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June 22, 2012

RBI Working Paper Series 8/2012

Volatility in Exchange Rate of Indian Rupee due to Spillover Effects of Other Markets

The Reserve Bank of India today placed on its website a Working Paper No.8 titled "[Volatility Transmission in the Exchange Rate of the Indian Rupee](#)". The Working Paper has been written by Shri Satyananda Sahoo.

In an environment of growing integration among the financial markets, volatility in the exchange rate of a currency could not only be attributed to domestic macroeconomic and global factors but also attributed to spillover effects emanating from other volatile markets due to market microstructure in terms of differences in timing of trading activity, bid-ask spreads and risk perceptions. In this context, this paper analyses volatility spillovers from the exchange rates of the Brazilian Real, the Russian Ruble, the South Korean Won, the Singapore Dollar, the Japanese Yen, the Swiss Franc, the British Pound Sterling and the Euro to the exchange rate of the Indian Rupee during 2005-11.

The study employs a two-step multivariate generalised autoregressive conditional heteroscedasticity (GARCH) framework to examine the dynamics of exchange rate volatility and its spillovers which is also corroborated by examining simple pair-wise Granger causality tests. All the currencies included in the study exhibit presence of conditional autocorrelation and persistence of volatility in daily exchange rates. The findings support the view that volatilities observed in the exchange rate of the leading currencies, among other things, cause volatility in the daily exchange rate of the Indian Rupee.

The Reserve Bank of India (RBI) introduced the RBI Working Papers series in March 2011. These papers present research in progress of the staff members of RBI and are disseminated to elicit comments and further debate. The views expressed in these papers are those of authors and not that of the Reserve Bank of India. Comments and observations may please be forwarded to authors. Citation and use of such papers should take into account its provisional character.

Press Release : 2011-2012/2051

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