

Discussion of:

Open Banking Under Maturity Transformation

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Open banking

- ▶ At first glance, open banking sounds very appealing
 - ▶ borrowers develop a history that shows their creditworthiness
 - ▶ but only one bank sees this history → monopoly pricing
 - ▶ letting more banks see the history → competition
 - ▶ removes monopoly rents, more efficient outcomes What's not to like?
- ▶ What are the possible downsides or concerns?
- ▶ One possibility: idiosyncratic interpretation of the data
 - ▶ if banks' algorithms give different scores to a borrower ⇒ winner's curse
 - ▶ implication: more competitors may not lead to better outcomes
 - ▶ most optimistic bank is more likely to be wrong
 - ▶ leads banks to be more cautious (when seeing a good signal)
 - ▶ winner's curse offsets some (all?) benefits of competition

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This paper

- ▶ Investigates the effects/desirability of open banking ...
- ▶ ... taking seriously the idea that the lenders are *banks*
 - ▶ offering loans of some maturity, while issuing debt of shorter maturity
 - ▶ funding cost is sensitive to the risk the bank is taking

Brief recap of the model

- ▶ Borrowers have a project that will succeed or fail
- ▶ Banks issue deposits, can lend or hold a risk-free asset
- ▶ Bertrand-like competition
 - ▶ each bank announces an interest rate (or “no offer”)
 - ▶ borrowers pick the lowest rate (⇒ first-price, common value auction)

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- ▶ **Key feature: bank creditors observe outcome of the auction**
 - ▶ interest rate on deposits resets accordingly

Compare two regimes

- ▶ Closed banking: incumbent bank has informative signal
 - ▶ entrant bank has no signal (uninformed)
 - ▶ assume $E[PV]$ of lending is <0 if no signal
- ▶ Open banking: both banks receive (independent) signals
 - ▶ that is, they have different algorithms for predicting repayment
 - ▶ give idiosyncratic interpretations of the same data

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Results

- ▶ Moving to open banking has mixed effects
- ▶ Closed banking:
 - ▶ uninformed bank never lends
 - ▶ informed bank lends if signal is good; takes all of the surplus
- ▶ Open banking:
 - ▶ borrowers are better off, but total expected output is lower
 - ▶ banks become more cautious in bidding; may make “no offer” even if they receive a good signal
 - ▶ because of the winner’s curse ...
 - ▶ ... which is “exacerbated by banks’ maturity transformation”
- ▶ Interesting!


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An alternative starting point

Consider three different versions of the model

1. Bankers lend their own funds
 2. Banks are funded with long-term debt
 3. Banks are funded with short-term debt
-
- ▶ In each case, what are the effects of moving to open banking?
 - ▶ What is the relationship between cases 1 and 3?

1) Bankers lend their own funds

- ▶ Suppose bankers have deep pockets
 - ▶ divide their funds between lending and the risk-free asset
- ▶ Closed banking:
 - ▶ uninformed bank will never bid (expected payoff is always < 0)
⇒ informed bank is a monopolist
 - ▶ lends following good signal, takes all of the surplus
- ▶ Open banking:
 - ▶ mixed results because the winner's curse appears
 - ▶ banks with a good signal may not bid with positive probability
 - ▶ resulting allocation may be less efficient (maybe?)
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2) Banks are funded by long-term debt

- ▶ Now suppose banks have issued long-term debt at fixed rate
 - ▶ and have limited liability \Rightarrow risk shifting shifting motive (sounds bad)
 - ▶ but risk-shifting can have *positive* effects here
- ▶ Closed banking:
 - ▶ the uninformed bank may now be willing to bid with some probability
 - ▶ because part of the loss in the bad state falls on creditors
 - ▶ which disciplines the informed bank \rightarrow borrowers get some of the surplus
- ▶ Open banking:
 - ▶ banks bid more aggressively than when using own funds
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3) Banks are funded by short-term debt

- ▶ Interest rate on debt is reset after results of auction are known
 - ▶ so that creditors are indifferent between the debt and outside option
 - ▶ undercuts bank's ability to shift risk onto creditors
- ▶ Results are similar to the first case
- ▶ Closed banking: exactly the same
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 - ▶ ... then short-term debt that disciplines banks brings the curse back
 - ▶ another way to see the main message of the paper (I think)

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Three questions

Models 1 and 3

- ▶ How similar/different are models 1 and 3?
 - ▶ for closed banking in this setting, results are identical (I think)
 - ▶ for open banking, they are ... similar?

Put differently:

- ▶ Is the ability to shift risk the only reason the maturity of debt matters for this issue?
 - ▶ do other mechanisms that limit risk sharing lead to same outcome?
 - ▶ can we just study model 1?
- ▶ Or does the maturity of debt matter in other ways?
 - ▶ i.e., ways that my simple narrative above misses

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Aggregate vs. idiosyncratic risk

- ▶ Bank lends to many borrowers in the model
 - ▶ but their returns are perfectly correlated
 - ⇒ bank is looking at borrower data to forecast macro variables
- ▶ I would expect borrower data to be most informative about individual creditworthiness
 - ▶ what I did in the past tells you a lot about me ...
- ▶ Is there a version of this model with heterogeneous borrowers?
 - ▶ winner's curse involves getting a bad pool of borrowers
 - ▶ which would increase the probability of bank failure (as here)
- ▶ Seems more complicated ...
 - ▶ would it matter for the results? Perhaps not.

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Other mechanisms

- ▶ Open banking has two potential benefits in this model
 - ▶ competition may reallocate surplus toward borrowers
 - ▶ generating a second signal provides more information
- ▶ What type of institution(s) would best harness these benefits?
- ▶ A mechanism design problem
 - ▶ have both banks report their signal \Rightarrow assign an allocation
 - ▶ if both report $H \rightarrow$ randomly assign loan to one bank (at some R)
 - ▶ if either reports $L \rightarrow$ no loan is made
- ▶ I think this mechanism uniquely implements the efficient allocation
- ▶ How could it be decentralized?
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