

## Forecasting of Some Major Exchange Rates : Structural and Time Series Model's Results

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It is generally pointed out that the forecasting performance of the structural models of the exchange-rate determination is poorer than that of the native Random-walk models. Among the most influential of the empirical studies of exchange-rate forecasting models were those performed by Meese and Rogoff (1983 a, 1983 b, 1985) (M - R) who found that during the 1976-1984 period on structural or time-series technique could appreciably outperform the Random-walk at any forecasting horizon shorter than 12 months. The forecasts M - R constructed were based on the actual future values of the exogenous variables.

Bilson (1978 a), Frankel (1979) and Frenkel (1981) present evidence suggesting that the monetary model broke down, while Dornbusch (1980) and Frankel (1982, 1984) draw the same conclusion for the portfolio - balance approach. Backus (1984) concentrated on the exchange-rate between the U.S. and Canadian Dollars and tested a number of portfolio - balance models, and he has concluded that Random-walk produced the best post sample predictions. Woo (1985) has worked with a monetary model which out performed the Random-walk model in predicting the exchange-rate between the U.S. Dollar and Deutschmark during a forecasting period from March 1980 through October 1981. Meese and Rogoff (1985) extended the analysis of their first two papers in a number of directions; to Mark-Yen and Mark-Pound, Dollar-Mark, Dollar-Yen and Dollar-Pound; to real exchange-rates as well as nominal exchange-rates. The models of systematic behaviour are found to be slightly better than in earlier studies.

### 2. Description of the data and econometric methodology

#### 2.1 Data

The data set consists of quarterly observations for Rupee/Dollar, Dollar/Sterling, Deutschmark/Dollar, Swiss Franc/Dollar, and Yen/Dollar exchange-rates from 1974:1 to 1988:2. The money supply statistics used in M1 or its equivalent in India, the U.K., Germany, Switzerland, and Japan, collected from the *International Financial Statistics*. Interest rates are short-term which are either prime-rates of banks, or the bank-rate. The data for the growth in the industrial production, and changes of the current account balances are also taken from the I.F.S.