Synthetic Dollar Funding (by Umang Khetan)

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CEMLA/Dallas Fed - Financial Stability Workshop

November 24, 2025

Disclaimer: The views presented here are my own and do not necessarily reflect those of the Central Bank of Chile or its Board Members.

Overview of the paper

Main Comments

Conclusion

Brief overview of the paper

- Research question(s):
  - How do shocks to wholesale dollar funding affect the **demand** for synthetic dollar funding by global banks?
  - How do fluctuations in the **demand** for synthetic dollar funding contribute to **CIP deviations**?
  - How do these funding market frictions affect the availability of dollar **credit**?
- How does the paper address these questions?
  - **Empirical** analysis:
    - Exploit exogenous variation in availability of MMF supply to study the demand of synthetic dollars by global banks.
    - Granular IV approach to link synthetic dollar demand with CIP deviations.
    - **Multiple** robustness exercises!
  - **Model**:
    - Application of Ivashina, Scharfstein and Stein (QJE, 2015) to study shocks to wholesale funding availability.

The mechanism in a nutshell

- Non-US global banks provide dollar credit using a mix of wholesale funding and synthetic dollars (through FX swaps).
- Very stylized setting:
  - Total dollar lending given by

$$\underbrace{l_W}_{\text{Wholesale funding}} + \underbrace{L_S}_{\text{Synthetic funding}} \leq \underbrace{N}_{\substack{\text{Cap on leverage} \\ \text{(regulation, discipline, etc)}}} \tag{1}$$

  - Interest rate on wholesale funds normalized to 0. **Inelastic** supply L_W.
  - Synthetic dollars pay a premium S due to **frictions in FX swap markets** (e.g. limited capacity of swap arbitrageurs).

The mechanism in a nutshell

- Banks solve

$$\max_{L_s, l_W} \underbrace{g(l_W + L_S)}_{\substack{\text{Return on assets} \\ \text{(concave)}}} - l_W - SL_S, \tag{2}$$

$$\text{s.t. } l_W + L_S \leq N \tag{3}$$

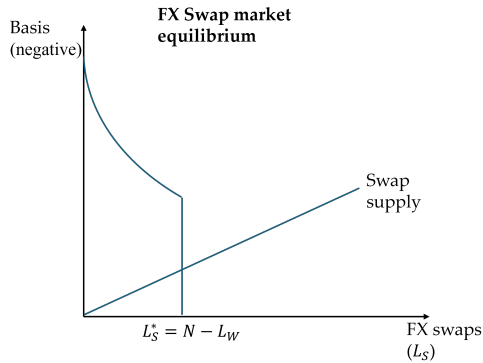
- Pecking order: use wholesale funding first ($l_W = L_W$)
- FX Swap demand satisfies

$$g'(L_W + L_S) = S \text{ if } L_W + L_S < N \tag{4}$$

$$L_W + L_S = N \text{ otherwise} \tag{5}$$

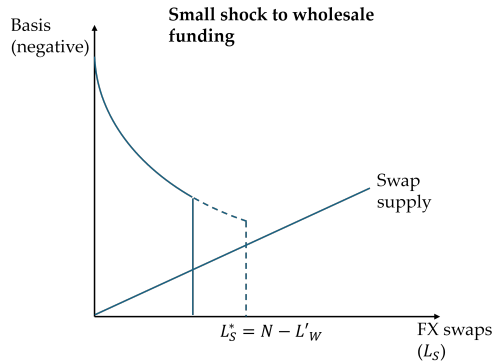
The mechanism in a nutshell

- In equilibrium, the price of the FX swap (equivalent to the (negative) basis, here) adjusts to clear the market
- In this example: banks invest until they hit the constraint.



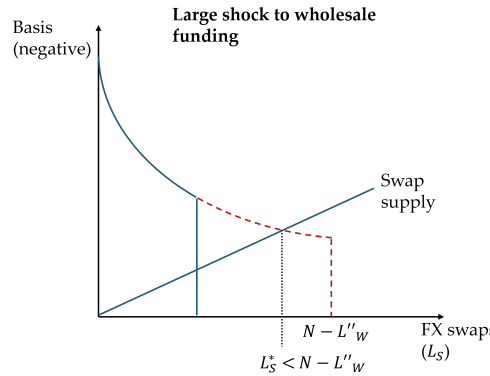
The mechanism in a nutshell

- Consider a small negative shock to the available wholesale funding.
- The **demand** for synthetic dollar **increases**.
- But: bank assets remain **unchanged**.
- Intuition: increase in funding cost is smaller than marginal value of lending at the constraint.



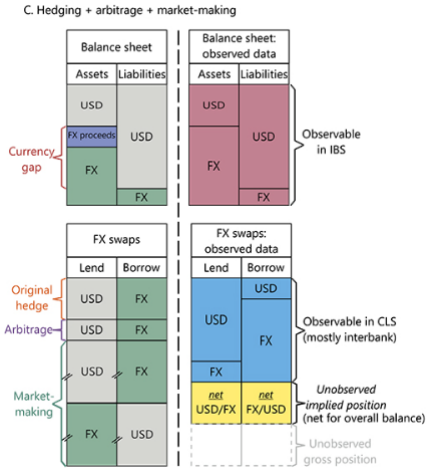
The mechanism in a nutshell

- Consider a large negative shock to the available wholesale funding.
- The demand for synthetic dollar increases.
- Eventually, the increase in funding costs leads to a **reduction in bank assets**.



Comment 1: Coverage and representativeness of CLS dataset

- Analysis uses sector-level data from CLS (main clearing platform in FX derivatives).
- Global banks are large net borrowers in this dataset.
- But: dataset covers about 1/3 of transactions.
- Could we be missing part of the market-making business of these banks with CLS data?



Comment 2: Link to bank credit is not obvious

- Strengths of the paper are mainly on empirical analysis.
- Empirical strategy links:
  - Wholesale funding shortages with more synthetic funding.
  - More synthetic funding with larger CIP deviations.
- The empirical analysis does not explicitly address bank lending.
- Model attempts to complete the analysis.
  - Calibration should be taken with some caution.
  - What are the novelties with respect to Ivashina et al. (2015) that bring new insights?

Additional comments

- Further discussion of the novelties of the paper is encouraged:
  - Demand-driven fluctuations in CIP have been discussed elsewhere: Ivashina et al. (2015), Borio et al. (2016).
  - Model is almost nested in setting in Ivashina et al. (2015).
- How do we read this in terms of policy implications?
  - Swap lines between central banks and liquidity provision to banks.
  - Argument for more precautionary holding of international reserves?
  - Limits in the exposure to wholesale funding? Basel III seems to have partially addressed this (e.g. LCR).

Conclusion

- Very nice paper with a strong identification strategy (main selling point, in my view) linking wholesale funding shocks and demand for synthetic dollars + multiple robustness exercises.
- Link to credit somewhat less clear.
- Model does not seem to bring significant new insights, but valuable to guide the discussion.
- Useful to provide more context about the representativeness of the data.