Discussion of "When is Foreign Exchange Intervention Effective? Evidence from 33 Countries"

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This paper

Very interesting and (rightly) ambitious paper.

Event analysis to examine effects of FXI on ER level, trend, and volatility

- Based on novel daily data covering 33 countries, 1995-2011.

Focuses on **effectiveness** (i.e., success in achieving CB objectives)

Rich number of results. Main ones:

- **Sterilized FXI can be an effective policy tool**
- ***Free floaters***: success rate in moving the level of the exchange rate > 80 percent 'under certain criteria'.
- Countries with **narrow band** regimes: High success rate of smoothing and stabilizing the exchange rate.

Explores a ***number of dimensions*** (transparency and communications, interaction with capital controls, etc.)

Carefully executed, large panel data analysis. Potential important contribution to the literature.

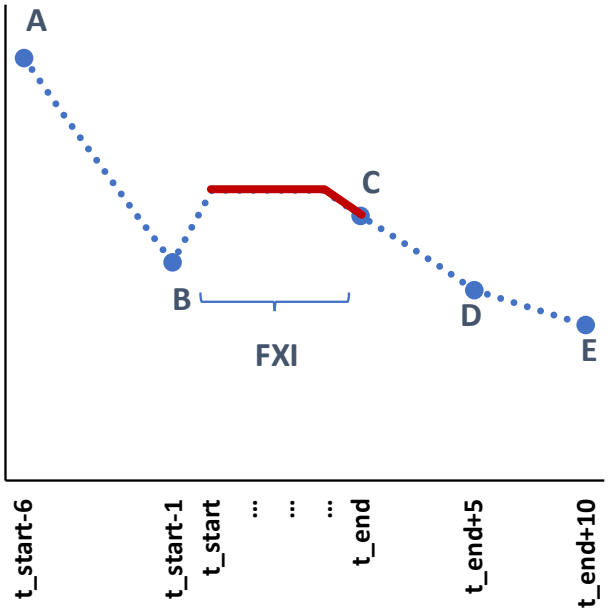
My comments

- FXI success criteria
- Placebo success rates
- Reverse causality
- Exchange rate regime (ERR) as indication of relevant CB objective
- Interpretation of main results
- Broader implications/conclusions

Success criteria

Four Success Criteria

"Event"	Does the exchange rate move in the intended direction during the episode?
"Direction"	As above, but assessed in $t_{end} + 5$
"Smoothing"	Is the slope of the exchange rate development less steep than before the intervention ($t_{start} - 6$ to $t_{start} - 1$, t_{start} to $t_{end} + 5$)?
"Stabilization"	Does the intervention stay until $t_{end} + 10$ always within a two percent band around the exchange rate on day $t_{start} - 1$



Definitions and naming could be refined.

Event (C-B) = Contemporaneous Level Effect

Direction (D-B) = Persistence of Level Effect (explore longer horizons)

Smoothing [(D-B)-(B-A)] = Trend or Speed of Appreciation/Depreciation– but mixes contemporaneous and post-event

Stabilization (within B±2% during B-E)= Volatility – but should be measured relative to trend and separate contemporaneous/post-event

Placebo

Main specification on determinants of effectiveness:

$$c_{ir} = \theta_r + \gamma X_i + \varepsilon_{ir}$$

where $c_{ir} = Prob(success\ criterion\ met \setminus FXI \neq 0)$;

θ_r is the de de-facto ERR

X_i is a vector of event characteristics

Papers determines success by testing $\hat{c}_{ir} > p_r$

where $p_r = Prob(success\ criterion\ met \setminus FXI = 0, \theta_r)$;

Works provided that $p_{r,i} = p_r$ for all i – but may not be the case:

- Stochastic properties of ER may be different
  - After period of sustained (trend) ER appreciation/depreciation
  - When ER is far from its LR value
  - In periods of high market volatility

Methodology

Focus on ***success in achieving CB intervention objectives***

> Two layers of potential bias

- Effect on ER > reverse causality > attenuation bias
- Effect rel. to objective > unobservable objective
  (de-facto ERR > tautological? ERR Endogeneity)

Reverse causality

- **Attenuation bias**
  - Well known by the authors.
  - Matching approach
    - But only as an extension—exact procedure and assumptions not fully clear.
  - This is the key issue in the literature (especially with regard to effect on levels)
  - Suggest to make this main exercise of the paper
    - Highlight the benefits of large panel to achieve identification (through this approach)

Exchange Rate Regime -> CB's FXI objective

- Analysis focuses on success relative to CB objective
- Requires knowing objective > unobservable
- Use (de-facto) ERR to proxy for objective.
- Success criteria are assessed differently for different ERRs
  - Free floaters > Event / Direction
  - Broad and Narrow Bands > Smoothing/Stability
- **Are some the (strongest) results on volatility somewhat tautological?**
  - Definition of ERR based on volatility of the exchange rate (especially under Reinhart-Rogoff 2004 classification?)

Endogeneity of ERR

Low success rate for floaters and high for narrow bands may reflect self-selection

$P(S \mid NB)$= prob. of success in stabilizing ER being a Narrow Band Targeter

$P(S \mid FF)$= prob. of success in stabilizing ER being a Free Floater

Criterion	(4) Stabilization
Regime-specific intercepts	
Free Floater	0.435***
	(0.044)
Broad Band	0.609***
	(0.024)
Narrow Band	0.949***
	(0.009)
Other regime	1.004***
	(0.013)
Intervention characteristics	
Average daily intervention size in % of GDP	0.104
	(0.064)
Intervention with prior 2 weeks' trend (0/1)	0.011
	(0.012)
Intervention towards fundamental (based on distance to 3Y-MA)	-0.004***
	(0.001)
Share of max. local volatility	-0.597***
	(0.039)
Observations	4,549
Adj. R-squared	0.810

$$P(S \mid NB) - P(S \mid FF) = \frac{P(S, NB)}{P(NB)} - \frac{P(S, FF)}{P(FF)}$$

$$= [P(NB \mid S) - P(NB)] \frac{P(S)}{P(NB)P(FF)}$$

Interpretation: not that FXI is effective for NB targeter; but CB is NB targeter b/c of its ability to conduct effective intervention.

Still points to effectiveness. FXI is effective **for some** but not necessarily for all. **ERR not a determinant.**

Main results

Table 5: *Determinants of effectiveness*

Criterion	(1) Event	(2) Smoothing	(3) Stabilization
Regime-specific intercepts			
Free Floater	0.532***	0.798***	0.435***
	(0.053)	(0.043)	(0.044)
Broad Band	0.414***	0.712***	0.609***
	(0.024)	(0.028)	(0.024)
Narrow Band	0.213***	0.745***	0.949***
	(0.012)	(0.018)	(0.009)
Other Regime	0.133***	0.835***	1.004***
	(0.021)	(0.031)	(0.013)
Intervention characteristics			
Average daily intervention size in % of GDP	0.330***	0.115	0.104
	(0.104)	(0.077)	(0.064)
Intervention with prior 2 weeks' trend (0/1)	0.099***	-0.065**	0.011
	(0.015)	(0.028)	(0.012)
Intervention towards fundamental	0.004***	0.001	-0.004***
(based on distance to 3Y-MA)	(0.001)	(0.001)	(0.001)
Share of max. local volatility	0.004	0.215***	-0.597***
	(0.041)	(0.050)	(0.039)
Observations	4,549	1,787	4,549
Adj. R-squared	0.373	0.800	0.810

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Event criterion

1. Small FXI > small chance of working

- Largest for FF but marginally larger than placebo.
- Low success probability for BB. Strong result—many managed floaters are in this group!
- Does this mean FXI more effective when infrequent? Signaling?

2. Very large FXI needed for meaningful chance at success

- 0.33 coefficient is small--average daily FXI is 0.05%GDP.
- Should coefficient vary with the ERR?

3. Interventions in line with trend/toward fundamentals

- Now success rate increases. Placebo?

Main results II

Smoothing and stabilization criterion

1. Evidence of strong effectiveness for broad and narrow band regimes
- Consistent with consensus
- Tautological?

2. Surprising that FXI size doesn't matter. Intuition?

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Oral Interventions

Event criterion

1. "… actual interventions are more effective at moving the exchange rate if they are noticed by markets"

Results suggest secrecy does not matter.

What matters is if there is oral intervention (OI)

> transparency or commitment?

Smoothing/Stabilization

2. OI has negative effect. Interpretation?

3. FXI and OI do not help reduce volatility during turbulent times. Aren't they deployed primarily at those times?

Table 7: *Effectiveness, information, and central bank communication*

Criterion	(1) Event	(2) Smoothing	(3) Stabilization
Communication			
Unnoticed intervention (0/1)	-0.044	-0.041	0.014
	(0.033)	(0.031)	(0.030)
Any oral intervention (0/1)	0.081***	-0.086***	-0.057***
	(0.018)	(0.025)	(0.014)
Turbulent time (0/1)	-0.058	-0.130*	-0.053
	(0.041)	(0.074)	(0.044)
Any oral intervention (0/1) x Turbulent time (0/1)	0.137**	0.175**	-0.065
	(0.060)	(0.085)	(0.054)

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--> What is OI exactly?

More information on the content of OI

Broader Implications and Conclusions

- **General results**
  - Effectiveness in reducing volatility > consensus
  - Effectiveness in moving levels only for floaters
    - ➢ Effect for managed floaters? By how much?
- **Direction of effect good enough if no policy trade off, but:**
  - Quasi-fiscal cost of FXI
  - Conflicts with other policy objectives

  > Magnitudes matter
- **Macroeconomic relevance**
  - Do effects on levels persist beyond 1-2 weeks?

In conclusion:

- Very interesting, thought-provoking paper.
- Wealth of information/data to be exploited – although replication is an issue
- ***Suggestion: focus on effects (not success), with matching approach as main exercise, highlighting the advantages of a large FXI panel to help identification.***

Thanks!