Tuesday 25th June 2002   **Room H**
1010 - 1120   **Econometrics & Economic Forecasting**

Chair: **John Fitzgerald**

1. The use of LEB (Linear-Ellipsoidal-Bounded) models in financial forecasting and estimation

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In the field of forecasting and estimation it has been traditional to resort to assumptions that could facilitate the analytical manipulation of density functions, more for convenience than for exactness. Examples of deviations from the usual 'independent samples from a normal distribution' include skewness, leptokurtosis, jumps, and heteroscedasticity. However, there are situations, such as when using returns of high frequency data, which need to use non-normal models.

We present a procedure that does not need to consider the density function of the underlying process in the derivation of estimators, but that relies on the process' temporal behaviour. The equations that describe the process are similar to the familiar least-squares or Kalman filters, but the interpretation and behaviour are different.

Using this procedure, for example, one can include information that usually cannot be incorporated into the forecasting, such as the daily maximum and minimum of prices, still conserving the simplicity of well-known formulations, but adding more information that potentially can help in the forecasting.

A numerical example is presented, showing how the LEB procedure is applied to estimate conjunctly the DAX, Nikkei and Dow Jones indices returns, and comparing the results to a traditional Kalman filter. Extensions to other financial applications will be mentioned, including the use of the formulation for multivariate GARCH and the interpretation of volatility.

2. Consumer confidence indicators and private consumtion expenditure in 13 OECD countries

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Consumer confidence indicators are frequently used by forecasters of the business cycle. This paper examines the predictive power of such indicators in predicting aggregate private consumption expenditure in 13 OECD countries. There is clearly a high degree of correlation between these indicators and private consumption expenditure in the data. However, an evaluation of the forecasting performance of the indicators should be done with reference to reasonable benchmark models. In this paper indicators are added to five different consumption models and the predictive power of the indicators are examined. If the indicators help predict consumption expenditure, independently of the information set used, it is considered useful. A distinction is done between indicators available simultaneously with other data and indicators known in advance. The evaluation is done by comparing predictive performance both within and out-of-sample. The results show that the confidence indicators help predict consumption for some countries, especially when the indicator is known in advance. However, it is also shown that when there is an improvement of the within-sample standard error of the regression or the out-of-sample RMSE it is quite small and economically insignificant.

3. Empirical information criteria for time series forecasting model selection

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In this paper, we propose a new empirical information criterion (EIC) for model selection. It is applicable to situations involving a large number of time series to be forecast. For example, it can be applied to a large inventory of products for which sales need to be forecast on a monthly basis. Our new criterion provides a data-driven model selection tool which can be tuned to the particular forecasting task.

The penalty function for each series is chosen based on the other series. We compare the EIC with other model-selection criteria including Akaike's Information Criterion (AIC) and Schwartz's Bayesian Information Criterion (BIC). The comparison show that for the M3 forecasting competition data, the EIC outperforms both the AIC and BIC.