Sophisticated Borrowing Constraints and Macroeconomic Dynamics

by Ebsim, Lian, Ma, Ottonello & Perez

Discussion by **Thomas Drechsel** (University of Maryland & NBER)

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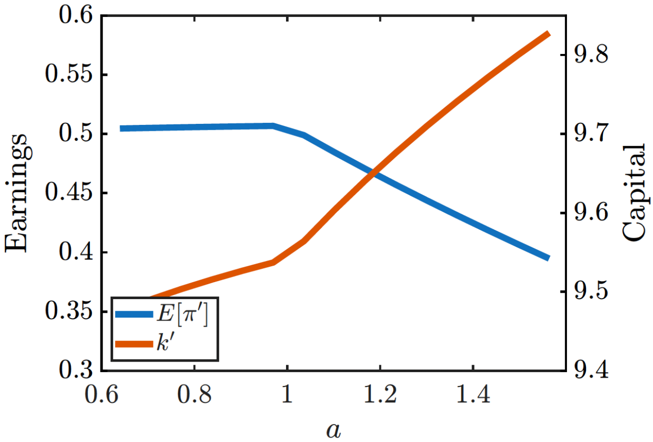
MAIN IDEA OF THE PAPER

- Previous research: covenants are widespread in US debt contracts
  - Shown by corporate finance research
  - Incorporated in macro models as borrowing constraints $\rightarrow b \leq \theta\pi$
- This paper:
  - Makes the **contingent control aspect of covenants** explicit in a macro model
  - Model matches dynamics of capital and earnings around covenant breaches
- In my view, this is a significant contribution

SOME INTUITION

EARNINGS AND CAPITAL UNDER MANAGER CONTROL



a is the desire to divert capital for unproductive use

MY COMMENTS

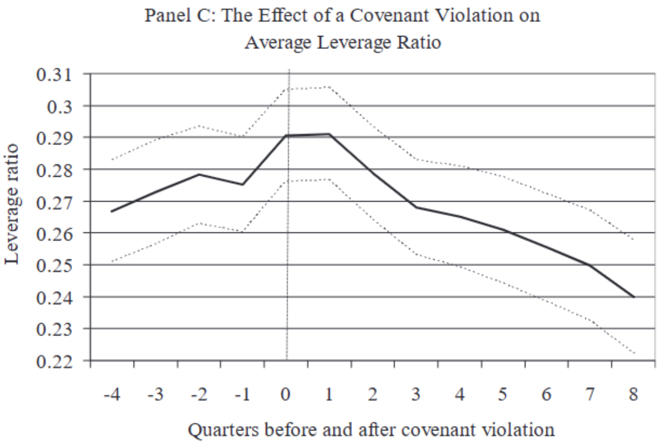
1. Dynamics of debt and leverage
2. Transition back to non-violation state
3. Why earnings?
4. A defense of “hard” constraints

COMMENT 1: DYNAMICS OF DEBT AND LEVERAGE

- In the model, debt repayment is not accelerated in the violation state
    - Follows from assumptions that simplify the creditor problem
- Seems to be at odds with evidence in Roberts and Sufi (2009):

  "Net debt issuing activity experiences a sharp and persistent decline following debt covenant violations, when creditors use their acceleration and termination rights..."

COMMENT 1: DYNAMICS OF DEBT AND LEVERAGE



Source: Roberts and Sufi (2009), Figure 1

COMMENT 1: DYNAMICS OF DEBT AND LEVERAGE

- The paper focuses almost exclusively on capital and earnings
- It would be helpful to show the dynamics of debt and leverage in data and model
- I suspect those might look different from each other
- Other variables would be interesting as well, e.g. the price of debt
- *Broader question: can the model match a wider set of empirical facts?*

COMMENT 2: TRANSITION BACK TO NON-VIOLATION STATE

- The transition from violation to normal state is assumed to be exogenous
  - Otherwise creditors would pick $\tau' = 0$ and "jump" back to non-violation state
- Alternative suggestion: allow the creditor to only gradually adjust τ'?
  - E.g. introduce convex adjustment cost for τ only for creditors
- Looks expositionally less ad hoc and we can tell stories around it
  - It may take time for creditors to "clean up the mess"

Comment 3: Why earnings?

- The constraints are labeled as "sophisticated"
- But would they be chosen optimally?
- In particular, would creditors choose earnings as the best trigger variable?
  - My conjecture: they would prefer a profit measure that subtracts investment
- Perhaps outside the scope of the paper, but a fascinating question

COMMENT 4: A DEFENSE OF "HARD" CONSTRAINTS

- Where am I coming from?

$$b \leq \theta\pi \quad \text{vs.} \quad b \leq \phi q k$$

- Drechsel (2023): implications for macro fluctuations generated by different shocks
- Drechsel and Kim (2024): implications for pecuniary externalities

COMMENT 4: A DEFENSE OF "HARD" CONSTRAINTS

Firm financing is complex ...

- collateral
- covenants
- credit ratings
- equity frictions
- ...

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Firm financing is complex ...

- collateral — earnings matter (*debt secured with blanket lien*)
- covenants — earnings matter (*earnings-based covenants*)
- credit ratings — earnings matter (*earnings used to compute ratings*)
- equity frictions — earnings matter (*valuation with earnings multiples*)
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  this paper
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this paper

existing papers

earnings matter for debt in many ways

$\Rightarrow$ capture this as simply as possible

comment 4: a defense of "hard" constraints

- Modeling contingent control in a macro model is difficult
- It is impressive that this paper shows us how to do it
- As macroeconomists we need to abstract from many details
- "Hard" earnings-based borrowing constraints:
  - Might stand in for other aspects of debt left out of the model
  - Have been shown to match a wide set of empirical facts
  - Are very convenient to use

CONCLUSION

- A fantastic paper that delivers a lot of insight
- My comments:
  1. Confront model with wider set of empirical facts, e.g. dynamics of debt
  2. Consider adjustment costs in transition back to non-violation state
  3. Think about why earnings are the trigger variable (maybe in the next paper)
  4. The existing approach still has a lot to offer

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