Segmented Money Markets and Covered Interest Rate Parity Arbitrage

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Discussion
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- ***Paper's Contributions:***

  - Provides an in-depth look at funding and transactions costs in enforcing arbitrage arising from CIP violations, focusing on *marginal funding costs*.

  - Sheds light on the differences in short-term funding costs (money market segmentation), post-2008 crisis.

  - Connects *order flow imbalances* in FX swap markets to price fluctuations in FX swaps.

- ***Review of results:***

Money markets rates used	Violations of LOOP and CIP-arbitrage	Possible Explanations
CP rates, Interbank deposit rates.	Negligible.	
OIS, GC repo, and IBOR rates.	Non-negligible.	Returns may be compensation for balance sheet liquidity risks.
Highly rated banks with attractive CP rates/Reserve managers	Can exploit CIP violations to reap riskless profits.	Outside options for accessing US$ are very expensive for low quality issuers.

Assessment of the paper

- Paper is a painstaking effort:
  - Many data sets in different currencies;
  - High frequency information.
  - Careful in documenting heterogeneity in money markets.

- Paper is well exposited and easy to understand.

- Sheds a new perspective on CIP violations:
  - The money market rates used in putative arbitrage transactions matter a lot!
  - High quality borrowers in US$ in unsecured markets have an advantage in reaping arbitrage profits, but their actions may be bounded.

Summary

- Carefully executed paper.

- Convincing evidence that the money market rates used in the arbitrage can yield very different results.
- Intermediary's aversion to order imbalance could result in arbitrage for a few players.

- Previously shown arbitrage profits may be compensations for:
  - Balance sheet risk taken.
  - Only very high quality players with access to unsecured US$ funding may reap benefits.

Limits to Arbitrage in the FX Market: Evidence from FX Trade Repository Data

Gino Cenedese, Pasquale Della Corte, and Tianyu Wang.

Paper's Contributions

- Transactions level data (proprietary) on OTC forwards, FX swaps and CCBS.
- Terrific data set with DTCC and other repositories for future research.

- Leverage ratio constraints of dealers matter:
  - De-levering by dealers leads to a fall in liquidity in forwards.
  - In turns this leads to CIP violations, in the short-run.

- Risk-weighted capital requirements affect CCBS spreads.
  - Increase in capital ratios, lead to a widening of CCBS Spreads.

- ***Review of results:***

Demand for US$	Supply of US$	Players
Short-term (forwards)		All except hedge funds, and central banks.
.	Long-term (CCBS)	Hedge funds, corporates and reserve managers.
Positive net buying of US$ against FX leads to a compression in CIP deviations.		

- ***Review of results:***

- Ability to identify the players is critical and I have not seen this in many data sets.

- It allows the authors to examine who supplies US$ and who demands them.
    - Conclusions here are intuitive and makes sense.
- As we get more time series data, we can examine whether there are shifts in players' positions.

Summary

- Unique data set with identities of players.
- Ideal for evaluating quantitative transfer of economic rents.
- Connects Dealer balance sheet constraints to CIP violations:
  - Leverage ratios.
  - Risk-weighted capital
- Loss of liquidity in markets due to balance sheet constraints:
  - Implications.

Comments

- The narrative suggests that violations of CIP parity results in:
  - Transfer of economic rents from low quality players to high quality players with access to low cost funding, and risk-free deposits, such as reserves.
  - No position is taken on:
    - Welfare losses, if any as a consequence of CIP violations.
    - Need for public policy intervention by regulators or central banks.
    - Now the central banks have the FX swap lines. They can activate and re-price when they wish to. Should we care about violations?

Comments:

- What are the welfare consequences?
  - Intermediaries, investors, and issuers.
  - Are we trading safety for illiquidity.

- Should policy makers care?
  - As dealers withdraw, other players may step in.
    - In corporate bond markets, dealer inventories are down, but mutual funds and ETFs have stepped in.
      a. This may have implications when a next macro shock arrives.
  - Is there a similar concern in FX swaps?

Comments:

- Quantitative assessments of magnitude of profits/losses
  - Are they big?
  - Does it lead to excessive risk taking?

- How vulnerable are the markets with respect to:
  - Sustained changes in policy rates [USA, for example]?
  - Unexpected divergences in monetary policies?