Discussion of
Burying Libor
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Main Question

Addresses theoretically and empirically:

- How are alternative benchmark rates determined?
- How do regulatory changes affect alternative benchmark rates?
- What does that say about the use of alternative benchmark rates?

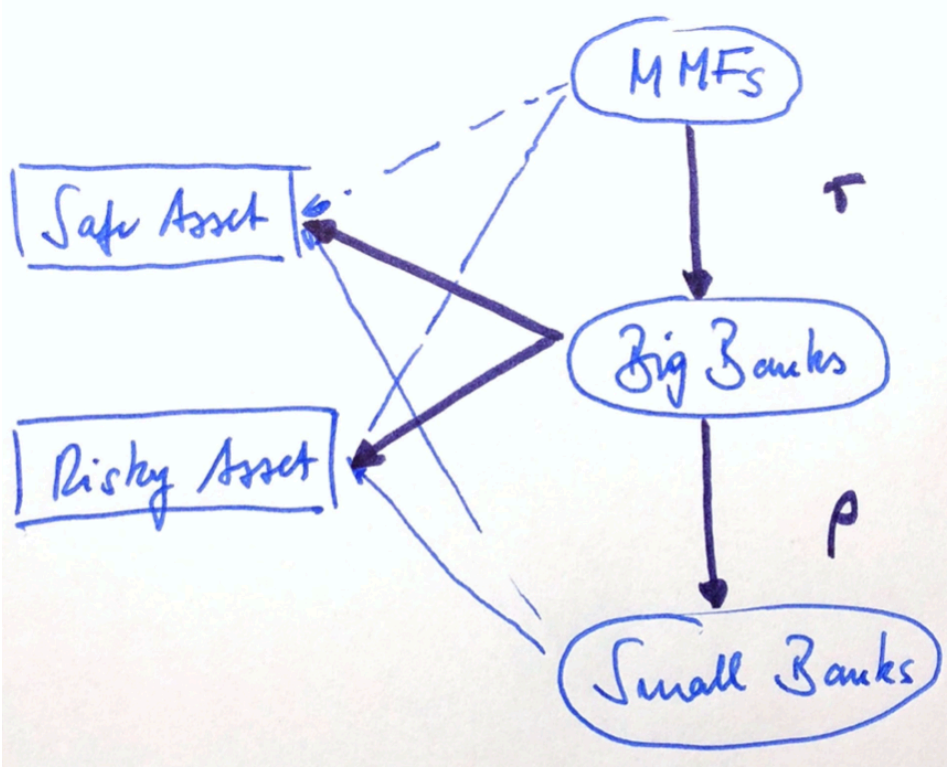
Structure of Discussion

1. Discuss theoretical reasoning $\rightarrow$ identifying assumption
2. Discuss empirical findings
3. General comments

General Theoretical Answers

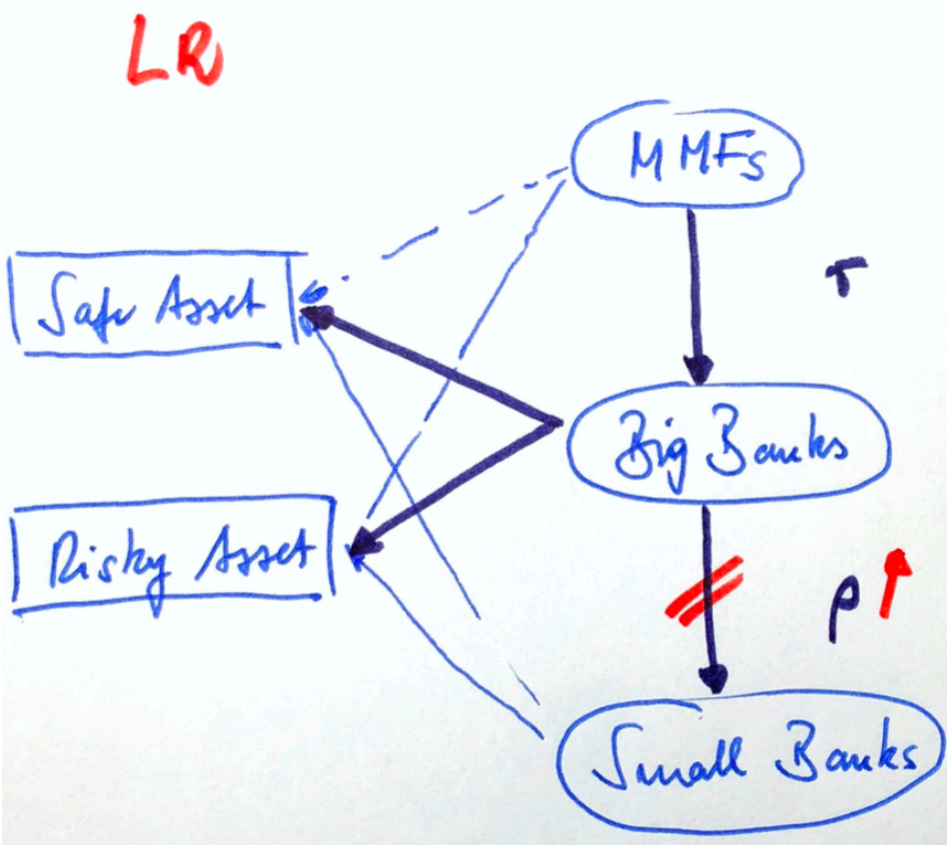
- In a world with frictionless financial (and interbank) markets opportunity costs determine rates in money markets
- If different agents have access only to different markets the opportunity costs of the market participants determine respective market rate

Theoretical Set-up



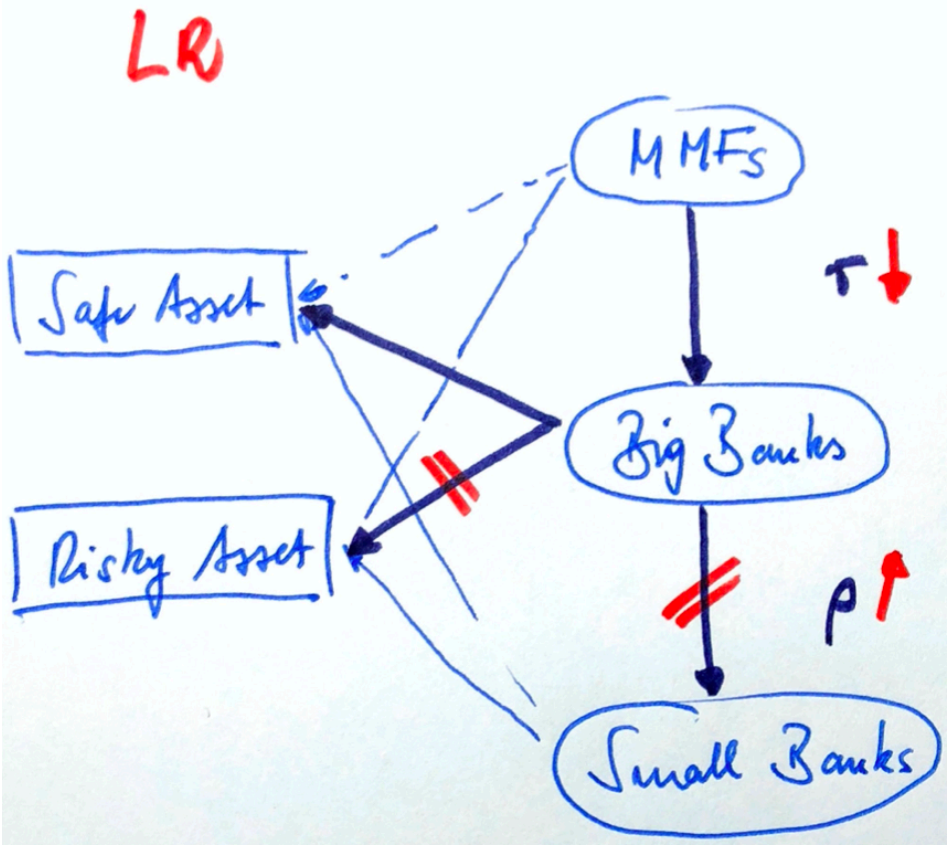
1. Theoretical Effect of LR

LR imposed on big banks increases opportunity costs of lending unsecured to small banks



2. Theoretical Effect of LR

LR imposed on big banks increases their demand for safe asset; this reduces return on safe asset and due to arbitrage repo rate payed to MMF



Comments on Theoretical Set-up

1. Who acts as (marginal) lender is hardwired in the model
   - If the LR drives a wedge between secured and unsecured rate, how reasonable is it that markets remain segmented?
   - Is it reasonable to assume that small banks are the borrowers in unsecured market?
2. Unsecured IB credit is perfectly safe; no risk premium and no effect of LR or portfolio decision on risk premium
3. No collateral constraint on big banks' repo borrowing capacity
   - Not too surprising: *"The main prediction of our model is that in non- crisis times 'the players' - whether a bank or non-bank is the marginal lender - are a more important determinant of the rate than 'the game'(whether the transaction is collateralized or not)"*

Main Empirical Findings I

- Identifying assumption:

$\Rightarrow$ In repo market MMFs (marginal) lender

$\Rightarrow$ In unsecured IB market big banks (marginal) lender

- Prediction: LR in U.S. tighter at month and quarter end

$\Rightarrow$ (broad) repo rates $\downarrow$

$\Rightarrow$ (IB) unsecured rates $\uparrow$

- Findings for U.S. after the introduction of LR

$\Rightarrow$ Secured Overnight Funding Rate (SOFR) $\uparrow$ at m-&q-end

$\Rightarrow$ (unsecured) Fed Funds Rate (FFR) $\downarrow$ at m-&q-end

Main Empirical Findings II

- Findings for U.S. with diff-in-diff of LR introduction

$\Rightarrow$ General Collateral Financing (GCF) repo $\uparrow$ at q-end after LR

$\Rightarrow$ (unsecured) Fed Funds Rate (FFR) $\downarrow$ at m-end after LR

- BUT: Similar effects also before LR intro

- Findings for U.K. with diff-in-diff of LR introduction

$\Rightarrow$ Repo $\downarrow$ at m-& q-end after LR

$\Rightarrow$ (unsecured) Sterling ONIA (SONIA) $\downarrow$ at m-& q-end after LR

- Findings for Euroarea diff-in-diff of LR introduction

$\Rightarrow$ Repo $\downarrow$ at q-end after LR

$\Rightarrow$ (unsecured) EONIA $\uparrow$ at q-end but only before LR

Comments on Empirical Findings

- Paper concludes form results:
  "we show (...) empirically that the marginal lenders in the underlying transactions have a significant impact on the rates."
- Based on identifying assumption this seems a far stretch
- Arguing that unsecured market (i.e. FFR) is a actually a broader market and SOFR actually a narrower IB market should be backed by more data

Suggestion for Empirical Analysis

- Add some control variables:
  -Transaction volume and market liquidity varies & affect prob of a spike
  -General volatility also increases prob of a spike at m-end
  -Excess reserves ...

- Using times series models might be more appropriate

- To improve identification: Regress spread on interaction between m-end (q-end) dummy and market share of non-banks in respective market

General Comment: Interpretation I

- *"Our paper highlights that the Libor funeral can increase the volatility (...) of the benchmark rates, making the alternative benchmark rates less representative for banks marginal funding costs"*
- Transaction based benchmark rates are likely more volatile
- This is also because they reflect actual transactions and thus real refinancing costs
- If banks want to hedge they better use this actual and more volatile benchmark then a fictitious one

- If regulatory changes or changes in market structure affect banks' funding costs this should be reflected in benchmark rates

General Comment: Interpretation II

- Unsecured rates suffer from a selection issue
- In market stress riskier banks might be rationed
- Thus their borrowing costs are no longer included in benchmark
- Only good banks with lower rates reflected in aggregate rate

- This can make unsecured benchmarks too volatile (or too inert)
- Unsecured rates might actually decline giving wrong a signal and undermine use of benchmark for hedging purposes
- This might also undermine the use of unsecured benchmark rates for monetary policy

Conclusion

- Very topical paper
- Improve the write-up:
  1) model needs better explanation,
  2) better tying of model to empirical results
- Identification strategy should be reconsidered