

Online Appendix for 'The Widening of Cross-Currency Basis: When Increased FX Swap Demand Meets Limits of Arbitrage'

Nadav Ben Zeev*

Daniel Nathan[†]

Appendix A Theoretical Motivation

In what follows we lay out a simple structural framework which is meant to fix ideas and form a suitable conceptual base for our paper's empirical analysis. Understanding the drivers of CIP deviations is tantamount to understanding the workings of the FX swap market (see [Du and Schreger \(2022\)](#) and references therein). Accordingly, the framework we use is a partial equilibrium of the FX swap market that builds heavily on [Liao and Zha \(2019\)](#).

G

Expectation and Variance of Local II's Profit. We can write the local II's next period's ex-

Relation between $Q_{t,II}$ and b_t . In the previous section we interpreted

increase in b_t (i.e., a widening of the basis) which depends on the level of the arbitrageur's initial arbitrage capital

This prediction has strong economic intuition given that lower A_t

,

(B.1)

we accord with the reasoning from [Miranda-Agrippino and Ricco \(2021\)](#), who estimate a hybrid

posterior distribution:

$$vec(B_i) \mid \mathcal{S}_{i,v}^2 \sim N(vec($$

with variance s

modified so as to improve estimation precision (Müller (2013

the horizon and $j = [L, I]$):

$$X_{j,h} = \tilde{X}_{j,h} + t_{j,h}, \quad (\text{B.17})$$

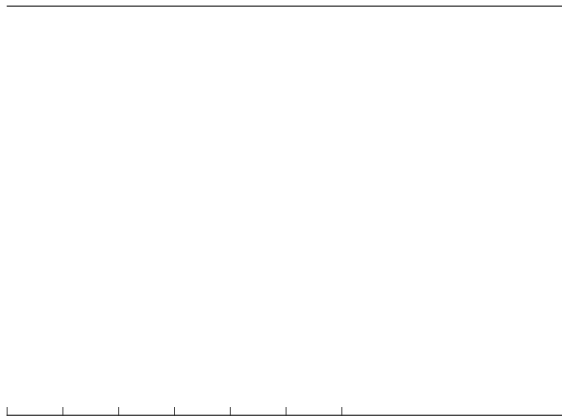
$$\tilde{X}_{j,h} = 2\tilde{X}_{j,h-1} - \tilde{X}_{j,h-2} + g_{j,h}, \quad (\text{B.18})$$

where Equation (B.17) is the model's measurement equation and Equation (B.18) is the model's state equation; $\tilde{X}_{j,h}$ is the smoothed impulse response at horizon h whose first-difference follows a random walk with shock $g_{j,h}$, which is a zero-mean independently and identically normally distributed variable with variance s_g ; and

data)

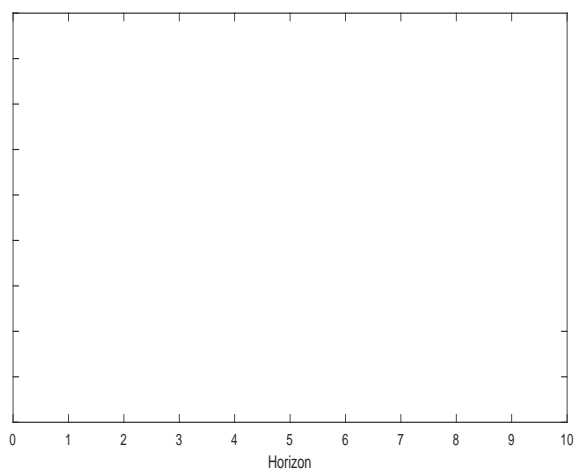
in Figure B.3. This response is obtained by replacing the dependent variable b_{t+h-1} b_{t-1} from Equation (B.4

Figure B.1: LOA-Dependent Impulse Responses of IIs' Aggregate Cross-Currency Basis to an Aggregate FX Swap Demand Shock.



Notes

Figure B.2: LOA-Dependent FEV Shares of IIs' Aggregate Cross-Currency Basis Attributable to the Aggregate FX Swap Demand Shock.



Notes

Appendix C Coefficient Estimates Results

This appendix presents the estimates of the linear coefficient (X

Table C.2: **GIV-With-Controls Estimation Results: Sectoral Swap Flows: Coefficient Estimates.**

Coefficient	IIs	Local Banks	Foreigners	MFs and ETFs	HFs	Real
Linear Coefficient	542.5*** (21.3)	-398.5*** (40.9)	-97.8*** (24.8)	-4.6 (5.4)	-12.7 (26.4)	10.1 (9.3)
Interaction Coefficient	-101.6***	152.6***	-41.5	-1.9	-27.3	5.9

Table C.3: GIV-With-Controls Estimation Results: Robustness Checks: Coefficient Estimates.

Coefficient	IIs' Aggregate Basis (in Basis Points)				
	Alternative LOA	Post-GFC	Pre-COVID	Shorter Lags	Longer Lags
Linear Coefficient	-3.4***	-2.6***	-3.3***	-3.4**	-3.8***

Table C.4: Seasonal Demand Shifter Results: Coefficient Estimates.

Coefficient	IIs' Aggregate Basis (in Basis Points)	
	Seasonal-No-Controls	Seasonal-With-Controls
Linear Coefficient	4.4 (2.9)	4.6 (3.3)
Interaction Coefficient	8.6** (3.7)	7.9** (3.7)
LOA_{t-1} Coefficient	0.3 (0.2)	-5.1 (3.4)
R^2	0.2%	37.9%
Obs	2,650	2,650

