The Effects of Foreign Exchange Market Operations in (Mexico and Colombia): Results of the Common Methodology Analysis

Banco de México, Banco Central de Chile, Banco Central de Reserva de Perú and Banco de la República

Conference of the BIS CCA Research Network Project
Cartagena, 29-30 November 2012
Summary:

• Non normality of HF returns may highlight the risk of sudden crashes.

• Intervention has a small and transitory effect on HF returns and no evidence of cumulative effects.

• These effects are smaller than the effect of US macro announcements, which are also transitory.

• Intervention may (Colombia) and may not (México) affect return volatility.

• US macro announcements affect return volatility strongly (Mexico) and not so strongly (Colombia) wrt to the effect of intervention.
Summary (2):

- The effect of intervention on returns and volatility depends on the time of intervention (México).

- Intervention affect market turnover on impact only (Colombia). Effect on impact = Intervention amount.

- Effects of intervention on return volatility and market turnover are at odds with a positive correlation between these variables.
Effect of Intervention on Mean Returns (bp).

Intervention has a small and transitory effect on HF returns.
Cumulative Effect of Intervention on Mean Returns.

Colombia

Effect on Returns  Cumulative Effect

Cumulative effects are ruled out in the case of Colombia.
Effect of US news Announcements on Mean Returns (bp).

Effect of US news announcements on returns is bigger than the effect of intervention.
Cummulative Effect of Intervention and US announcement on Mean Returns (bp).

Colombia

Cumm. Effect Int.  Cumm. Effect of News

Cummulative effect of US consumer confidence has a significant and mean reverting cumulative effect on mean returns.
Effect of Intervention on Return Volatility (bp).

Intervention may (Colombia) and may not (México) affect return volatility.
The effect of intervention on returns depends on the time of intervention in México.
The effect of intervention on return volatility depends on the time of intervention in México.
Effect of Intervention on Turnover (million USD) and Volatility (bp)

Colombia

Response of Turnover to 1 million Intervention

Response of Volatility

Intervention affect market turnover on impact only. Effect on impact = Intervention amount. However, the story does not seem to match the effect on volatility.
Turnover and Volatility along a non-intervention day in Colombia

On average there is positive correlation. On short intervals correlation shifts signs. Model of Tauchen & Pitts (1983) explains this behavior.