Discussion of "Bond Finance, Bank Finance, and Bank Regulation"
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What this paper does

Model   general equilibrium macro-finance model

intermediaries = banks or bond mutual funds

Application   bank capital adequacy ratios

with bond finance, optimal policy is <u>more lenient</u>

cap ratio $\uparrow \implies$ loan spreads $\uparrow$

with bond finance: <u>loans $\rightarrow$ bonds substitution</u>

$\downarrow$ bankers' wealth share, loan supply

Why should we care?

1. Do the "details" of financial intermediation matter for macro outcomes?

   Holmstrom and Tirole (1997), Bolton and Freixas (2000), ...

   bonds vs. loans: DeFiore and Uhlig (2011, 2015), Crouzet (2017, 2021), ...

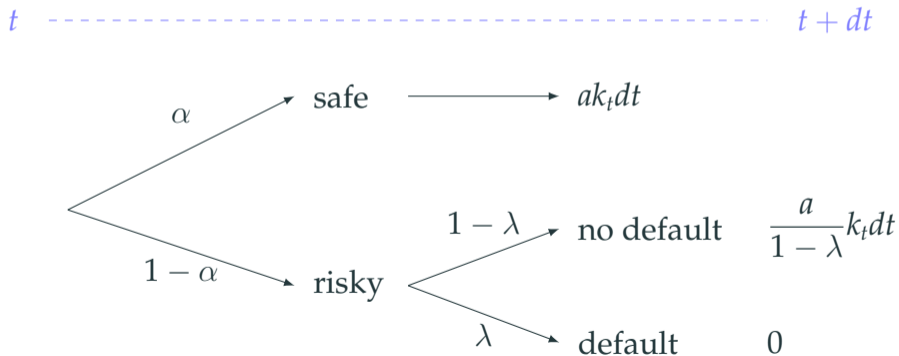   general equilibrium + global, non-linear solution (CT)

2. How should policymakers set capital adequacy ratios for banks?

   Repullo and Suarez (2012), Davydiuk (2017), Elenev et al. (2020), ...
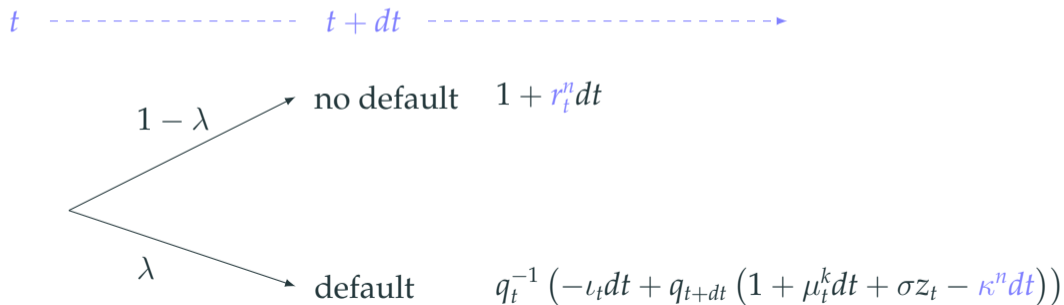
   indirect impact of bond financing

Production

Discrete time: $t = dt, 2dt, ..., ndt, ...$

t - $t + dt$

α → safe $\longrightarrow$ $ak_t dt$

$1 - \alpha$ → risky

$1 - \lambda$ → no default $\quad \dfrac{a}{1 - \lambda} k_t dt$

λ → default $\quad 0$

Debt contracts

Payoff to intermediary $n \in \{\text{bank,bond}\}$

t - - - - - - - - - - - - - - - $t + dt$ - ▸

$1 - \lambda$ → no default $1 + r_t^n dt$

λ → default $q_t^{-1} \left(-\iota_t dt + q_{t+dt} \left(1 + \mu_t^k dt + \sigma z_t - \kappa^n dt \right) \right)$

Comment 1: how to interpret debt contracts?

What drives firm "default"?

solvency: no

liquidity: maybe, but

z_t shocks (capital quality shocks) don't trigger default

firm could get transfers from the expert that owns it

firm could cut capex

If "default" is exogenous, then what do the debt contracts capture?

equity-like features (upside from good shocks to q_{t+dt}, z_t)

what does this correspond to in practice?

does it matter for the quantitative results?

Comment 2: discrete vs. continuous-time

In the continuous-time limit ($dt \to 0$):

total default probability is still λ

so probability *per unit time* is $\lambda/dt \to +\infty$

same for probability of becoming risky/safe

"immediately" move between states

Why bring this up?

more natural to use Poisson transition rates

but: exposure of lenders to aggregate risk may be become $o(dt \cdot dZ_t)$ (as $dt \to 0$)
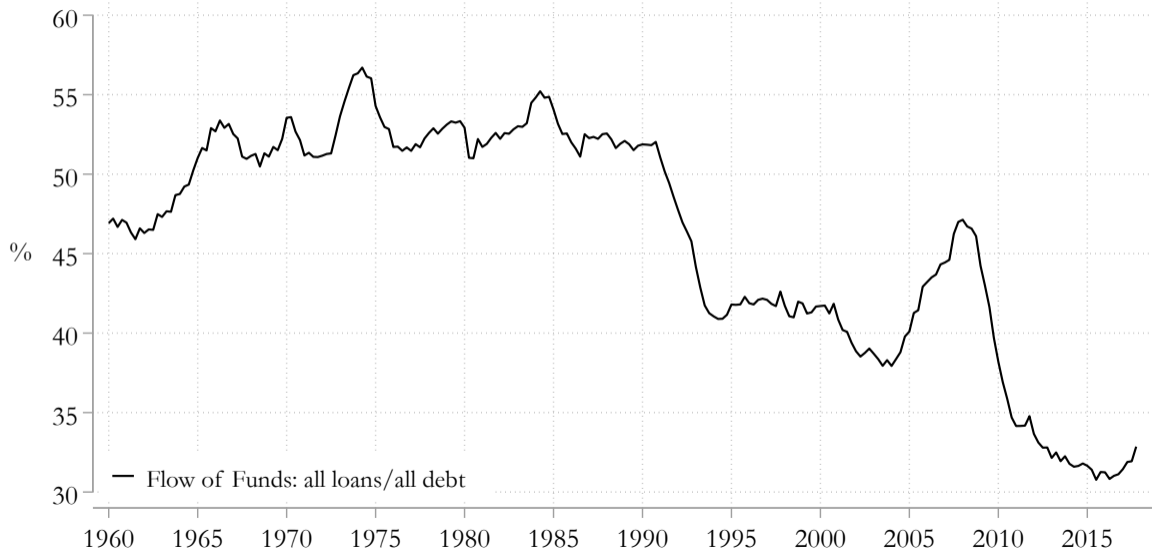
Comment 3: calibration

Target loan/bond moments

    "risk premium" on bonds/loans   (DeFiore and Uhlig, 2015)

    share of loans to total debt

Loans as a fraction of the total debt of corporations (Crouzet, 2021)

Flow of Funds: all loans/all debt

Comment 3: calibration

Target loan/bond moments

    "risk premium" on bonds/loans   (DeFiore and Uhlig, 2015)

    share of loans to total debt

What would a calibration to lower loan share imply?

    current calibration may overstate relative benefits of bank financing

    $\therefore$ optimal capital adequacy ratios might be closer to 6%

Comment 4: externalities

Markets are incomplete in this model

 cannot raise outside equity

The paper states that this leads to "pecuniary" externalities

 too much leverage relative to first-best

 $\therefore$ counter-intuitive predictions

  shutting down bond market increases TFP

 want: leverage policy chosen by constrained planner —— but this is difficult ...

Other small comments

1. How to interpret $\kappa^{bank} < \kappa^{bond}$?

   Bolton and Scharfstein (1996): bondholders are worse at *avoiding* liquidiation

   conditional on liquidation, do (secured) bondholders have lower recovery rates?

   see Carey and Gordy (2007)

2. Equation at the bottom of p.8: maybe it should be $R_t - r_t^\lambda$? (Same for equation at top of p.9.)

3. Does it matter for the optimal policy results that the mass of bankers, experts, and households seems to be the same (p.11)? (I don't think so, since all welfare functions seem to peak around the same capital requirement; worth mentioning if that's correct.)

4. I don't understand the path of bank leverage in the middle bottom panel of Figure 4. Why is it 0 throughout for the economy with bond financing? Does this mean that banks hold no deposits in that calibration?

5. p.24: in what sense is bond financing "more costly?" (I thought risk premia were calibrated to be lower —— does that change as adequacy ratios rise?)

Conclusion

Very interesting model with insightful counterfactuals

Main suggestions

    explain more clearly what the debt contracts represent

    explore calibrations with lower loan shares

    clarify role of externalities