

Forecasting the USD/COP Exchange Rate: A Random Walk with a Variable Drift

Working Paper No. 253 Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Peter Rowland

This study develops three exchange rate models as well as a simple statistical model defined as a random walk with a variable drift. The exchange rate models all use the purchasing power parity hypothesis to account for the long-term relationships between prices and the exchange rate, together with error correction models to represent any short-term dynamics. The models are estimated for the USD/COP rate of exchange, and their forecast performance is compared to that of a simple random walk as well as to that of the random walk with a variable drift term. Two of the models are shown to outperform the simple random walk on the 12 and 24-months forecasting horizon. However, all the models are outperformed by the random walk with a variable drift, where the drift term is estimated using a Kalman filter. The results suggest that fundamental models might only be a useful tool for forecasting of the exchange rate in the very long run.