Discussion: Debt Maturity Management

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This Paper

- A theory of leverage and maturity composition of corporate debt

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- A theory of leverage and maturity composition of corporate debt
  - Clean analytical characterization in a special two-state environment
- The economics
  - Why do firms issue long-term debt? Create state contingent payoff to support more borrowing
  - An interesting welfare result: enterprise value rank $V_{\text{short}} > V_{\text{both}} > V_{\text{long}}$, due to the lack of commitment

Understanding Long-term Debt Issuance

- When default risk is relatively large, the value of long-term debt is positive when short-term debt is riskless
- The benefit of issuing an additional long-term debt $p_H(f)\Delta$
- The effect of an additional long-term debt issuance on short-debt issuance $d_H(f) - d_H(f+\Delta) \approx -p_L(f)\Delta$
- The buyback cost of an additional long-term debt issuance $-p_H(f+\Delta)\Delta + p_H(f)\Delta = -p'_H(f)(\Delta)^2$
- Overall, under this relevant scenario, LT and ST debt are not 1-1 substitutable, because the valuation of LT and ST debt are different

Comments

1. Generalizability and quantitative relevance
2. Insights from the sovereign debt literature, and more thoughts on welfare rank
3. State contingencies

Generalizability

- A stark (but unrealistic) implication of the model: LT debt has value only if the firm is issuing riskless ST debt, because the imperfect substitution depends on different valuations of LT and ST debt
- Can we generalize this result?

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- Can we generalize this result?
  - Consider N states. Is it true that $d_i(f) = j_l(f)$ $(i > l)$, i.e., the firm under state i borrows such that default happens only if the next period state is below state l $(i > l)$?

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- Simulate a panel of firms with different cash flow growth rate (and possibly with other characteristics), compare leverage and debt composition with data
- One step further extension: relate to other firm variables, e.g., investment, hiring, asset prices (possibly the next paper(s))?

Insights from the Sovereign Debt Literature

- A similar argumanet is made in the sovereign debt literature, e.g., Arellano and Ramanarayanan (2012)
- ST debt is better at incentivizing the borrower to repay, while LT debt provides hedging against future bond price changes

$$u'(c)\left(1+\frac{\partial q_S}{\partial b'_L}\frac{b'_S}{q_L}+\frac{\partial q_L}{\partial b'_L}\frac{b'_L-\delta b_L}{q_L}\right)=\beta(1+r^*)E[u'(c')|R']\frac{E\left[(1+\delta q'_L)u'(c')|R'\right]}{E[u'(c')|R']E[(1+\delta q'_L)|R']}$$

  - With risk-averse borrowers, LT debt provides hedging benefit. In bad times, $u'(c')$ is high and q'_L is low
- The current paper abstracts this force away with risk-neutral lenders
  - Which force more important
  - Systematic or idiosyncratic shock matters?

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  - Which force more important
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- Clarify the contribution

  "Second, the borrower in our model is risk-neutral and therefore does not have a reason a priori to value the merit of risk-sharing by long-term debt. The cost of default makes the borrower behave as if she is risk-averse"

Insights from the Sovereign Debt Literature

- One very interesting result of the theory is that, when the firm has an option to issue LT debt, the enterprise value even decreases
  - The reason: LT debt cannot be committed
  - Aguiar, Amador, Hopenhayn, and Werning (2019) show a similar result in the sovereign debt market. It would be helpful to clarify the difference between this paper and the literature
  - Any possible commitment device that can make LT debt welfare-improving?

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- Other possible state contingincies without the commitment problem, e.g., callability and convertibility of debt
  - Discussion on market incompleteness and hedging may be extended
  - Will callable/convertible debt help sustain higher level of ST debt in the same way as LT debt (introduce state contingency)?
  - Other possible ways of introducing state contingencies

Conclusion

- A very nice paper, elegant exposition, recommend to everyone
- More discussion on generalizability and quantitative relevance helpful
- Clarify contribution and compare with the risk-averse borrower case