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The Newsletter of the EURO Working Group on Financial Modelling

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# ***NEWSFLOW***

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# ***NEWSFLOW***

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Subscription is free for members of the EURO Working Group on Financial Modelling. See 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.

## **NEW!!!!**

You can now find information about the Euro Working Group on the internet.  
See the site [www.finance-on-eur.nl](http://www.finance-on-eur.nl) and select 'Research'.

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## Editorial

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### EMERGING FINANCIAL MARKETS: OPPORTUNITIES FOR RESEARCH

The rapid economic growth of the newly industrialised countries, particularly in the South East Asian region, has led to a tremendous need for funds to finance this growth. This in turn has acted as a catalyst for the development of the financial markets. In most of these countries the stock markets are well established with regulatory bodies overseeing their functioning. Similarly, serious efforts are being made to develop the bond market, although, so far only few of the developing countries can claim to have a viable and transparent bond market. In addition to the development of the financial markets, there is an enormous need for financial services both by the corporate and the public sector. The financial services which are in most demand include, leasing, factoring, venture capital and project financing and insurance. The banks and the financial institutions are equipping themselves both in terms of manpower and networks to meet this demand. The techniques of project financing are needed to meet the growing demand for funds for the development of infrastructure. One should also note that the financial markets are globalising at a rapid pace, and given the development of Information Technology the pace of change is likely to accelerate. Already, most of the portfolio managers are developing mutual funds which are oriented towards the emerging markets. The recent Asian financial crisis also demonstrated very clearly the interdependence of the financial markets. This has led to a spate of Mergers and Acquisitions involving financial institutions in the emerging markets and the developed countries.

It should however be stressed that the financial crisis in Asia is not over. Although, the governments claim that most of the countries in the region will have a real growth in the year 2000. The discussions with the corporate sector and the banks give a different interpretation of the situation. It seems that the problem of non performing loans have yet to be resolved. Different solutions are being envisaged, including securitization of a part of the loan portfolio and simultaneously raising new equity. The corporate sector is finding it difficult to raise new funds from the market. The stock markets are not convinced, this is reflected in the evolution of the market indexes.

Given the rising importance of the emerging markets in the global scene, it is important to understand these markets in order to better understand their performance and the likely changes that are going to take place in the near future. Emerging countries are also targets for foreign direct investments given their rising importance in the global economy. Firms entering these markets need to raise funds and manage risks. It seems to us, that there are several areas in which research should be carried out, they include:

- Analysis of the financial markets in some of the emerging economies with a view to understanding the mechanisms and instruments and also to highlight the role of the major actors. The governance and transparency issues of these markets need also to be analysed.
- To study the integration of these markets to the global economy by analysing the causality and correlation with the major financial markets.
- To analyse the possibilities of using these markets by foreign investors to raise funds and manage their financial risks. The research should include the use of financial engineering techniques such as project financing for financing the infrastructure projects.
- One area that deserves a particular emphasis, is how financial engineering techniques can be used for reinforcing the equity of the financial institutions. The financial institutions are still carrying significant amount of non performing loans and are facing great difficulties in raising new equity to meet the capital adequacy requirements.

Alain Chevalier, Professor ESCP-EAP  
Jyoti Gupta, Professor ESCP-EAP

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## Call for papers EJOR

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Thusfar, the European Journal of Operational Research has published a number of special issues on Financial Modelling:

Issue 74/2, edited by T. Martikainen, I Virtanen and P. Yli-Olli;

Issue 91/2, edited by E. Castagnoli and J. Spronk. In 1998, the European Journal of Operational Research together with the EURO Working Group on Financial Modelling decided to start a more regular series of feature issues.

A feature issue on financial modelling is an issue of EJOR partly or wholly devoted to financial modelling. The intended frequency of these feature issues on financial modelling is once or twice per year.

Papers on financial modelling are solicited that help to solve financial-economic decision problems in practice. Papers may relate to new insights, both theoretical and empirical, into the environment in which decision makers operate, new tools available to the decision makers and to the integration of these tools within frameworks for financial-economic decision making. Papers that stimulate and strengthen the interaction between financial economic theory and the practice of financial decision making, will be especially welcome.

The first feature issue was published as Issue Volume 114, Number 2, April 16, 1999, and edited by J. Spronk. The second feature issue was edited by N. v.d. Wijst and J. Spronk and will be published soon.

Authors who want to submit to the upcoming feature issue are kindly invited to submit four copies of their paper to the Guest Editor Financial Modelling:

Nico van der Wijst  
The Norwegian University of Science & Techn.  
Dept. of Managerial Economics &  
Techn. Management  
Alfred Getz vei 1  
N-7034 Trondheim  
NORWAY  
Tel. + 47.73.597712  
Fax + 47.73.593603  
E-mail: [Wijst@iot.ntnu.no](mailto:Wijst@iot.ntnu.no)

With respect to format and other requirements of submitted work, the authors are kindly referred to the Instructions to Authors, that can be found in every issue of EJOR. For the feature papers there is a separate board of editors, consisting of

**Wolfgang Bühler**, University of Mannheim, Germany

**Erio A. Castagnoli**, Università Luigi Bocconi, Italy

**Michael A.H. Dempster**, University of Cambridge, UK

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**Stavros A. Zenios**, University of Cyprus, Cyprus

**William T. Ziemba**, University of British Columbia, Canada

**Constantin Zopounidis**, Technical University of Crete, Greece

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## 28th EWG Meeting

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The 28th meeting will be held in Vilnius, Lithuania, on 26-28 April, 2001.

This meeting will be organized by:

**Dr. Leonidas L. Sakalauskas**

For further information please contact him at:

**Baltic Operation Research Society  
Institute of Mathematics & Informatics**

**Akademijos st. 4**

**Vilnius 2600**

**LITHUANIA**

**Tel: +370.2.359 207**

**Fax: +370.2.729 209**

**Email: [sakal@kti.mii.lt](mailto:sakal@kti.mii.lt)**

More information about this meeting can be found on the internet site

<http://www.science.mii.lt/EWGFM-28>

which is expected to be accessible around November 15, 2000.

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## New York 16-18 November 2000

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### Program

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The Program of this meeting can be found on the internet site:

[http://people.hofstra.edu/faculty/anoop\\_rai/ewg27.htm](http://people.hofstra.edu/faculty/anoop_rai/ewg27.htm)

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### Information

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This meeting is organized by:

**Dr. Anoop Rai**

For further information please contact him at:

**Hofstra University  
Department of Finance  
221 Weller Hall  
Hempstead, NY 11549  
U.S.A.**

**Tel: +1-516-4635356**

**Fax: +1-4634834**

**Email: [anoop.rai@hofstra.edu](mailto:anoop.rai@hofstra.edu)**

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## Next meeting(s)

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Originally, Rita d'Ecclesia and Sara Simonelli had planned to organise their meeting in Capri in Autumn 2001. Because of circumstances this meeting is now planned for Spring 2002.

There are offers for organising meetings in Bath (UK), Cyprus and Cape Town. The exact scheduling is still to be determined together with the organisers.

Offers to organise one of the future meetings are welcome.

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## Euro XVIII

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From July 9-11, 2001 in Rotterdam. For more information:

<http://www.fbk.eur.nl/PRJ/EURO2001/content.html>

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## New book(s)

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*Dynamic Asset Liability Management*

By Roy Kouwenberg

*Abstract:* Asset liability management is concerned with optimal investment strategies and financing policies for investment funds that have to meet financial obligations. This includes the financial planning problems of pension funds, banks and insurance companies, which face the daily task of managing billions of dollars of retirement savings, deposits and insurance premia. Due to its practical relevance, asset liability management has become an important subject of research, attracting scholars from multiple disciplines, including finance, operations research and actuarial science. This book focuses on dynamic investment strategies and financing policies for asset liability management. It analyzes simple financial economic models that provide qualitative insight into the investment problem, as well as stochastic programming models that provide a quantitative solution and can deal with practical issues like transaction costs and trading limits.

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## Working Papers

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From the *Rotterdam Institute for Business Economic Studies* (RIBES), Erasmus University Rotterdam, Room H15-28, 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.  | 9719/F   | Meulen, J. van der and J. van der Voort, Er valt wat te zeggen voor passief beleggen.  |
| 9503/F | Groenendijk, A.A. and E.E. Hagen, Solving the capital structure puzzle: The government as a stakeholder in the firm, March 1995.                                    | 9721     | Post, G.T., Transconcave Data Envelopment Analysis   |
| 9504/F | Vermeulen, Erik M., Jaap Spronk and Nico van der Wijst, Analysing risk and performance using the multi-factor concept, april 1995.                                  | 9822     | Kouwenberg, R., Dynamic Portfolio Insurance: A Stochastic Programming Approach   |
| 9505/F | Vermeulen, Erik M., Jaap Spronk and Nico van der Wijst, A Framework for conditional failure prediction, April 1995.   | 9824     | Soppe, A., Capital, Interest and Ethics: Some Empirical Explorations of an Ethical Approach of economic growth                                   |
| 9508/F | Brännback, M. and J. Spronk, A multidimensional framework for strategic decisions, June 1995  | 9847     | Post, G.T., Estimating non-convex production sets using transconcave DEA   |
| 9509/F | Hallerbach, W.G. and J.Spronk, Portfolio management for the non-average investor, June 1995.  | 9905     | Post, G.T., Nonparametric efficiency estimation in stochastic environments   |
| 9520/F | Soppe A., De duurzaamheid van het internationale geld en bankstelsel: Een ethische beschouwing, September 1995.   | 9911     | Kuosmanen, T. and G.T. Post, Robust Efficiency Measurement. Dealing with outliers in Data Envelopment Analysis                                   |
| 9526/F | Groenendijk, A.A., Investeren, kasstroomprojectie en ondernemingswaarde, December 1995.   | 9913     | Hallerbach, W.G. and J. Spronk, A Multicriteria Framework for Risk Analysis  |
| 9606/F | Greco S, The splitting property of fuzzy financial laws, September 1996.  | 9922     | Spronk, J. and W.G. Hallerbach, Het "redelijk rendement" voor ondernemingsactiviteiten vanuit financieel-economisch perspectief                  |
| 9612/F | Post, T. and J. Spronk, Interactive data envelopment analysis, September 1996.  | 9933     | Post, G.T. and J. Spronk, Evaluating productive performance under uncertainty  |
|        |   | 9934     | Kuosmanen, T. and G.T. Post, Measuring economic efficiency with incomplete price information.  |

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## Working Papers

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From the *Erasmus Center for Financial Research* (ECFR), Erasmus University Rotterdam, Room H11-01, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands, the following papers can be ordered:

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|------|---|------|--|
| 9801 | Roy Kouwenberg, A stochastic programming model for asset liability management for pension funds.  | 9903 | Philip Hans Franses and Patrick J.F. Groenen, Visualizing time-varying correlations across stock markets.                              |
| 9802 | Dick van Dijk, Philip Hans Franses and André Lucas, Short patches of outliers, ARCH and volatility modeling.  | 9904 | Pauline Bod, David Blitz, Philip Hans Franses and Roy Kluitman, An unbiased variance estimator for overlapping returns.                |
| 9803 | Philip Hans Franses and Richard Paap, Modeling day-of-the-week seasonality in the S&P 500 index.  | 9905 | Martin Martens and Ser-Huang Poon, Correlation dynamics between international stock markets using synchronous data.                    |
| 9804 | Jenke ter Horst, Theo Nijman and Frans de Roon, Style analysis and performance evaluation of Dutch mutual funds.  | 9906 | Jaap Hoek, Patrick Houweling and Frank Kleibergen, The joint estimation of term structures and credit spreads.                         |
| 9805 | Jenke ter Horst, Theo Nijman and Frans de Roon, Performance analysis of international mutual funds incorporating market frictions.                                | 9907 | Winfried Hallerbach and Bert Menkveld, Value at risk as a diagnostic tool for corporates: the airline industry.                        |
| 9806 | Monique Donders, Roy Kouwenberg and Ton Vorst, Options and earnings announcements: an empirical study of volatility, trading volume, open interest and liquidity. | 9908 | Ser-Huang Poon and Peter F. Pope, Tests of option market efficiency: a high frequency data and common volatility component approach.   |
| 9807 | Bert Menkveld and Ton Vorst, A pricing model for American options with stochastic interest rates.   | 9909 | Jacek Gondzio, Roy Kouwenberg and Ton Vorst, Hedging options under transaction costs and stochastic volatility.                        |
| 9808 | Jon Danielsson, Philip Hartmann and Casper de Vries, The cost of conservatism: extreme returns, value-at-risk, and the Basle multiplication factor.               | 9910 | Jon Danielsson, Bjorn N. Jorgensen and Casper G. de Vries, VoF or VAR? Firm Value and Risk Management.                                 |
| 9809 | Antoon Pelsser and Ton Vorst, Pricing of flexible and limit caps.   | 2001 | Ton Vorst, Optimal Portfolios under a Value at Risk Constraint.  |
| 9810 | Phil Hunt, Joanne Kennedy and Antoon Pelsser, Markov-functional interest rate models.   | 2002 | Bert Menkveld and Ton Vorst, A Pricing Model for American Options with Stochastic Interest Rates.                                      |
| 9811 | Antoon Pelsser, Pricing double barrier options using analytical inversion of Laplace transforms.  | 2003 | Henk Grootveld and Winfried G. Hallerbach, Upgrading Value-at-Risk from Diagnostic Metric to Decision Variable.                        |
| 9812 | Phil Hunt and Antoon Pelsser, Arbitrage-free pricing of quan-to-swaptions   | 2004 | Philip Hans Franses and Roy Kluitman, Unbiased Variance Estimators for overlapping Returns when the Returns have First-Order Dynamics. |
| 9813 | Roy Kouwenberg, Dynamic portfolio insurance: a stochastic programming approach.   | 2005 | Arjan Berkelaar and Roy Kouwenberg, Retirement Saving with Contribution Payments and Labor Income as a Benchmark for Investments.      |
| 9901 | Dick van Dijk, Philip Hans Franses, André Lucas and Nick Taylor, SETS, arbitrage activity, and stock price dynamics.  | 2006 | Arjan Berkelaar and Roy Kouwenberg, Dynamic Asset Allocation and Downside-Risk Aversion.   |
| 9902 | Jan Annaert and Marc J.K. de Ceuster, The big mac: more than a junk asset allocator?  | 2007 | Yulia Veld-Merkoulova, Price Limits in Futures Markets: Effect on the Price Discovery Process and Volatility                           |

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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 decision makers in the firm, intermediaries and the investment community”. 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: over 300 members, 25 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 October/November. Earlier meetings were held in Belgium, Curaçao, Cyprus, Finland, France, Hungary, Italy, the Netherlands, United Kingdom, Germany, Greece, Croatia, Poland and Spain. There are now members in 34 countries spread over 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* or for publication of your contributions please contact the editor: H  l  ne Molenaar, address below.

## *Membership*

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

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