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The Newsletter of the EURO Working Group on Financial Modelling

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# ***NEWSFLOW***

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Number 17

Spring 1998

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# ***NEWSFLOW***

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## **Subscription**

Subscription is free for members of the EURO Working Group on Financial Modelling. See inside back cover for information on membership.

## **Invitation to readers**

Readers are invited to actively contribute to the newsletter. Examples are book reviews, announcements, opinions, lists of published papers, etc.

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*NEWSFLOW* is published twice a year (March and October) by the EURO Working Group on Financial Modelling under a grant from the Erasmus University Rotterdam. Circulation: over 400 to 33 countries.

You can find the latest edition of *NEWSFLOW* on the internet page: <http://www.eur.nl/few/finbel/htmls/finFLOW.html>

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# Editorial

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## Finance and ethics

At the upcoming EURO XVI conference this summer in Brussels, a forum discussion will be dedicated to the relation between operational research and ethics. The introduction of moral values in financial decision making is a trend that is notoriously recognizable in financial practice, but very hard to model in literature. Implicitly though, all financial theories and financial modeling are based on moral values. The characteristics of the free market arguments: individualism, utility maximization, rationality, selfishness, *laisser-faire* and efficiency, are (part of) the set assumptions underlying most financial theory. Economists assume the worst about human behavior. A clear-cut example of this phenomenon in finance is the agency theory. As developed in the seventies, being a period of growing individualism and operational efficiency, the merger market at that time can be seen as a reaction on the after war period of 'national rebuilding of destroyed economies'. The collective and more socially inspired after-war economic atmosphere changed substantially into the free market ambiance of the recent decades. Agency relations are recognized everywhere and explicitly modeled. The contract must protect the principal from the agent's opportunism, but what protects the agent from the principal's opportunism? Many applications of principal agent analysis depict agents in a negative light, as individuals who prefer shirking to working, whose promises cannot be trusted and who will misrepresent information if it is to their benefit. Ethical constraints, such as fairness are completely overlooked, probably because they are hard to model. By ignoring the practical importance of ethical values for the participants, principal-agent models also miss out on a potentially important means of solving the principal's problems. The set of solution possibilities is limited to monetary incentives.

As mentioned before, economics and corporate finance is full of agency relationships. Corporate governance discussions, stakeholder versus shareholders controversies and the like, receive growing attention in literature. From a market perspective the socially responsible investments gain popularity. It may be a challenge for the academic researcher of the next decade to introduce these values into the financial models. Game theory can be of help in such an effort.

**Aloy Soppe**

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## **IFORS '99**

### **15th World Conference on Operational Research**

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Triennial Meeting of the International Federation of  
Operational Research Societies -- IFORS.

Hosted by the Operations Research Society of China

**Beijing, China, August 16-20, 1999**

For more information:

IFORS Secretariat:  
Ms. Loretta Peregrina  
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Tel.: +1 519 661 4220  
Fax: +1 519 661 3485  
E-mail: IFORS@Ivey.uwo.ca

Information also available on the internet-site:  
<http://www.ifors.org/leaflet/triennial.html>

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## **23rd EWG Meeting**

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The 23rd meeting will be held in Kraków, Poland,  
from October 8-10, 1998.

This meeting will be organized by:

**Andrzej M. Skulimowski**

For further information please contact him at:

**The Progress & Business Foundation Cracow  
ul. Florianska 31  
31-019 Kraków  
POLAND  
Tel: +4812.217154 / 217011  
Fax: +4812.217411  
Email: pbf@uci.agh.edu.pl**

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## **Paris – May 1998**

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### **Preliminary Program**

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*Thursday May 14, 1998*

08.45 Welcome – Registration  
09.15 Introductory speech -Schedule presentation

#### **Portfolio Management & Derivative Valuation**

09.45 - 11.15

“The Equivalence of Quadratic and Exponential  
Utility Functions in Portfolio Optimisations”  
C.J. Adcock

“Portfolio Management in the Energy Sector”  
S.W. Wallace

“Derivative valuation with fixed costs: Application  
to Price Process with Barriers”  
E. Jouini

11.15 Coffee Break

#### **Currency Problems, EMU**

11.45 - 12.45

“The Influence of the forecast Horizon on the  
Currency Predictions of Experts, Novices and  
Statistical Models”

M.E. Wilkie-Thomson, A.C. Pollock, K.B.  
Henriksen and A. Macaulay

“EMU and the European Financial Markets”  
A.V. Benos

“Risk Assessment and Sovereign Debt Instruments:  
A Multicriteria Approach”  
E. Clark, R. Cusin and J.B. Lesourd

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**12.45 Lunch**

**Investment and Simulations**

14.15 - 14.45

“CDROM presentation”

P. Gougeon

**Interest Rates**

14.45 - 15.45

“Linear Functionals Preserving a given Preorder with an Application to the Term Structure of Interest Rates”

E. Castagnoli and F. Maccheroni

“An Alternative Perspective on UK Interest Rate and Inflation Forecasting”

R.L. Giles

15.45 Coffee Break

**Portfolio Management**

16.15 - 17.45

“A Dichotomic Algorithm for Mixed-Integer Non-Linear Mean-Variance Portfolio Selection”

D. Favaretto and M. Corazza

“A test of European Financial Integration with a CAPM-type Model and Reverse-event-study Methodology”

A. Alford, Gulser Meric and Ilhan Meric

“The Credit Allocation of Italian Banks in a Portfolio Perspective”

A. Resti

*EVENING: Visit to the Louvre and Dinner*

**Friday May 15, 1998**

**Measurement**

09.00 - 10.30

“Variance vs Downside Risk: Is there really that much Difference?”

H. Grootveld and W. Hallerbach

“Some insights into the Notion of Value-at-risk”

R. Kast, E. Luciano and L. Peccati

“Interest Rate Risk Measurement in the Insurance Companies”

P. Gougeon

10.30 Coffee Break

**Capital Structure, growth & Security**

11.00-12.30

“Capital Structure and Growth”

D. van der Wijst

“Capital Growth with security”

L.C. MacLean and W.T. Ziemba

12.30 Lunch

14.00 Meeting and Organisation (1999)  
J. Spronk and Ramon Sala-Garrido

**Forecasting and time series**

14.15 - 15.45

“High Parallel Computing Simulation on Dynamic Bond Portfolio Management”

V. Moriggia

“On the Practical Construction of Credit Worthness Index”

J. Barle

“Dynamical Information Contents of Runs in Financial Times Series”

A.M.J. Skulimowski

15.45 Coffee Break

**Stages of Decision & Measurement in the Investment Process**

16.15 - 17.30

“Multiple Attractor Dynamics in Socioeconomic Decision Problems”

A. Chevalier and P. Kunsch

“Treating Training Expenditures as Investment in Human Resources”

I. Guerrero

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**Information**

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This meeting is organised by

**Alain Chevalier**

For further information please contact him at:

Groupe ESCP

Département Finance

79, Avenue de la République

75543 Paris Cedex 11

FRANCE

Tel: +33.14.9232000

Fax: +33.14.3559963

E-mail: Chevalie@cscp.ccip.f

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## Abstracts

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If you want to receive one or more of the abstracts of the papers that will be presented at the Paris meeting, please contact the organising committee.

The abstracts will be sent to you by fax.

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## Next meeting(s)

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The Spring 1999 meeting will be organised in Valencia, by Maria Bonilla.

The Autumn 1999 meeting will be organised in Vienna, by Otto Loistl.

The Spring 2000 meeting will be organised in Trondheim, by Nico van der Wijst.

The Autumn 2000 meeting will be organised in New York, by Anoop Rai.

Offers to organise the Spring meeting in 2001 are welcome.

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## *NEWSFLOW* Individual Notes

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Frans de Roon (Erasmus University), Theo Nijman (Tilburg University) and Bas Werker (Université Libre de Bruxelles) have been awarded the second price at the *Robeco Portfolio Management Workshop*. The price, which amounts to CHF 10,000, has been presented on October 17, 1997 in Geneva at the 25th anniversary of the Robeco Group in Switzerland and Belgium. It has been awarded for the paper "*Testing for mean-variance spanning with short sales constraints and transaction costs: The case of emerging markets*". This paper is also part of the PhD-thesis Frans de Roon defended in December 1997.

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## Books

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### **Book of Constantin Zopounidis**

#### **New Operational Approaches for Financial Modelling**

*abstract:* This book is devoted to the 19th Meeting of the Euro Working Group on Financial Modelling. Its basic aim is to present some new operational approaches (i.e. neural nets, multicriteria analysis, new optimization algorithms, decision software, etc.) for financial modelling, both in a theoretical and practical levels.

Contents: New Trends in Financial Modelling - High Performance Computing and Finance - Financial Markets, Portfolio Theory and Selection - Financial Forecasting - Corporate Finance: Investment and Financing Decisions - Insurance Companies and Financial Modelling - Stochastic Modelling and Uncertainty in Finance - Data Analysis and Financial Accounting - Multicriteria Analysis in Financial Decisions.

contact address:

Physica-Verlag

c/o Springer-Verlag GmbH & Co. KG

P.O. Box 311340

D-10643 Berlin

GERMANY

Fax: +49.30.82787301

Email: orders@springer.de

### **Thesis of Frans de Roon**

#### **Essays on Testing for Spanning and on Modeling Futures Risk Premia**

*abstract:* The portfolio choices of investors and asset pricing are two important topics in financial economics. These two topics form the main theme of this study. The first part of the study, which is about spanning and intersection, mainly focuses on the portfolio choices of investors. Building on the well known mean-variance portfolio theory of Markowitz, we analyze whether investors can extend their efficient set by including additional securities in their portfolio, which comes down to evaluating the performance of the additional assets. The analysis of this portfolio question is extended to the case where investors have non mean-variance utility functions, where investors face nonmarketable risks, and where investors face short sales constraints and transaction costs. Empirical applications for the analysis in the first part are given for futures markets and for emerging markets. The second part of this study is about risk premia in futures markets. In this part, we first provide an empirical analysis of the effects that the presence of hedgers has on futures risk premia. This effect is known as the so called hedging pressure. Finally, we give an empirical analysis of the differences in risk premia for futures contracts that differ in their maturity only.

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THE NETHERLANDS

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Fax. 31.10-4526399

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## Working Papers

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From the Rotterdam Institute for Business Economic Studies (RIBES), Erasmus University Rotterdam, Room H15-1, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands, the following papers can be ordered:

- |        |   |          |  |
|--------|---|----------|--|
| 9401/F | Hallerbach, W.G., Duration and bond return approximation, The quaso-convexity effect, January 1994.   | 9615/O/F | Bruining, J., A.C.C. Herst and D. Citron, Loan convenience relationship banking and MBO's in default: a comparative study of the UK and Holland. |
| 9405/F | Smit, J.T.J., The flexibility value of strategic investments under competition, March 1994.   | 9616/F   | Soppe, A.B.M., De rol van rente, geld en vermogen in het wereld economisch proces: een ethische beschouwing.                                     |
| 9414/F | Spronk, Jaap and Erik M. Vermeulen, Interfirm performance evaluation under uncertainty: A multi-dimensional framework, September 1994.                              | 9707/F   | Post, Th. and J. Spronk, Bank performance bench-marking in stochastic environments using log-linear mean-variance data envelopment analysis.     |
| 9422/F | Brouwer, Frank, Paul C. van Aalst and Nico L. van der Sar, Investment risk and risk management revisited, November 1994.  | 9711/F   | Groenendijk, A.A. and J. Spronk, Portfolio performance through the eyes of monkeys.  |
| 9426/F | Hallerbach, Winfried G., A simple approximation to the normal distribution function with an application to the Black & Scholes option pricing model, December 1994. | 9713/F   | Spronk, J. and E.M. Vermeulen, Interfirm performance evaluation under uncertainty.   |
| 9502/F | Higson, Chris and Jamie Elliott, Post-takeovers returns - The UK evidence, March 1995.  |          |  |
| 9503/F | Groenendijk, A.A. and E.E. Hagen, Solving the capital structure puzzle: The government as a stakeholder in the firm, March 1995.                                    |          |  |
| 9504/F | Vermeulen, Erik M., Jaap Spronk and Nico van der Wijst, Analysing risk and performance using the multi-factor concept, april 1995.                                  |          |  |
| 9505/F | Vermeulen, Erik M., Jaap Spronk and Nico van der Wijst, A Framework for conditional failure prediction, April 1995.   |          |  |
| 9508/F | Brännback, M. and J. Spronk, A multidimensional framework for strategic decisions, June 1995  |          |  |
| 9509/F | Hallerbach, W.G. and J.Spronk, Portfolio management for the non-average investor, June 1995.  |          |  |
| 9520/F | Soppe A., De duurzaamheid van het internationale geld en bankstelsel: Een ethische beschouwing, September 1995.   |          |  |
| 9526/F | Groenendijk, A.A., Investeren, kasstroomprojectie en ondernemingswaarde, December 1995.   |          |  |
| 9606/F | Greco S, The splitting property of fuzzy financial laws, September 1996.  |          |  |
| 9612/F | Post, T. and J. Spronk, Interactive data envelopment analysis, September 1996.  |          |  |

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## Working Papers

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From the Erasmus Center for Financial Research (ECFR), Erasmus University Rotterdam, Room H5-9, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands, the following papers can be ordered:

- |      |   |      |  |
|------|---|------|--|
| 9501 | Martin Martens and Paul Kofman, Intraday leads and lags with index-futures arbitrage.   | 9702 | Terry H.F. Cheuk and Ton C.F. Vorst, Average rate caps.  |
| 9502 | Philip H. Franses and Olaf van Thull, Forecasting stock market volatility using (nonlinear) GARCH models.                               | 9703 | Philip Hans Franses and Hendrik Ghijsels, outliers, GARCH and forecasting volatility.  |
| 9503 | Guus C.E. Boender and Fred Heemskerk, A static scenario optimization model for asset/liability management of defined benefit plans.     | 9704 | Cees Dert and Bart Oldenkamp, Optimal guaranteed portfolios and the casino effect.   |
| 9504 | Guus C.E. Boender, A hybrid simulation/optimization scenariomodel for asset/liability management.                                       | 9705 | Fabio Mercurio and Ton C.F. Vorst, Option pricing hedging at fixed trading dates.  |
| 9505 | Ivo J.M. Arnold and Chamiel de Koning, The effect of diverging inflation trends on exchange rates.                                      | 9706 | Frans A. de Roon, Theo E. Nijman and Chris Veld, Analyzing specification errors in models for future premia with hedging pressures.  |
| 9506 | D.J.E. Baestaens and W.M. van den Bergh, The marginal contribution of news to the DEM/USD swap rate.                                    | 9707 | Bart Oldenkamp and Ton C.F. Vorst, Time and option pricing theory: another perspective.  |
| 9601 | Monique Donders and Ton Vorst, The Impact of Firm Specific News on Implied Volatilities.  | 9708 | Martin Martens and Onno Steenbeek, Open outcry electronic trading systems: the Case of the Nikkei market.  |
| 9602 | Philip Hans Franses and Paul van Homelen, On Forecasting Exchange Rates Using Neural Networks.  | 9709 | Guus C.E. Boender, Paul C. van Aalst and Fred Heemskerk, Modelling & management of assets & liabilities of pension plans in the Netherlands.                               |
| 9603 | Dick van Dijk, Philip Hans Franses and André Lucas, Testing for ARCH in the Presence of Additive Outliers.                              | 9710 | Guus C.E. Boender, Bart Oldenkamp and Martijn Vos, Solvency insurance with optioned portfolios: an empirical investigation.  |
| 9604 | Antoon Pelsser and Ton Vorst, Optimal Optioned Portfolios with Confidence Limits on Shortfall Constraints.                              | 9711 | Frans A. de Roon, Theo E. Nijman and Bas J.M. Werker, Testing for mean-variance spanning with short sales constraints and transaction costs: the case of emerging markets. |
| 9605 | Terry Cheuk and Ton Vorst, Complex Barrier Options.   | 9712 | Ronald Mahieu and Rob Bauer, A Bayesian analysis of stock return volatility and trading volume.  |
| 9606 | Fabio Mercurio and Juan Moraleda, An Analytically Tractable Interest Rate Model with Humped Volatility.                                 |      |  |
| 9607 | Juan Moraleda and Ton Vorst, Pricing American Interest Rate Claims with Humped Volatility Models.                                       |      |  |
| 9608 | Ronald van Dijk, Teun Kloek and André Lucas, Forecasting Stock Returns using Bilinearities in Fundamentals and Macroeconomic Variables. |      |  |
| 9609 | Guus Boender, Fred Heemskerk and Sacha van Hoogdalem, Asset/Liability Management: De Indexerings Afspraken.                             |      |  |
| 9701 | Philip Hans Franses and Kasper van Griensven, Forecasting exchange rates using neural networks for technical trading rules.             |      |  |

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# EURO Working Group on Financial Modelling

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The EURO Working Group on Financial Modelling was founded in September 1986 in Lisbon. The primary field of interest for the Working Group can be described as “financial models that help to solve problems faced by financial managers in the firm”. From this the following objectives of the Working Group are distinguished:

- providing an international forum for exchange of information and experience on financial modelling;
- encouraging research in financial modelling (new techniques, methodologies, empirical studies, software, etc.);
- stimulating and strengthening the interaction between financial economic theory and the practice of financial decision making;
- cooperating and exchanging information with other universities and financial institutions throughout Europe.

It can be stated safely that the Working Group has become an established one. To give an idea: about 300 members, 16 international meetings and an own newsletter (*NEWSFLOW*) are three examples of the success until now.

## *Meetings*

The meetings of the Working Group are organized twice a year, in April/May and in November/December. Earlier meetings were held in Belgium, Curaçao, Cyprus, Finland, Hungary, Italy, the Netherlands, United Kingdom, Germany, Greece and Croatia. There are now members in 17 countries from 4 continents. The meetings are attended by 80-100 members on average, most of them scientists but also representatives from the financial institutions, and are usually organized on Thursday, Friday and Saturday morning. The organizers are expected to schedule three types of sessions: a round table session with invited speaker(s), regular sessions with the presentation of refereed papers and balloon sessions in which unrefereed papers, new topics and ‘loose’ ideas can be discussed.

## *Newsletter*

*NEWSFLOW*, the newsletter of the Working Group is published twice a year, about one month before each meeting. It contains general information about the Working Group and the next meeting(s), abstracts of the papers of the next meeting, letters from readers, announcements of financial seminars, calls for papers, a list of working papers, etc. For information about *NEWSFLOW* please contact the editor: Hélène Molenaar, address below.

## *Membership*

For information about membership of the EURO Working Group on Financial Modelling, you may write to:

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