

---

## Editorial

---

### Kostas Andriosopoulos\*

Research Centre for Energy Management,  
ESCP Europe Business School,  
London NW3 7BG, UK  
Email: kandriosopoulos@escpeurope.eu  
\*Corresponding author

### Michael Tamvakis

Cass Business School,  
City University London,  
Northampton Square,  
London EC1V 0HB, UK  
Email: m.tamvakis@city.ac.uk

### Rita D'Ecclesia

MEMOTEF Department of Mathematical Methods for Finance,  
Economics and Trade Flows,  
Sapienza University of Rome,  
Roma, Italy  
Email: rita.decclesia@uniroma1.it

**Biographical notes:** Kostas Andriosopoulos is an Assistant Professor in Finance and Energy Economics and Executive Director of the Research Centre for Energy Management at ESCP Europe Business School. He holds a PhD in Finance (Cass Business School, City University London). He also holds an MBA and MSc in Finance (Northeastern University, Boston, USA), and a bachelor's degree in Production Engineering and Management (Technical University of Crete, Greece). His current research interests include price modelling, financial engineering and the application of risk management techniques and innovative investment strategies in energy, shipping and agricultural commodities' markets, and international trade.

Michael Tamvakis trained as an economist at the Athens University of Economics and Business in Greece. He then joined the International Centre for Shipping, Trade and Finance at the (then) City University Business School; first as a student on its MSc programme, and then as a member of its academic staff. He received his PhD from City and is currently Professor of Commodity Economics and Finance at Cass and visiting professor at HEC (University of Geneva). He lectures in international commodity trade, commodity derivatives, energy economics and shipping economics, where he also focuses his research interests.

Rita D'Ecclesia holds a PhD in Corporate Finance and a BA(Hon.) in Statistics. She is Full Professor at Sapienza University of Rome and Visiting Professor at Birkbeck, University of London; Director of the PhD programme

in International Economics and Finance (Doctoral School in Economics) at Sapienza University of Rome; Chair of the Euro Working Group for Commodities and Financial Modeling and Associate Editor of several journals. In addition she is the Director of the International Summer School on Risk Measurement and Control organised at Sapienza University of Rome. She teaches courses at both undergraduate and graduate level. Her most recent research topics are related to risk measurement in financial and commodity markets.

---

The second volume of this Special Issue on Commodities Financial Management of the *International Journal of Financial Engineering and Risk Management (IJFERM)*, as with the first volume, is also an eclectic collection of papers focusing on a number of different areas of commodities markets.

In their paper, Panella, D'Ecclesia, Stack and Barcellona build a predictive model based on neural networks (NN) for each of the two most globally active crude oil futures markets, Brent and WTI, using 'next nearby' or M1 daily closes on ICE and NYMEX, respectively. The authors find that their modelling approach with NN successfully produces accurate predictions for crude oil prices, over a one year horizon, proven to be extremely useful in a highly volatile and rapidly changing market with 'major booms and busts' – up-moves and down-moves.

Next, Abouarghoub, Mariscal and Howells provide with their study a distinctive empirical insight into the dynamics of tanker freight rates, by proposing a two-state Markov-switching distinctive conditional variance model that matches the two-state conditional freight variance to the most suitable GARCH specification. To this end, the authors investigate the hypothesis of the second moment of freight return (conditional variance) being regime state dependence and then they examine the suitability of different conditional variance models to better capture freight dynamics within these distinct regimes. Their modelling approach is applied on the Baltic Dirty Tanker Index (BDTI), a time series that represents freight rate positions for a fleet of tankers. Findings support the hypothesis that tanker freight dynamics are state dependence and are better captured by distinctive conditional volatility models, which subsequently provide better risk measures.

In their paper, Samis and Davis use Monte Carlo simulation with both Discounted Cash Flow (DCF) and Real Options risk pricing techniques to analyse an actual project financing proposal for a small gold mine. Monte Carlo simulation combined with real options analysis proves to be a powerful tool for understanding how financing distributes value and risk among project stakeholders. Creditors' concerns about default and equity holders' concerns about protective loan covenants can be compared with the proposed modelling approach that helps interested parties, including government, to balance their competing interests.

Finally, Barone-Adesi, Geman and Theal study in their paper the effects of the gold lease rate, speculative and pricing pressure in the gold market. To understand how speculative agents can affect the gold futures market, the authors examine the open interest data from the Commodity Futures Trading Commission (CFTC) Commitment of Traders (CoT) report. The data consists of weekly open interest values for commercial, non-commercial and small trader positions collected from the CFTC reports spanning the period from January 1996 until October 2009. The authors argue that the derived lease rate can serve as an observable form of the convenience yield of gold, and in such a

framework exhibit a strong impact of short-term lease rates (1-month duration) on the level of discretionary market inventory. Finally, it is shown that increased speculative activity in gold futures contracts is associated with higher futures returns.

As with the first, the second volume of this special issue offers a wide range of papers with an insight into the multi-faceted research currently carried out on commodities, specifically on issues around commodity pricing and modelling.