Pension Fund Flows, Exchange Rates, and Covered Interest Rate Parity

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- Identification challenge: disentangling non-fundamental flows from fundamental/informed flows.
- Role of intermediaries in accommodating non-fundamental flows.

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- Cross-currency basis falls by 25 bp (from an average of -36 bp).

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- Chilean Pension Funds and FyF
- Spot FX Market
- Bank Hedging
- Overed Interest Rate Parity (CIP)

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Chilean Pension Funds













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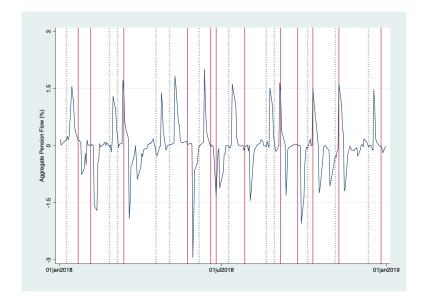
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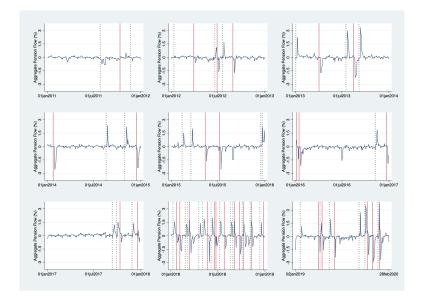
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- Recommendations induce strong flows.

Fund A Flows and FyF Recommendations (2018)



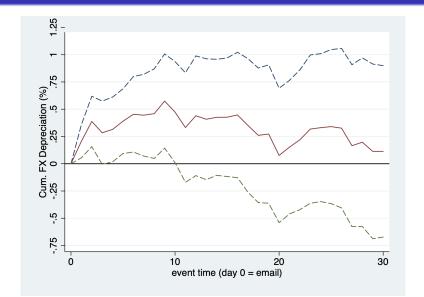
Fund A Flows and FyF Recommendations (2011-2020)



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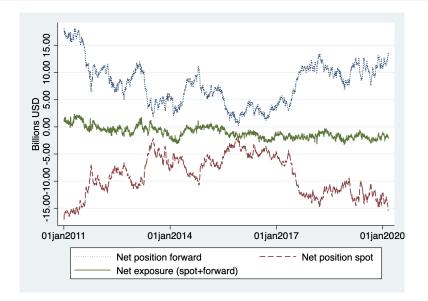
Chilean Peso Depreciates after FyF Recommends to move to Fund A



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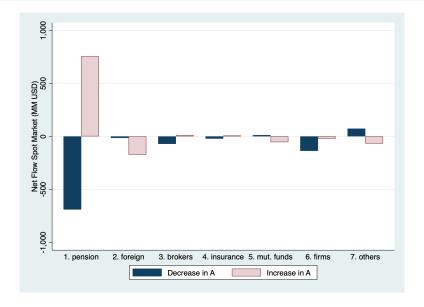
Banks' Net Positions in Spot and Forward Markets



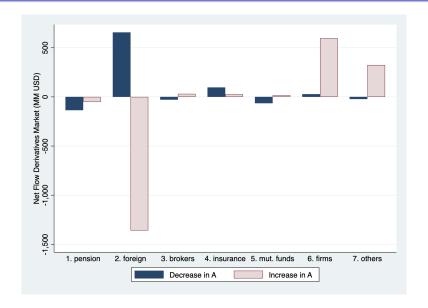
Banks' Hedging following FyF Recommendation



Spot Market Flows and FyF Recommendations



Forward Market Flows and FyF Recommendations



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Covered Interest Rate Parity (CIP)

• The cross-currency basis (CCB) measures deviations from CIP:

$$CCB \equiv (1 + r_{us}) - (1 + r_{chile}) \times \frac{S}{F}$$

CIP

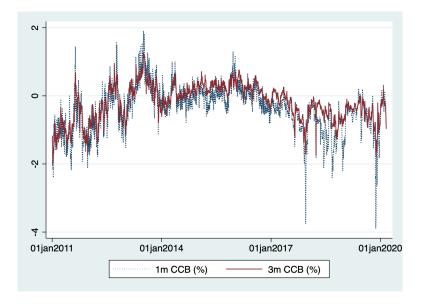
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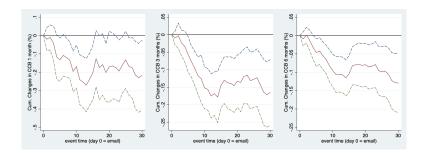
$$CCB \equiv (1 + r_{us}) - (1 + r_{chile}) \times \frac{S}{F}$$

 A negative CCB implies that dollar-swapped Chilean deposits are paying "too much."

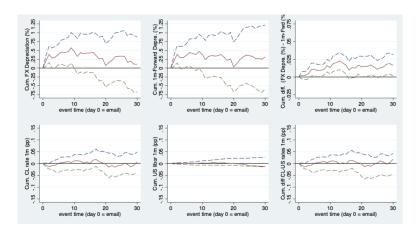
Cross-Currency Basis of Chilean Peso (2011-2020)



CCB falls after FyF Recommends to move to Fund A



The action is in the forward premium, not interest rates



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- Banks move the forward premium depending on whether they need to buy/sell forward.
- Further evidence linking CIP violations to banks:
 - Stronger effects at the end of quarters (Du, Tepper, and Verdelhan, 2018).
 - Stronger effects when bank capital has recently declined (Du, Hébert, and Huber, 2023; He, Kelly, and Manela, 2017).

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 - We estimate a price elasticity of 0.83 for the Chilean Peso (Gabaix and Koijen, 2021).
- Banks' hedging transmits non-fundamental shocks from spot to forward markets.
- Banks' risk bearing constraints contribute to CIP violations.