Econometrics for Risk Management

A practical seminar on the use of econometrics for risk management.
Presented by Dr Ghulam Sorwar

THE COURSE

In current market conditions a rigorous approach to risk management is essential. This programme applies fundamental econometric and data handling techniques to practical problems faced daily by organisations operating in the capital markets. The course is highly relevant to anyone analysing or interpreting financial market data.

PRIOR KNOWLEDGE

Basic knowledge of finance and statistics.

WHO SHOULD ATTEND?

- Traders
- Risk Managers
- Strategists
- Consultants
- Middle and Senior Managers

About LFS

London Financial Studies is a specialist teaching resource that concentrates exclusively on capital markets. We offer individuals, teams and companies a unique and expert teaching resource that combines theoretical understanding with practical experience. LFS is well known for its personal approach and the economic value that it delivers to clients.

www.londonfs.com
Econometrics for Risk Management

DAY I

Understanding the Data - Descriptions and Distributions
- Descriptive measures of data
- Measures of association
- Variance-Covariance matrix
- Introduction to statistical distributions of data
- Introduction to Matrix notation
- Performing matrix operations in EXCEL

Workshop: Variance-Covariance modelling

Making Links and Drawing Conclusions
- Statistical distributions of data continued
- Continuous distributions
- Fat tailed distributions
- Sampling from distributions
- Central limit theorem
- Interval estimation
- Hypothesis testing

Workshop: Simulating and working with distributions

The Teacher

Dr Ghulam Sorwar is a highly experienced finance academic with a wealth of practical experience. Following a career on the derivatives desk at Abbey Life Investment Services, he joined City University Business School where he helped to develop the MSc in Mathematical Trading and Finance and taught the numerical methods course. He is currently a full time member of the finance faculty at Nottingham University and has published widely on financial time series simulation and options pricing for risk management. Ghulam is also an energetic teacher who puts across his subject matter in a relevant and entertaining way.
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DAY II

**Fundamental Techniques - Linear Regression**
- Basics of regression
- Least squares method
- Residual analysis
- Heteroskedasticity, multicollinearity and autocorrelation
- Forecasting

**Workshop:** Regression and forecasting

**Fundamental Techniques - Value at Risk and Time Series Analysis**
- Time series patterns
- Essential time series models
- Forecasting using time series models
- Stationarity
- Complex time series models
- Measuring correlation in time series data
- Problems with time series models
- Introduction to Value at Risk

**Workshop:** Comparing alternative time series models

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Our work is built on four complementary key values:

**Practical application**
What we teach is soundly based in current best practice. Our teachers have extensive practical experience in relevant capital markets.

**Intellectual clarity**
Our teachers are first class communicators and acknowledged experts in their fields. They combine extensive practical experience with profound theoretical understanding. As skilled communicators, they get the message across quickly and effectively. Course exercises deliver effective practical learning that participants remember long after leaving the classroom.
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DAY III

Volatility Modelling
- Characteristics of financial data
- QQ Plots
- Simple volatility models
- GARCH models
- Forecasting using GARCH models
- Maximum likelihood estimation

Workshop: Estimating GARCH parameters using Maximum likelihood estimation

Correlation modelling
- Variance-covariance and correlation
- Different interpretation of correlation
- Difficulties with interpreting correlation
- Modelling time varying covariance
- Modelling time varying correlation
- Estimating parameters in covariance and correlation models

Workshop: Measures of association and correlation modelling

Personal approach
We try to understand the needs of each person and structure courses and packages of real benefit to them. All our teaching groups are small enough to enable individual needs to be assessed and met continually.

Economic value
We understand the commercial environment in which our clients operate. What we teach them delivers tangible benefits to their personal performance and the bottom line of their companies.
Global markets are fast moving, complex and evolving continuously. High-quality professional education is vital to maintain performance.

Tight Focus
Our expertise is in capital markets. That is what we concentrate on. We offer courses and packages on a wide range of topics in this important and complex area. This tight focus enables us to deliver teaching that is uniquely effective and useful.

Theory and practice
The professional and personal qualities of our course leaders are crucial: effective learning can only be delivered by exceptional teachers. At London Financial Studies we are able to attract prominent practitioners and academics all of whom have a clear and thorough grasp of their subjects and wide practical experience. They are all expert communicators with the ability to impart their knowledge in a clear and engaging way.
The course fee is £790 per day plus VAT and includes lunch, refreshments, full documentation and all relevant Excel macros and spreadsheets. An early booking discount of 10% is available for bookings made more than 20 working days before the start of the course. Multiple booking discounts are also available. If delegates cannot attend, substitutes are welcome at any time for no extra charge. An administration charge of 15% will be made for cancellations received earlier than 20 working days before the start of the course. The full course fee will be charged for all cancellations received after that date.

**Econometrics for Risk Management**
(For more than 1 booking, please fill in another form)

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