Corporate Debt Structure, Access to Credit, and Monetary Policy

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Motivation

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- Monetary policy (MP) shocks might transmit differently to corporate bond and bank credit markets
- $\rightarrow\,$ Important to disentangle what the frictions driving corporate debt structure (and their interaction with MP) are

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 - Low risk firms issue corporate bonds
 - Medium risk firms obtain bank loans and benefit from monitoring
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 - Heterogeneous firms seek funds to finance productive investment
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 - Medium risk firms obtain bank loans and benefit from monitoring
 - High risk firms are credit rationed
 - Sorting of firms into these categories is endogenous and depends on aggregate outcomes
 - $\rightarrow\,$ Effect of monetary policy shocks on debt composition is consistent with the data

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- Spreads can move for several reasons
 - The paper would benefit from explicitly identifying the driving forces in the model
 - Argument in the paper: "bond finance becomes relatively cheaper (...) because bank equity is squeezed by the monetary policy contraction, which hampers (banks) ability to collect deposits and supply credit to firms"
 - However, I'll argue this explanation is only partial and other channels are at play
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 - Which channels are the relevant drivers in the data?
- Room for strengthening quantitative contribution

What moves spreads? A (very) simple model

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 - Bonds pay R^B (endogenously determined) with probability $1-p^B \in [0,1]$ and zero o/w
 - Loans pay R^L (endogenously determined) with probability $1-p^L\in[0,1]$ and zero o/w
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- In equilibrium:

$$(1 - p^L)R^L = (1 - \gamma)R + \gamma(1 + \delta)R$$

 $(1 - p^B)R^B = R$

A simple model: Spreads in equilibrium

• Let s^L and s^B denote loan and bond spreads, resp.

$$s^{L} \equiv R^{L} - R = rac{(p^{L} + \gamma \delta)}{1 - p^{L}}R$$
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• $p^L > p^B$ implies $s^L > s^B$, and:

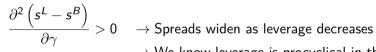
$$\frac{\partial \left(s^{L} - s^{B} \right)}{\partial R} > 0 \quad \text{ even if } \delta = 0$$

ightarrow Spread between loans and bonds widen even if no financial friction on the side of banks

Other forces driving spreads

• In the simple model:

 $\frac{\partial^2 \left(s^L - s^B \right)}{\partial \delta} > 0 \quad \rightarrow \text{Spreads widen as banks become more constrained}$ \rightarrow How does bank equity respond to MP shocks in the data? Profitability can increase if passthrough to deposits is low



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$$\frac{\partial^2 \left(\boldsymbol{s}^L - \boldsymbol{s}^B \right)}{\partial \gamma} > \boldsymbol{0}$$

- \rightarrow Spreads widen as leverage decreases
- \rightarrow We know leverage is procyclical in the data. Is it so in the model?
- Outside of the simple model:
 - Bank competition and endogenous markups
 - Time-varying risk aversion

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 - Variance decomposition

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- ...

- Additional elements to improve model fit?
 - Investment adjustment costs: capture asset price dynamics
 - Habits in consumption: capture hump-shaped responses obtained in the empirical section

Other (minor) comments

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 - Currently, calculated as NFC loans/equity (leverage of 2)
 - Standard practice in macro-banking to use total assets/equity instead (leverage above 10)

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- Bank equity returns calibrated to 1.3% (seems way too low?)

Concluding remarks

- Commendable effort in rigorously microfounding corporate debt structure in macro
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- Commendable effort in rigorously microfounding corporate debt structure in macro
- Timely and policy relevant!
- Further isolating the mechanisms at play would make the model more informative

• Could benefit from more emphasis on the quantitative properties