# FORECASTING FINANCIAL MARKETS N7: ADVANCES FOR EXCHANGE RATES, INTEREST RATES AND ASSET MANAGEMENT

Seventh International Conference sponsored by Elseware, IFS Ltd and I IFFF

FFM2000 will share a Joint Programme with the Computational Finance Conference CF2000 sponsored by London Business School

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#### Program Chairs:

- Christian Dunis(Infacts/StatQ and Liverpool Business School)
- John Moody (Oregon Graduate Institute)
- Allan Timmermann(UCSD)
- Neil Burgess (London Business School)

#### Industrial Chairs:

- Patrick Nam (Elseware)
- Darren Toulson(Intelligent Financial Systems Ltd.)

#### Topics:

- Fund management and trading rules
- Advances in asset management and portfolio optimisation
- Relative value and market neutral strategies
- Modelling volatility and correlation
- Modelling with high frequency data
- Risk analysis and credit trading
- Derivatives pricing models
- Special Session: Weather derivatives

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## FORECASTING FINANCIAL MARKETS / COMPUTATIONAL FINANCE JOINT CONFERENCE PROGRAMME

Day 1: Wednesday 31 May 2000 08:00 Registration & Coffee 08:45 Opening Address

#### SESSION 1 MARKET DYNAMICS AND INVESTMENT STRATEGIES

09:00 Invited Speaker: H. Pesaran (University of Cambridge), Real Time Modelling in Finance.

09:35 EUR/USD Exchange Rate: A Monthly Econometric Model for Forecasting, D. Sartore et al., University Ca Foscari, Venice.
10:00 What Exactly Should We Be Optimising? Criterion Risk in Multi-Component and Multi-Model Forecasting, A. N. Burgess, London Business School.

10:25 Poster Preview, Exhibits and Coffee

10:45 Duration Dependence in Stock Prices: An Analysis of Bull and Bear Markets. A. Lunde et al., Aalborg University.

11:10 Covariance and Correlation in International Equity Returns: A Value-at-Risk Approach, R. Campbell et al., Erasmus University, Rotterdam.

11:35 A Real Options Approach to Hedge Fund Valuation, J. Moody , Oregon Graduate Institute, Portland.

12:00 Lunch, Exhibits and Poster Session 1

#### TUTORIAL SESSION (Additional registration fee applies)

14:30 Tutorial 1: VaR: Volatility, Extremes and Correlation, A. McNeil (Swiss Federal Technical University, Zurich).

15:45 Posters. Exhibits and Tea

16:15 Tutorial 2: Data Mining in Finance, V. Dhar (Stern School of Business, New York.)

17:30 Close of session

#### SPECIAL SESSION ON WEATHER DERIVATIVES

 $14{:}30$  The Use of Weather Derivatives in the Financial and Insurance Markets, R. Douglas, WIRE Ltd., Brighton.

14:55 Weather Data for Derivative Trading, M. Gibbs, The Met Office, Bracknell.

15:20 Weather Derivatives & Basic Pricing Strategies, D. Toulson, Intelligent Financial Systems Limited, London.

15:45 Posters, Exhibits and Tea

16:15 Is Over-analysis Killing the Weather Market? R. McIntyre, R.  $\,$ 

Preston, Speedwell Weather Derivatives, London.

16:40 Weather Derivatives - Strategy for Cracking the Corporate Market, S. Harry, Willis Corroon Ltd., London.

17:05 Panel Discussion & Alternative Risk Transfer: Insurance meets Finance

17:35 Close of session

Day 2: Thursday 1 June 2000 08:30 Coffee

#### PARALLEL SESSION 2 TRADING STRATEGIES

09:00 21 Methodologies to Beat the Market, G. T. Albanis et al., City University Business School, London.

09:25 Optimising Trading Strategies Using Multi-Action Reinforcement Learning, N. Towers et al, London Business School.

09:50 FXYI2: An FX Investing Index, M. Levitt, High Frequency Finance, Sunnyvale, California.

10:15 Poster Preview, Exhibits and Coffee

FX MARKETS

10:45 Nonlinearities Are Simulatneously Present in the Conditional Mean and Variance of Financial Data: Application to High Frequency Exchange Rates, G. Dufrénot et al., Paris 12 University and GREQAM, Marseille. 11:10 Structural Change and Long Memory in Volatility, M. Beine et al., Lille 2 University and SES, MRW, Belgium.

11:35 Intraday Technical Trading in the Foreign Exchange Market, M. Neely et al., Federal Reserve Bank of St. Louis.

12:00 Lunch, Exhibits and Poster Session 2

## PARALLEL SESSION 3 ESTIMATING PROBABILITY DENSITIES

9:00 Recovering the Density Function of Asset Prices Using GARCH as Diffusion Approximations, F. Fornari et al., Bank of Italy and University of Cambridge.

9:25 Testing the Stability of Implied Probability Density Functions, R. R. Bliss et al., Federal Reserve Bank of Chicago.

9:50 Density Estimation through Quasi-Analytic Monte-Carlo Simulation: Option Pricing Bounds under Fixed and Proportional Transaction Costs, N. K. Chidambaran, Stern School of Business, New York.

10:15 Poster Preview, Exhibits and Coffee

#### **CREDIT RISK ANALYSIS**

10:45 Credit Contagion: Pricing Cross-Country Risk in Brady Debt Markets, M. Avellaneda et al., New York University.

11:10 A New Approach to Corporate Loan Default Prediction from Financial Statements. A. Fan et al., University of Melbourne.

11:35 An Equity-Based Neural Network Loan Default Prediction Model, A. Atiya et al., Caltech, Pasadena, California.

12:00 Lunch, Exhibits and Poster Session 2

## PARALLEL SESSION 4 DERIVATIVE PRICING

14:30 Jump-Diffusion Processes: Volatility Smile Fitting and Numerical Methods for Pricing, L. Andersen et al., General Re Financial Products, London.

14:55 Error Bounds on Tree Methods for Calculating Options Prices, D. Basterfield, Oregon Graduate Institute, Portland.

15:20 Fourth Order Finite Difference Method, A. Mayo, IBM, T. J. Watson Research Center.

15:45 Posters, Exhibits and Tea

#### TERM STRUCTURE MODELS

16:15 Bootstrap Results from State Space Form Representation of the HJM Model, R. Bhar et al., University of Technology, Sydney.

16:40 Specification Testing of Univariate Continuous-Time Interest Rate Models, R. G. Fléres et al., EPGE/FGV, Rio de Janeiro.

17:05 Nonparametric Modelling of Parametric Short Term Interest Rate Models, F. Altissimo et al., Bank of Italy, Rome. 17:30 Close of session

#### PARALLEL SESSION 5 CONTROLLING DOWNSIDE RISK

14:30 Building a Mean Downside Risk Portfolio Frontier, G. M. de Athayde, EPGE/FGV, Rio de Janeiro.

14:55 Implementing Dynamic Investment Strategies with Downside Risk, M. Persson, Lund University, Sweden.

15:20 Portfolio Optimization in a Downside Risk Framework, R. Bramante et al., University Cattolica del Sacro Cuore, Milan.

15:45 Posters, Exhibits and Tea

#### **VOLATILITY AND CORRELATION MODELLING**

16:15 The Jumping Interest Rate: Testing, Modeling and Forecasting, R. D. de O. Brito et al., EPGE/FGV, Rio de Janeiro.
16:40 The Arrival of Public Information and Volatility Persistence in Financial Markets, G. Janssen, University of Leuven, Belgium.
17:05 Forecasting FX Volatility Using Canonical Variate Analysis, B. Pilgram et al., University of Western Australia.
17:30 Close of session

Day 3: Friday 2 June 2000 08:30 Coffee

#### PARALLEL SESSION 6 ASSET PRICING MODELS

09:00 Factor Representing Portfolios in Large Asset Markets, E. Sentana, CEMFI. Madrid.

09:25 The 3-CAPM: Theoretical Foundations and a Comparison of Asset Pricing Models, E. Jurczenko et al., Paris 1 University.
09:50 Should International Investors Rely on Asset Pricing Models? A Bayesian Perspective, F. Fornari et al., University of Cambridge.
10:15 Poster Preview. Exhibits and Coffee

#### STRESS TESTING VALUE-AT-RISK

10:45 Value-at-Risk under Non-normality and Non-linearity, I. Mauleon, Universidad Rey Juan Carlos I, Madrid.

11:10 Stress Testing Portfolio Value-at-Risk, F. Bourgoin, Barclays Global Investors, London.

11:35 VaR-based Asset Allocation using Neural Networks, N. Chapados et al., University de Montréal.

12:00 Lunch, Exhibits and Poster Session 3

### PARALLEL SESSION 7 ADVANCED PORTFOLIO ALLOCATION

09:00 Portfolio Selection Based on the Multivariate Skew Normal

Distribution, C. J. Adcock et al., University of Bath.

09:25 Multi-Level Risk-Controlled Sector Optimisation, R. D & Vari et al,

State Street Research and Management, Boston.

09:50 Optimal Benchmark Tracking with Small Portfolios, R. Jansen et al,

ING Investment Management. The Hague.

10:15 Poster Preview, Exhibits and Coffee

#### ADVANCED FORECASTING METHODS

10:45 A Financial Stock Index Trend Prediction Approach with Temporal

Considerations, G. Banavas et al, University of Plymouth.

11:10 Nonlinear Estimation for Linear Prediction, M. Saffell et al.,

Oregon Graduate Institute, Portland.

11:35 Improved Neural Network Forecasting by Optimal State Space

Reconstruction, H.-G. Zimmermann et al., Siemens, Munich.

12:00 Lunch, Exhibits and Poster Session 3

#### **SESSION 8**

#### **VOLATILITY, RISK AND ASSET MANAGEMENT**

14:00 Invited Speaker: M. Dempster (Judge Institute, Cambridge), Dynamic

Model-Based Asset Liability Management.

14:35 Scenario-Based Valuation of Credit Event-Linked Securities, K.

Giesecke, Humboldt University, Berlin.

15:00 Value-at-Risk with Heavy-Tailed Risk Factors, P. Glasserman et

al., Columbia University, New York,

15:25 Posters. Exhibits and Tea

15:50 FX Volatility Forecasts and the Informational Content of Market

Data for Volatility, C. Dunis et al., Liverpool Business School.

16:15 Extreme Values and Time Series: Application to Risk Management, S.

Avouyi-Dovi et al., Banque de France, Paris.

16:40 Invited Speaker: F. Diebold (Stern School of Business, New York),

The Distribution of Stock Return Volatility.

17:15 End of Conference

## Poster Session 1 (Wednesday) - Derivatives Pricing, Portfolio Management, Asset Allocation and Volatility

Risk-Neutral Pricing of Credit Derivatives, M. Jost et al. (WEDIT

Deloitte and Touche, Dusseldorf);

Methods of Symbolic Dynamics in Options Trading, P. Tito et al. (Austrian Research Institute for Artificial Intelligence):

An Icosahedral Lattice Method for Three-Factor Models, L. A. McCarthy et al. (University of New South Wales):

Index Tracking, J. E. Beasley et al. (Imperial College, London);

Risk Characteristics of Actively Managed Market Neutral Portfolios, M. Lundin et al. (Fortis Investment Management):

investment wanagement);

Risk-Averse Asset Allocation Using Reinforcement Learning, R. Neunier et al. (Siemens); Nonparametric

Nonparametric

Specification Tests for Conditional Duration Models, M. Fernandes (European University

Institute); Predicting High Performance Stocks

Using Dimensionality Reduction Techniques Based on Neural Networks, G. T. Albanis et al.

(City University Business School, London);

Estimation Methods in Generalized Long Memory Processes, L. Ferrara et al. (Paris 13 University):

Modeling Realized Volatility, R. Oomen (European University Institute); Long-Run Volatility Dependencies in Intraday Data and Mixture of Normal Distributions, A. Boubel et al. (Evry University);

Volatility Estimation Using High, Low and Close Data - A Maximum Likelihood Approach, M. Magdon-Ismail et al. (RPI, New York);

Volatility Models and Time-Varying Parameters, J. del Hoyo et al. (Universidad Autonoma, Madrid):

Using White's Reality Check with GARCH Models, L.Souza et al. (University of Warwick); Modeling Outliers and Extreme Observations for ARMA-GARCH Processes, P. Verhoven et al. (Curtin University of Technology).

## Poster Session 2 (Thursday) - Option Pricing, Trading Strategies and Risk Measurement

The Valuation of Point Barrier Options in a Path Integral Framework, C.Chiarella et al. (University of Technology, Sydney):

A Neural Network-Based Approach to Extracting Risk-Neutral Densities and to Derivative Pricing, C. Schittenkopf (Austrian Research Institute for AI);

Short Term Interest Rate Option Pricing: An Empirical Analysis of the Relative Accuracy of Implied Volatilities Across Contracts, G.Cifarelli (University of Brescia):

The Quality of Option Price Forecasts: A Dynamic Approach, G. Capelle-Blancard et al. (Paris 1 University):

Exploiting Computational Intelligence Techniques within a Framework for Statistical Arbitrace. A. N. Burgess (London Business School):

Anomalous Scaling in a Stock Market Model with Endogenous Trading Activity Dynamics, G. Iori, (University of Essex);

Expected Utility Maximization and Time Diversification, B. Hannson et al. (Lund University); Profitability and Market Stability in the Presence of a Technical Trading Rule, D. Goldbaum (State University of New Jersey):

Extreme Value Theory for Tail-Related Risk Measures, E. Kellezi et al. (University of Geneva):

Measuring DAX Market Risk: A Neural Network Volatility Mixture Approach, K. Bartlmae et al. (DaimlerChrysler AG);

(Un)Conditionality and Risk Forecasting, J. Danielsson (London School of Economics); Comparing Different Methods for Estimating Value-At-Risk for Nonlinear Real Portfolios, M. Coronado (Universidad P. Comillas, Madrid);

An Efficient and Feasible VaR Method for Highly Nonlinear Securities, L. Iversen et al. (BG Bank, Copenhagen):

Specific Simulation Based on Default Intensities for Risk Measurement of Credit Portfolios, M. Benfaida (DaimlerChrysler AG);

Modeling Liquidity Risk in A Monetary Policy Environment, C. Caglio et al. (University Bocconi, Milan).

#### Poster Session 3 (Friday) - Forecasting, Market Analysis and Volatility

Combining Heterogenous Classifiers for Stock Selection, G. T. Albanis et al. (City University Business School, London):

Optimizing Forecasting Models for Trading Using Meta-Parameters, N. Towers et al. (London Business School);

Dynamical Deseasonalization in OTC and Localized Exchange-Traded Markets, W. Breymann et al. (Olsen and Associates, Zurich):

On Out-of-Sample Statistics for Time Series, F. Gingras et al. (Université de Montréal); Asymmetries as a New Explanation for the Forward Premium Puzzle, J. Coakley et al. (London Guildhall University):

High Frequency Data in Financial Markets - An Academic Review, B. Roche, (University of Bruxelles);

The Stable Paretian Hypothesis and The Asian Currency Crisis, D. Basterfield et al. (Oregon Graduate Institute);

Chile's Downward-Sloping Term Structure of Interest Rates: a Non-Parametric View, V. Fernandez (Catholic University of Chile):

Comparing Data-Driven Spot and Integrated Volatility Estimators with Different Sampling Frequencies and the Design of Optimal Filters, E. Andreou et al. (University of Manchester); GARCH, Implied Volatilities and Implied Distributions: An Evaluation for Forecasting

Purposes, J. Aguilar (Sveriges Riskbank, Stockholm);

Multivariate GARCH with Nonparametric Conditional Correlations, C. Huse et al. (EPGE, Rio de Janeiro);

On the Relevance of Modeling Volatility for Pricing Purposes, M. Moreno (Universitat Pompeu Fabra, Barcelona);

A Volatility Forecasting Model Based upon the Least Common Action Principle, G. Chernizer (CVTM Inc., New York);

The Bed Spread Common Volatility, Volatility Spillovers, Price Discovery and Implications for Trading Strategies, B. Campbell et al. (Concordia University, Montréal);

Revisiting the Finite Mixture of Gaussian Distributions in Futures Markets, T. An et al. (Paris 9 University).

Conference Venue: The Harrington Centre Harrington Hall 5-25 Harrington Gardens London SW7 4JW

#### Registration Fees:

Standard delegate fee: GBP 600. Academics are entitled to a 50% discount (letter on university letterhead required). The fee includes all refreshments and lunches. Additional fee for tutorials: GBP 100. Please note that payment must be received at least one week before the Conference begins.

A conference dinner is organised on Thursday 1 June 2000 for which there will be an additional fee of £ 25 (please register on site on the first day of the conference).

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#### Hotel Accommodation:

We recommend that delegates who wish to stay at Harrington Hall for the duration of the Conference book a room as soon as possible as many conferences will be taking place in London during May. For further information on preferential rates available to delegates, please contact Myèlne Bazsalicza at Elseware on +331 4458 9340. Harrington Hall 5-25 Harrington Gardens London SW7 4JWTel: +44.207.396.9696 Fax: +44.207.396.9090

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