

Comments on
“The Effects of Intraday FX Market Operations in Latin America: Results for Chile, Colombia, Mexico and Peru”
by
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Outline

- Summary of paper
- Pros and cons of common methodology approach
- Comments on results and conclusions
- Comments on market turnover analysis
- Research suggestions
- Other comments



Summary of Paper (1)

- The paper provides a common methodology analysis of the intraday exchange rate effects of time-stamped, sterilized, rules-based, foreign currency reserve management operations (Chile, Colombia, and Mexico) and time-stamped, sterilized, discretionary interventions (Peru)
- The common methodology follows Dominguez (2003, 2006)
- The paper concludes:
 - 1) skewness of the exchange rate return is negative on “intervention” days (the authors’ interpretation is that “intervention” occurs when crash risk is high); kurtosis of the exchange rate return is higher on “intervention” days (“intervention” occurs when extreme values are more likely)



Summary of Paper (2)

- 2) Rules-based foreign currency reserve sales or purchases of pre-announced quantities have small and transitory effects on exchange rate returns (in the expected direction)
- 3) Rules-based foreign currency reserve sales or purchases of pre-announced quantities have a positive and in many cases transitory effect on exchange rate returns volatility
- 4) The effects of foreign currency reserve management operations are smaller than the effects of US macro news
- 5) The effects of foreign currency reserve purchases are similar whether assessed using indicator variables/dummies or actual amounts (Colombia)
- 6) Foreign currency reserve purchases permanently increase market turnover in amounts equal to the purchases (Colombia)



Pros and Cons of Common Methodology Approach (1)

- Advantage of using a common methodology:
- Differences in results across different countries could not be driven by the use of different methodologies, thus differences in results across different countries can be compared and explained by different approaches to “intervention”

- Disadvantage of using common methodology:
- One and the same methodology is not necessarily the best suited methodology for analyzing each of these four very different “intervention” data sets (that describe “interventions” carried out for different reasons and in different ways)
- Choice of methodology is not explained or motivated



Pros and Cons of Common Methodology Approach (1)

- Methodology: Dominguez 2003, 2006
- Context: G3 interventions (1977-1994/1989-1995)
- Step 1: Compare the first four moments of the distribution of exchange rates across intervention versus non-intervention days
- Step 2: Run event study regressions to estimate the influence of intervention (and macro news) on exchange rate returns and exchange rate volatility (only intervention days included in regressions)
- One notable Step 2 extension: Event study regressions to estimate the influence of intervention (and macro news) on exchange rate market turnover (Colombia)



Pros and Cons of Common Methodology Approach (2)

- Dominguez (2003, 2006): Analysis of G3 interventions that are discretionary, infrequent, (largely) unpredictable, and carried out in varying amounts
- In the G3 context, interventions do not occur with regularity and do not occur only during a few extended time-periods; accordingly the non-intervention days also do not occur only during a few extended time-periods. Accordingly, neither the intervention nor the non-intervention periods are associated with particular economic or institutional circumstances
- In the G3 context, it thus makes sense to compare exchange rate behavior across intervention and non-intervention days, and it makes sense to consider interventions as events and estimate event study regressions



Pros and Cons of Common Methodology Approach (3)

- Current study: Objectives, frequency, and predictability:
- Chile: Explicitly targeting predetermined foreign reserve quantities; all “interventions” are purchases of foreign currency; target daily amounts pre-announced; uncertainty about intraday timing
- Colombia: Same as Chile
- Mexico: Explicitly targeting predetermined foreign reserve quantities; all “interventions” are sales of foreign currency; target daily amounts pre-announced; no uncertainty about intraday timing
- Peru: Discretionary intervention aimed at reducing volatility; intervention and amount made public with a lag (at the end of the intervention day)



Pros and Cons of Common Methodology Approach (4)

- Current study: Sample periods:
- Chile: 14 April to 29 September 2008 and 3 January 2011 to 16 December 2011 (two “episodes of intervention”)
- Colombia: 2 May 2007 to 23 November 2011 (three rounds of pre-announced daily “intervention”, each lasting several months, and totaling 387 “intervention” days; four “no-intervention” periods for a total of 638 “no-intervention” days)
- Mexico: 9 October 2008 to April 2010 (“intervention sample”) and days with no “intervention” during 12 April 2010 to 29 November 2011 (“non-intervention sample”)
- Peru: 5 January 2009 to 27 April 2011 (comprising a total of 126 intervention days)

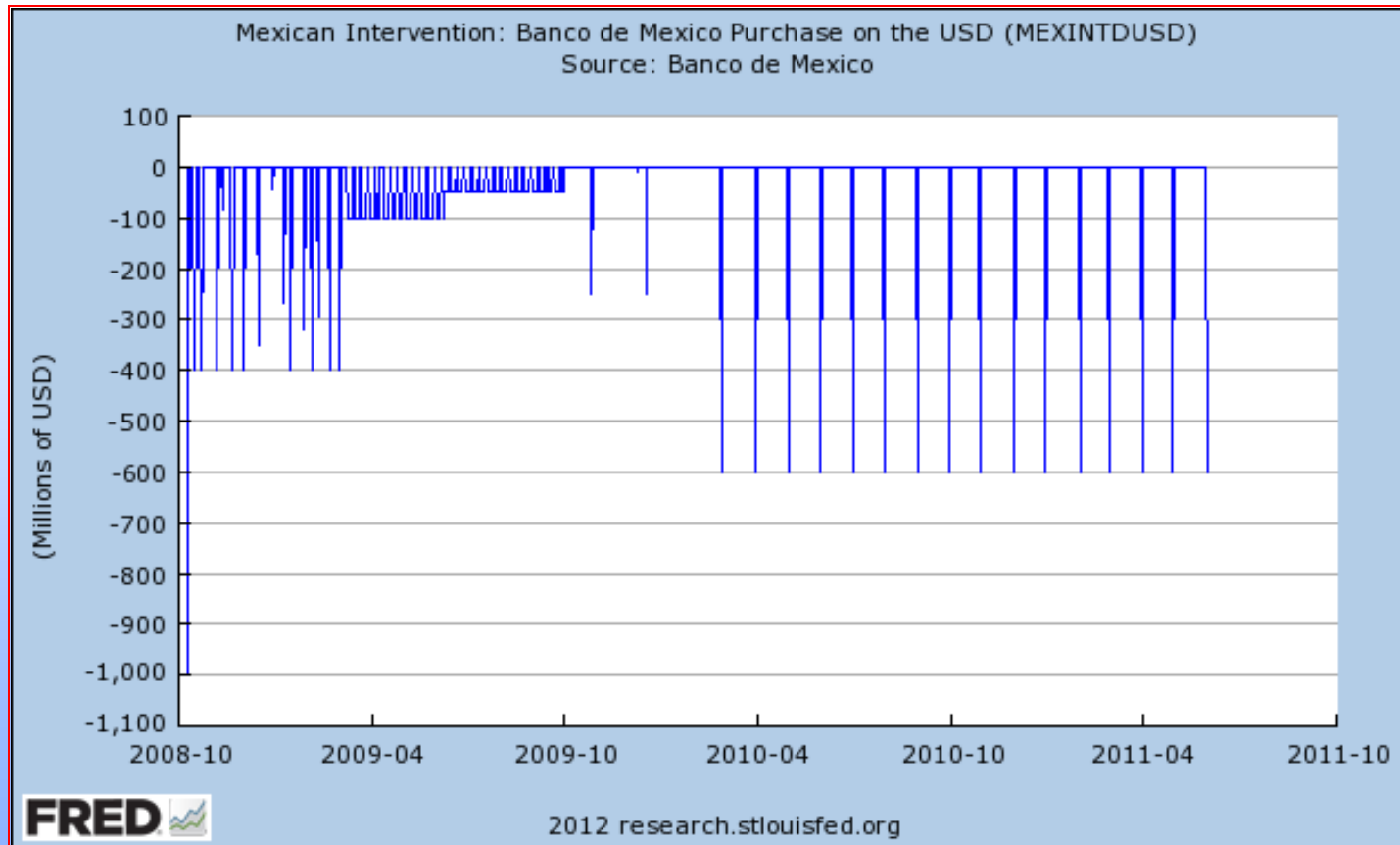


Pros and Cons of Common Methodology Approach (5)

- Is the Dominguez (2003, 2006) methodology well suited for:
- Chile: Not enough information on the data to answer the question (two extended periods of foreign currency purchases)
- Colombia: Possibly (three extended periods of foreign currency purchases and four extended periods of no activity)
- Mexico: No (1 ½ years of daily foreign currency sales compared to no activity days over subsequent 1 ½ years of less frequent foreign currency sales)
- Peru: Yes (1 ½ years of discretionary and relatively infrequent interventions)



Pros and Cons of Common Methodology Approach (7)



Comments on Results and Conclusions (1)

- Does it make sense to find ongoing effects of pre-determined operations in a forward-looking market?
- Is uncertainty about intraday timing really enough to explain the findings (particularly in regards to the estimated effect on foreign exchange returns)?



Comments on Results and Conclusions (2)

- Step 1 results (comparison of exchange rate moments across “intervention” and “non-intervention” days):
 - 1) unclear if these results are based on formal statistical testing or merely based on assessing whether “number a in table 1 is larger than corresponding number b in table 2”
 - 2) when formal statistical testing is explicitly mentioned, the results are generally inconclusive (e.g. normality test for Peruvian data cannot reject symmetry of returns but rejects normality consistent kurtosis; test of equality of group variances for Colombian data may or may not reject variance homogeneity, it depends on the particular times of intervention)



Comments on Results and Conclusions (3)

- US macro news (regression results):
 - 1) The US macro news data does not consist of surprises (macro announcement relative to market expectations of the announcement) but merely announcements
 - 2) The construction of signed announcement dummies seems unclear (Colombia); how are positive and negative macro surprises identified without employing a measure of expectations?
 - 3) The construction of quantitative announcement variables based on median and standard deviation of past announcements seems ad-hoc (Mexico)



Comments on Results and Conclusions (4)

- 4) Why use dummies for US macro news for Colombia and quantitative US macro news variables for Mexico in a common methodology paper?
- 5) Is it meaningful to discuss the estimated magnitude of the effect of US macro news when US macro news appear in the form of dummy variables (Colombia)?
- “Intervention” amount versus dummy (Colombia)
- 1) When “intervention” amounts are fixed it is not very interesting, and should not be one of the key conclusions of the paper, that the effects of “intervention” are qualitatively the same whether “intervention” amounts or dummies are included in the estimations



Comments on Results and Conclusions (5)

- Description of results and associated conclusions:
- 1) The discussion of the regression results pertaining to the mean returns do not seem to fully match what the associated regression result graphs show (graph 4)
- 2) Some results seem more mixed than what the associated conclusions would suggest (e.g. kurtosis results: “This tends to be higher on intervention days in Columbia and Mexico, but lower in Chile and Peru”; kurtosis conclusion: “returns exhibit...heavy tails (high kurtosis) [during intervention days]”).)



Comments on Market Turnover Analysis (1)

- Event study regression analysis suggests that a foreign currency reserve purchase increases the turnover on impact in an amount equivalent to the purchase amount (Colombia)
- Since market turnover and volatility are generally positively correlated, the authors are puzzled that exchange rate volatility does not increase accordingly
- The foreign currency purchase is not intended to influence the market and, furthermore, has been preannounced. Thus the purchase does not constitute news and, in line with the trading desk report referred to in the paper (p. 26), would therefore not cause day-traders to initiate additional trades (with associated effects on volatility). That this is the case seems confirmed by the one-for-one increase in market turnover result.



Research Suggestions (1)

- Does it make sense to find ongoing effects of pre-determined operations in a forward-looking market, continued:
- Include more institutional details on reserve policy announcements and, if possible, provide evidence for whether or not the respective market participants understood that foreign currency reserve operations were not interventions (i.e. not aimed at influencing the exchange rate)
- This seems particularly important in the case of Colombia where the first extended period of foreign currency purchases followed a period (not under study) of discretionary interventions



Research Suggestions (2)

- Carefully examine exchange rate behavior at the time when foreign currency purchase (Chile and Colombia) and sale (Mexico) announcements are made
- Carefully examine exchange rate behavior at the time when a previously announced foreign currency purchase scheme is unexpectedly halted (Chile 29 September 2008)
- Complement the event study analysis with a time-series analysis of the intraday exchange rate effects of foreign currency purchases and sales separately across each extended purchase/sale period (Chile, Colombia, and Mexico in particular)



Research Suggestions (3)

- Analyze the exchange rate effects of foreign currency reserve purchases (Colombia) and interventions (Peru) after first conditioning reserve purchase volume and intervention volume relative to market turnover
- Use matching methods (see Fatum and Hutchison 2010 for an application to intervention data) to assess the influence of reserve purchases and interventions where matching is done according to market turnover (e.g. the exchange rate movement coinciding with intervention at time t when market turnover is X is matched with an exchange rate movement coinciding with no intervention at time h when market turnover is X)



Research Suggestions (4)

- Use the very high-quality exchange rate data to investigate the intraday effects of reserve management operations and interventions on the bid-ask spread (see Fatum, Pedersen, and Sorensen 2012 for an analysis of the intraday effects of intervention on exchange rate spreads that relies on exchange rate data of a much lower quality)
- This would be particularly interesting in the context of Peru where such an investigation might shed light on transmission channels of intervention



Other Comments (1)

- Motivate choice of methodology
- When the objective of foreign currency reserve purchases or sales is not to influence the exchange rate it seems odd to refer to the possibility of unintended exchange rate effects as “treatment effects” (and, similarly, to refer to these reserve management operations as “interventions”)
- For the Step 1 analysis, the comparisons should entail formal statistical testing (or it should be made clear if this already is the case)



Other Comments (2)

- To ease the readability of the description of the results consider writing “currency x appreciates” instead of currently “the exchange rate appreciates”, “changes are positive” etc.
- Discuss results in light of other studies (studies of intraday effects of intervention in general in regards to the results for Peru; Dominguez, Fatum, and Vacek 2012, who study the intraday exchange rate effects of Czech National Bank foreign currency reserve sales, in regards to the results for Chile, Colombia and Mexico)
- Typo in paper title (FY should be FX)

