Costs and Competition in Money Markets

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The views expressed here do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

Overview

The authors deploy a double-pronged attack of

1. **Data**, impressive loan- and bank-level merged data set; and
2. **Theory**, extending the Poole model;

to show the important role that both

- **Balance-sheet costs**, mostly due to regulation; and
- **Imperfect competition**;

play in overnight banking markets (fed funds + eurodollars).

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Most work since then has already incorporated imperfect competition, segmentation, balance-sheet costs...

- Bech and Klee (2011): Bargaining, GSEs and banks...
- Armenter and Lester (2017): Directed search, balance-sheet costs...
- Frost et al. (2015), Kim et al. (2017), Schulhofer-Wohl and Clouse (2018), Afonso et al. (2018)...

as well as prior work on the microeconomics of fed funds trades,

- Ashcraft and Duffie (2007),..., Afonso and Lagos (2015).

Simon said...

Theoretically, [...] the IOER rate should set a minimum rate or floor, so to speak, on short-term interest rates [...]

However, uncertain or rising balance sheet costs, likely related to new regulatory changes [...] have tempered the willingness to arbitrage the differences in rates. [...]

[C]ompetitive conditions in the unsecured money markets haven't proven strong enough to narrow the spread between the fed funds rate and the IOER rate [...]

Simon Potter
Recent Developments in Monetary Policy Implementation
December 2013

Measurement

Yet we still lack firm **quantitative** answers:

- How large are the balance-sheet costs?
  - For FDIC fees, we have Banegas and Tase (2016);
  - For everything else, barely a guess;
  - Substantial differences across bank "types."

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- Is segmentation hardwired or fungible?
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This paper could fill the gap and be a key reference for all future work.

Comment: It is Over (the Counter)

Both data and model tiptoe around the fact that money markets are characterized by **over-the-counter** trading.

- No centralized platform or clearinghouse, agreed terms are private;
- Price dispersion, incomplete arbitrage, unrealized trade gains...

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Moreover, unsecured markets are currently quite **thin**:

- Low volume, only a handful of truly bank-to-bank trades;
- Little or no intermediation;
- Limited participation by banks;

so trading frictions may be more apparent.

Implications for the data

Aiming to utilize the data available, the empirical analysis is specified in terms of triplets lender type $\times$ borrower id $\times$ day, using

- Rates r_{jkt} for the reduced-form evidence, and
- Borrowers' market shares s_{jkt} for the discrete-choice model.

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However, **data are very sparse,** less than 1 loan per borrower$\times$day.

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  - Daily #transactions could be less than #counterparties.
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Suggestion: Aggregate up by borrower type, week or month.

- However, the *extensive margin* could be very informative.

The discrete-choice model

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- May or may not have an allocative role (directed vs. random search),
- Reflect the trade surplus and thus both parties' characteristics,
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Suggestion: Provide evidence that the discrete-choice model is the right one, at least for the deeper market segments.

Policy implications

The scope of the empirical analysis is impressive, but it is not designed with the key policy questions in mind.

- Interest-rate control (e.g., IOR technical adjustments),
- Aggregate factors on money markets (e.g., high secured rates),
- Future of the fed funds market (e.g., FHLB reform)...

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Suggestion: The money fund reform seems an opportunity to illustrate and support the discrete-choice model and its implications.

Summary

- A very ambitious paper with outstanding data,
- The discrete-choice model is a powerful tool,
  - But I would like more evidence that is the right model too.
- Likely to be a key reference for future papers on money markets.