

Repo and FX Swaps: A Tale of Two Markets

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Recap

- Paper utilizes confidential ECB micro data to provide novel insights into the dollar swap and repo markets; all transactions of about 50 euro area banks, 2021-2024
- Key findings document:
 1. Repo and FX swaps are close substitutes
 2. Wider spread between borrowing and lending rates in repos than swaps.
 - ▶ Higher repo balance sheet costs (leverage ratio).
 3. Significant price dispersion across different counterparty types.

Preview of Main Comments

- The descriptive part is very informative and quite developed
- Paper can be a bit clearer on the research question
- In this regard, the richness of the data can be used for additional test
 1. Current tests are often aggregate and could benefit from micro analysis.
 2. Contract data contain information on prices *and* quantities

Research Questions

- The data is exceptionally rich and can address various research questions.
- My sense is that the papers main economic question is the effect of leverage regulation on FX swap and repo integration.
- Paper can be a bit more focused on this leverage question
 - ▶ The modeling part already emphasizes the leverage story.
 - ▶ Better highlight how study of price dispersion is related to leverage constraint question.
 - ▶ Price dispersion could suggest need for granular fixed effects to isolate the leverage effect.
 - ▶ Especially, some counterparty groups may experience demand shifts at quarter ends.
- Or is the paper more broadly about funding market integration?
 - ▶ Then it would be nice to dig deeper into other drivers
 - ▶ Country segmentation, cross-border segmentation, etc

Conceptual Framework

- The conceptual framework is clear and centered on the effect of leverage constraints on spreads, with intuitive, testable predictions.
 - ▶ Banks borrow and lend in both repo and fx swap (net position = 0)
 - ▶ Price setters in lending market, but price takers when borrowing
 - ▶ Key friction is that repo positions, unlike swaps, factor into leverage ratio
 - ▶ As result, wedge between FX swap and repo rates appears.
 - ▶ The size of swap-repo wedge depends on shadow cost and demand elasticities.

$$r_{L,i}^{repo} = \frac{\epsilon_i}{\epsilon_i - 1} (r_B^{repo} + \mu), \quad r_{L,j}^{fx} = \frac{\eta_j}{\eta_j - 1} (r_B^{fx} + \mu), \quad r_B^{fx} = r_B^{repo} + \mu$$

Additional test for role of leverage constraint using micro data

- The current draft argues that FX swap spreads over repo borrowing rate reflect leverage regulation
 - ▶ Empirical identification from pricing of cross-quarter contracts
 - ▶ Hypothesis could be articulated more sharply with more detailed discussion of regulatory framework, including liquidity
- Data can be used to for additional tests to study heterogeneity in spreads across banks and counterparties
 - ▶ Consider studying heterogeneity in effects based on bank leverage ratios, potentially interacting with cross-quarter contract dummies.
 - ▶ Some banks in your sample may be from jurisdiction that don't rely on end-of-quarter assessment of regularity ratios
 - ▶ Non-bank participants may also exhibit (potentially heterogeneous) demand shifts at quarter ends, potentially confounding the estimate
 - ▶ Examine the Supplementary Leverage Ratio (SLR) exemption and its impact on US banks.

Model Predictions for Prices and Quantities

- The model provides predictions for both prices and quantities.
 - ▶ The current (empirical) analysis of quantities is limited to aggregate volumes.
 - ▶ Micro-information on quantities is a key benefit of the data, so I encourage the authors to explore this information better.
 - ▶ Set up all tables with quantities (notional values) as additional outcome variables, similar to price tables.
 - ▶ same specifications for price and quantity regressions
 - ▶ If notionals don't respond, action may be at extensive margin

Further Comments

- The granularity of the data potentially allows for narrower identification by controlling better for other factors.
 - ▶ Specifically, consider using more granular fixed effects, see Abbassi and Bräuning (2020) for similar application. Esp. within-bank across contract types.
- Would be great to know more about time-varying cost of leverage constraint, and relatedly role of other regulatory capital and liquidity constraints
- Additionally, studying the effects of swap lines could be insightful as it may change demand.
- Put estimates of swap-repo spread into context
 - ▶ What does it imply about cost of capital? How does it compare with other findings?
 - ▶ What share of variation in spreads does posited channel explain?

Summary

- Be a bit clearer of the research questions
- Use counterparty heterogeneity (e.g., bank leverage ratio) for tests
- Focus on both prices and quantities
- Great paper, thanks for letting me discuss it!