

Title: What events matter for exchange rate volatility?

Authors: Hedibert Lopes Igor Martins

This paper identifies and quantifies the effect of macroeconomics events of multiple countries on exchange rate volatility using high frequency currency returns while accounting for persistent stochastic volatility effects and seasonal components capturing time of the day patterns. Due to the hundreds of macroeconomic announcements and its lags, we rely on sparsity based methods to select relevant events for the model. We contribute to the literature in four ways: First, we identify the macroeconomic events that drive currency volatility, estimate their effect, connect them to macroeconomic fundamentals and show how they can be linked to lower frequency currency returns using a model averaging argument. Second, we find a connection between intraday seasonality, trading volume and opening hours of majors markets across the globe and provide a simple labor-based argument for the pattern found. Third, we show that inclusion of macroeconomic events and seasonal components are key for forecasting exchange rate volatility. Fourth, applying our proposed model for multiple currencies alongside a dynamic copula yields a Sharpe ratio 3.5 times higher than using standard SV and GARCH models.