FX market illiquidity and funding liquidity constraints, by Banti and Phylaktis, 2013

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Two foundational ideas

Funding constraints Financial intermediaries do arbitrage using capital. But:

- What if rational traders lack the capital, or face extreme payments for, the capital that's required for doing arbitrage?
- This can constitute one impediment to market efficiency.

Co-movement of liquidity With equities, and with currencies, there are common factors in liquidity – and funding constraints can be one source of this co-movement.

Both ideas well understood on the equity market; now going into thinking about currencies. Very interesting field!

Funding and currency liquidity – a motivational argument

- One huge activity on the market is covered interest parity arbitrage
- Financial intermediaries require capital in order to setup CIP arbitrage – over and beyond the steps in the CIP formula itself.
- E.g. one may need to post collateral, pay MTM margins, have counterparties that one can trust, and so on.
- When that lubrication breaks down, CIP arbitrage breaks down.
- Example: In the global crisis.
- A possibility: Maybe in normal times, funding constraints are not a big deal, but under extreme stress they become an issue.

A concern with the funding measures of this paper

- The interest rate on financial firms' CP (FCP) is not a funding constraint
- It is the cost of business.
- It just goes into the CIP formula and all is well.
- It does not hinder activity.
- There is a *different* point at which financial firms are unable to borrow, unable to take positions, are forced to closeout winning positions: That is where it's a funding constraints story.
- The new literature on funding constraints is primarily about *quantity*, not price.
- An alternative view: Maybe there is a threshold for the FCP rate below which it's a clean world, and above which funding constraints are showing up.

An example of a regression equation

$$\begin{aligned}\Delta\text{illiq}_t &= \alpha_0 + \alpha_1 \Delta\text{FCP}_t + \alpha_2 \text{VOL}_t + \alpha_3 \Delta\text{TS}_t + \alpha_4 \Delta\text{FF}_t \\ &\quad + \alpha_5 \text{MKT}_{t-1} + \ldots + \epsilon_t\end{aligned}$$

Δilliq_t	Change in liquidity
FCP_t	Change in CP rate
VOL_t	Global FX volatility
ΔTS_t	Change in TED spread
ΔFF_t	Change in FF rate
MKT_{t-1}	Lagged FX market returns

The tyranny of regressions

- Such regressions are riddled with bias.
- Reality is not linear; there are omitted variables; there are outliers.
- We are analysing the impact of x_t upon y_t. Maybe the relationship is reverse.
- In all probability there is time-series structure with everything hitting everything. The obs are not i.i.d.
- This is not a technical problem (that some better estimation strategy can solve). It is a design problem.
- To talk about the impact of x_t on y_t we have to find plausibly exogenous shocks to x_t.
- Or, natural experiments where t_1 and t_2 are similar in most respects but differed in one thing - x_t - for an exogenous reason.

Thank you.