

**MODELLING THE STERLING-DEUTSCHEMARK EXCHANGE RATE:
NON-LINEAR DEPENDENCE AND THICK TAILS**

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This paper presents an analysis of the £-DM exchange rate prior to, during, and following sterling's ERM membership. Unlike most of the empirical literature on exchange rates including Pesaran and Robinson (1993), we take a parametric approach to modelling exchange rate dynamics based on the Student's t Autoregressive model with dynamic heteroscedasticity (STAR) due to Spanos (1992). This model, which is more general than standard ARCH-type formulations, is first postulated on the basis of the probabilistic features of the data, and then shown to provide a parsimonious and statistically adequate representation of the data. The estimation results indicate that the statistical distribution of the £-DM exchange rate is leptokurtic in all periods, and that there was a monotonic, sharp decrease in its conditional volatility during ERM membership.

Keywords: *Heteroscedasticity, Leptokurtosis, Non-linear Dependence, Student's t Distribution, STAR Model, £-DM Exchange Rate, ERM*

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