Applied Econometrics of FX Markets

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Topics

1. Basic econometric concepts
    - 1.1 The logic of ordinary least squares estimation
    - 1.2 Hypothesis testing
    - 1.3 Underlying assumptions and related problems

2. Introduction to RATS programming
    - 2.1 RATS Description and environment, RATS files
    - 2.2 Reading data in RATS
    - 2.3 RATS variables and basic transformation
    - 2.4 Printing and plotting time series
    - 2.5 Saving data, programs and estimation results

3. The classical linear regression model
    - 3.1 Uncovered interest parity
        - 3.1.1 Theoretical Considerations
        - 3.1.2 Estimation in RATS
        - 3.1.3 Hypothesis testing
    - 3.2 News Approach of FX markets
        - 3.2.1 Theoretical Considerations
        - 3.2.2 Estimation in RATS
        - 3.2.3 Hypothesis testing
    - 3.3 Diagnostic testing
        - 3.3.1 Autocorrelation
        - 3.3.2 Heteroscedasticity
        - 3.3.3 Non-normality

4. Modelling volatility

4.1 GARCH models

4.1.1 Theoretical Considerations

4.1.2 Estimation in RATS

4.1.3 Diagnostics

4.2 GARCH-M models

3.2.1 Risk adjusted uncovered interest parity

3.2.2 Estimation in RATS

4.3 Markov switching models of FX

3.3.1 Econometric modelling

3.3.2 Estimation in RATS

5. Modelling long-run relationships

5.1 Nonstationary variables

5.1.1 Testing for unit roots

5.1.2 Purchasing power parity

5.2 Cointegration analysis

5.2.1 The Engle-Granger-Methodology

5.2.2 Exchange rates and capital flows

6. Student projects

Literature:

Brooks, C.: RATS Handbook to Accompany Introductory Econometrics for Finance Cambridge University Press, 2009.

Enders, W.: Applied Econometric Time Series, Wiley and Sons, 2010.

Estima: RATS Handbooks, User Guide and Reference Manual, 2010.

Tsay, R.: Analysis of Financial Time Series, Wiley Series in Probability and Statistics, Hoboken 2010.

Copeland, L.: Exchange Rates and International Finance, Prentice Hall, 2005.