

# FX Interventions Rules for Central Banks

## A Risk-Based Framework

Romain Lafarguette    Romain Veyrune

MCM Central Bank Operations Division

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*The views expressed in this presentation do not necessarily represent the views of the IMF, its Executive Board, or IMF management.*



# Key Messages

Foreign Exchange intervention rules should

- ▶ Depend on market conditions
- ▶ Objective, be anchored to a risk tolerance level rather than an arbitrary FX level threshold
- ▶ Capture FX non-linearities and asymmetries between appreciation and depreciation
- ▶ Be forward-looking
- ▶ Be easily operationalizable

We propose an FX intervention rule based on **Conditional Value at Risk**

# Regression Table

|                                 | Constant | Microstructure | CIP      | FXI      | Baseline | Robustness |
|---------------------------------|----------|----------------|----------|----------|----------|------------|
| Intercept                       | 1.09     | -2.16          | 2.15     | 1.67***  | 1.63     | 1.64***    |
| Lag FX log returns              | 0.09***  | 0.08***        | 0.08***  | 0.08***  | 0.08***  | 0.08***    |
| Bid-ask spread abs value        |          | 0.11**         | 0.15***  | 0.14***  | 0.15***  | 0.15***    |
| Forward points first difference |          | 0.32***        | 0.32***  | 0.32***  | 0.27***  | 0.27***    |
| Interbank rate vs Libor         |          |                | -1.11*** | -0.98*** | -1.02*** | -1.03***   |
| FX intervention in USD lag      |          |                |          | 0.04     | 0.04     |            |
| VIX first diff                  |          |                |          |          | 9.78***  | 9.79***    |
| EURUSD log returns              |          |                |          |          | 0.13***  | 0.13***    |
| FX intervention dummy lag       |          |                |          |          |          | 4.13       |
| Omega                           | 0.15***  | 0.14***        | 0.13***  | 0.13***  | 0.14***  | 0.14***    |
| Alpha                           | 0.17***  | 0.19***        | 0.18***  | 0.18***  | 0.19***  | 0.19***    |
| Gamma                           | 0.06***  | 0.06***        | 0.06***  | 0.05***  | 0.05***  | 0.05***    |
| Beta                            | 0.98***  | 0.98***        | 0.98***  | 0.99***  | 0.98***  | 0.98***    |
| Nu                              | 8.81***  | 9.11***        | 9.18***  | 9.15***  | 7.77***  | 7.77***    |
| Lambda                          | 0.13***  | 0.11***        | 0.12***  | 0.12***  | 0.1***   | 0.1***     |
| R2                              | 0.4 %    | 4.9 %          | 5.1 %    | 5.1 %    | 14.3 %   | 14.3 %     |
| R2 adjusted                     | 0.4 %    | 4.8 %          | 5.0 %    | 5.0 %    | 14.2 %   | 14.1 %     |
| Number of observations          | 4511     | 4511           | 4511     | 4510     | 4510     | 4510       |
| Significance *10%, **5%, ***1%  |          |                |          |          |          |            |

# Dynamics of the Mexican Peso against USD

