Energy and Value Letter

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Energy and Value Letter

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Energy and Value Letter

EDITORIAL POLICY OF THE ENERGY AND VALUE LETTER

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The objective of the Energy and Value Letter is to bring together academics and practitioners from all over the world to focus on timely valuation issues in the energy sector. It publishes news from the Centre for Energy and Value Issues, its linked organisations and others (including calls for papers), practitioners' papers: short articles from institutions, firms, consultants, etcetera, as well as academic papers: short articles on theoretical, qualitative or modelling issues, empirical results and the like.

Contributions dealing with developed as well as developing countries are made public. Specific topics will always refer to energy issues and include, but are not limited to: Financial Regulation; Financial Markets; Financial Risks; Asset Pricing; Value at Risk; Capital Structure; Sourcing Capital; Corporate (Re-) Structuring; Corporate Governance; Behavioural Finance; Financial Performance; Cost Control; Financial Accounting; Fiscal and Legal Issues.

In the initial stage of the journal, virtually all of the publications are on invitation. Nevertheless, the journal welcomes unsolicited contributions. Please e-mail to **energyandvalue@gmail.com**, c/o Özgür Arslan, a copy of a news item or a completed paper. The cover page should include the affiliation, address, phone, and e-mail of each author together with appropriate JEL classifications. A news item should not have more than 400 words and a paper should not exceed 3.000 words.

With your readership and candid comments, the Energy and Value Letter will grow in volume and quality over time. In this first volume of the journal, some steps are set to get hold of this future. Mehmet Baha Karan writes on the 2nd Multinational Energy and Value Issues conference and André Dorsman introduces the Centre for Energy and Value Issues. Nanne Brunia and Bert Scholtens have an interesting paper on performance issues in the oil industry.

I leave you with one provoking thought. Globalisation in all markets, despite the pains recently experienced in financial markets, is a desirable fact of life. Global integration of energy markets, so that prices and values (of products that can be cleanly converted into clean power generation) are truly set by supply and demand forces, is a most desirable objective. The effect will be seen in increasing the size of the global economic cake and at the same time, most importantly, increasing the well-being of the populations of developing and emerging economies.

Together with my co-editors-in-chief Özgür Arslan and André Dorsman, I look forward to the promotion of these ideals with colleagues and readers by way of the Energy and Value Letter.

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HACETTEPE UNIVERSITY

Second Multinational Energy and Value Conference

July 2-5, 2009 Istanbul, Turkey
http://www.rug.nl/feb/onderzoek/energyandvalue/index

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Energy and Value Letter

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On the eve of the event itself, I write a few notes on the Second Multinational Energy and Value Conference in the City of Istanbul, July 2-5, 2009. I hope that our international academic collaboration in the energy finance area, which commenced with the first energy and value conference in Amsterdam in 2007, will improve and reach to a sounder ground by way of this conference.

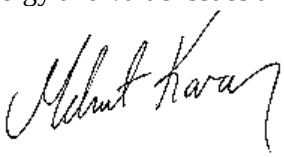
I expect that our conference will very beneficial to the energy sector, in the current situation in which the magnitude of influence of the global financial crisis particularly on the energy markets is becoming more intensive. The importance of international contacts and cooperation concerning energy finance is steadily growing in the setting of a crisis which is characterized by extremely volatile petrol prices, sharp falls in asset prices and hardship in accessing sufficient external finance for energy financing.

With an aim of providing a more organized contribution to the studies in the area of energy finance, our core group will in a short time, settle their activities under the framework of the "Centre for Energy and Value Issues" (CEVI). Therefore the objective is to have an institutional formation to cooperate with, not only the researchers working on the energy finance, but also with the practitioners in the energy industry. Our efforts hereto will continue throughout the conference.

I am proud to announce both academic studies and practice contributions. Just as with the conference that took place in Amsterdam, also in the Istanbul conference separate sessions are organized in separate days for the presentations of the academics and the practitioners. We expect that there will be a major interest to the sessions in both of the days.

I like to refer to the symbolic significance of carrying out the conference in Turkey. It is widely known that Turkey is located between the world's energy markets and resources and hence bears the feature of being a natural bridge of energy. On the one hand Turkey links the western and eastern economies in the energy field through the Nabucco pipe line. On the other hand it has the role of combining the Western and Eastern cultures. In accord with this, our objective is to bring together academics and practitioners who work on energy finance in different countries and diverse cultures.

Our formation has started with a conference, of which the second edition is about to start now. We attempt to strengthen it with a journal soon. We will continue to develop and grow our efforts on energy and value issues all through the years.



Chair of the Conference

Energy and Value Letter

INTRODUCING THE CENTRE FOR ENERGY AND VALUE ISSUES

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1. What is CEVI?

The Centre for Energy and Value Issues (CEVI) is a multinational platform for academics and practitioners who deal with economics, finance and management issues in the energy sector. CEVI organises seminars and conferences, publishes a quarterly e-journal, is involved with specials in other journals and aims to set up a research book series.

CEVI is founded by André Dorsman (VU University, Amsterdam, The Netherlands) and Mehmet Karan (Hacettepe University, Ankara, Turkey), taking over an initiative by Wim Westerman (University of Groningen, The Netherlands). Practitioners and academics from all over the world are invited to join us.

2. CEVI Conferences

The first conference on Energy and Value Issues was held in Amsterdam, the Netherlands, from June 27-29, 2007. Being jointly organised by the University of Groningen and the Energy Delta Institute, it laid down the basic structure for future conferences with a day of practitioners' presentations and a day of academic paper presentations. Out of the 20 papers received, 15 were accepted for the conference. Next, 8 of these were submitted for a special on energy and value issues in Frontiers in Finance and Economics (FFE) and 3 of these will be published in autumn 2009.

The Second Multinational Energy and Value issues Conference is organised by Hacettepe University. It will be held in Istanbul, Turkey, from July 2-5, 2009. Out of the 31 papers submitted, 26 were accepted for presentation. Abstracts of the papers will be published in a conference book. A selected number of papers can be submitted to FFE, which aims to have a second energy and value special. Other papers may be advised to be sent to, albeit in abbreviated form, CEVI's Energy and Value Letter.

3. Other CEVI activities

The shortcut for the energy and value website is: http://www.rug.nl/feb/energyandvalue. CEVI mainly uses it as a platform for information about the actual conference and for publishing the e-journal. CEVI prepares a book on energy issues in Western Europe and Turkey, which should become the starter for a research book series. The Energy and Value Letter aims to keep hold of any relevant news.

4. CEVI goals

CEVI is a tool to bring scientists from all over the world together and to stimulate research and education in energy and value issues. CEVI is also a tool to unite practitioners from many countries to help them to solve energy and value problems jointly. CEVI stimulates exchanges between scientists and practitioners by way of meetings and publications.

Oil price changes and performance evaluation

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1. Introduction

The prices of primary commodities like oil are highly volatile. The presence of fixed costs in energy technologies implies that both demand and supply respond differently to oil price increases and decreases. Real option theory suggests that oil price volatility will reinforce this asymmetric response. Kuper and van Soest (2006) confirm this effect for energy use in fifteen OECD countries between 1978 and 1996. On the supply side the effects of oil price volatility are exacerbated by the operating leverage of oil development projects (McCormack and Vytheeswaran, 1998). Since a considerable fraction of the cost of such projects are fixed, or at least not related to oil price changes, project cash flows tend to be even more volatile than oil prices. Between 1998 and 2003, the link between exploration spending and oil price increases seems to be decoupled: oil prices more than doubled, whereas exploration spending fell by more than 40% (Osmundsen et al., 2007). The complex relationship between prices and quantities in the oil industry might obscure the connection between the value of oil companies in relation to (adjusted) accounting profits and cash flows.

The value of a company is identical to the sum of its capital and the present value of the expected future economic profits. Economic profit differs from reported accounting profit in many ways. First, economic profit takes account of the opportunity cost of *all* capital. Second, it adjusts for what might be called conservative accounting practices. Research and development costs are for example directly expensed by accountants and not matched with the future pay-offs of these investments (Chan, Lakonishok and Sougiannes, 2001). This non-adjustment for conservative accounting practices results on average in too low values of the company's capital and in hence a return on capital that exceeds the economic rate of return. The successful effort method used for development and exploration costs, and the unit of production method of depreciation are examples of conservative accounting typical for the oil and gas industry (Osmundsen et al., 2007). McCormack and Vytheeswaran (1998) recommend adjusting the accounting data of oil companies for changes in the net present value of its oil reserves. Their measure of economic profit is more closely related to changes in the market value of the 25 major US oil companies.

The adjustment of the accounting data recommended by McCormack and Vytheeswaran (1998) reveals a weakness of accounting data. The accountant's return on capital is in general a poor indicator of the true economic rate of return (Stark, 2004). The bias of the accountant's return on capital depends crucially on the cash flow patterns of the company's projects relative to the method of depreciation applied to its investments. Oil price volatility has a leveraged effect on project cash flows, but given the level of production it has no effect on depreciation charges. Therefore, it cannot be expected that the accountant's return on capital will properly reflect the economic rate of return.

The literature is much more positive about the relation between *changes* in the accountant's return on capital and *changes* in the economic rate of return (Stark, 2004). Changes in the accountant's return on capital do, all other things equal, indicate changes in the true rate of return. However, this prediction is derived under the assumption that expectations are always realized. But oil price volatility might reduce the correlation between the accountant's return on capital of oil companies and the true economic rate of return. In our analysis, we specifically look into the impact of inflation on the accounting bias of the internal rate of return.

2. Analysis

We use simulations to quantify the bias of the accounting rate of return. Assume that the firm's projects have an economic rate of return of 6%, a constant stream of real cash flows for 10 years, and that the firm applies straight-line depreciation. Table 1 presents the bias of the accounting rate of return of this firm in the

steady state without any excess returns. With 2% inflation and real growth, the accounting rate of return is 0.6%-point higher than the economic rate of return. Ignoring the accounting bias results, using standard valuation techniques, in a valuation error of approximately 15%. Inflation increases this error, whereas real growth reduces the valuation error.

Table 1. The accounting bias, inflation, and real growth

Real growth	Inflation		
	0%	2%	4%
0%	0.0%	0.9%	1.4%
2%	0.5%	0.6%	0.9%
4%	0.2%	0.3%	0.4%

The size of the accounting bias and the valuation error depend crucially on the mismatch between cash flow patterns and depreciation schedules. Constant extraction rates characterize the production of upstream oil companies (Adelman, 1990). In this case, the unit of production method of depreciation results in an unbiased accounting rate of return when all prices are constant. However, changes in the general price level and changes in the oil prices disturb the relation between cash flows and depreciation charges. Table 2 presents the bias of the accounting rate of return for an upstream oil company in a steady state. The real growth rate in these simulations is 2% and the economic rate of return is 13%. When all prices increase at 2%, the accounting rate of return is 1.8%-point higher than the economic rate of return.

Table 2. The accounting bias, inflation, and oil price changes for an upstream oil company

Oil price change	Inflation		
	0%	2%	4%
0%	0.0%	0.0%	0.0%
2%	2.6%	1.8%	1.3%
4%	6.5%	4.4%	3.0%

We have three kinds of results. First, oil price increases boosts revenues but do not affect depreciation allowances. As a result, the accounting bias increases. Second, inflation reduces this bias because the accompanying cost increases reduces the mismatch between cash flows and depreciation charges. Third, the accounting rate of return is more sensitive to oil price changes than to a change of the general price level. Since revenues are related to oil prices and costs to the general price level, the sensitivity to relative oil price changes increases with the profitability of the oil company.

3. Conclusion

With constant extraction rates, unit of production depreciation, and constant prices, the accounting rate of return of an upstream oil company is an unbiased estimate of the economic rate of return. However, simulations show that the accounting rate of return of an upstream oil company in a steady state is a biased estimate of the economic rate of return. This simulation approach enables both analysts and managers to improve their assessment of the performance of oil companies using traditional accounting performance measures. Our main contribution is that we explicitly introduce specific price changes in the discussion on the properties of the accountant's rate of return. However, the analysis has to be extended to the case that the oil company is not in a steady state.

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Value Issues in Energy: Let the Light in

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1. Introduction

The energy finance themes and topics at academic conferences reveal a widespread recognition of the value issues involved and the crucial roles that energy production and power generation play in this rapidly globalising world. An analytical approach to the solution of the problems associated with energy production and power generation helps to bring theory and reality closer together. The search for a fuller specification of models that provide a stronger explanation of the various value phenomena associated with energy surges. It has given rise to a series of specific energy and value conferences.

The 2009 Istanbul Conference on Multinational Energy and Value Issues offers a fine array of diverse energy and value research presentations and papers. It has been deemed useful for readers of the first Energy and Value Issues Letter that a summary of the Istanbul conference papers, issues and findings be provided for quick reference. The comments below are made on conference papers in no particular order of importance and the topics classification given is the present author's. The papers are briefly discussed as follows. The writer of this article is responsible for any errors or omissions.

2. Asset pricing

The CAPM has been an important model to help explain risk and return profiles of financial assets. In the paper entitled "*CAPM Performance and Volatility Structure of Energy Companies Traded in the Istanbul Stock Exchange*" by C. Coşkun Küçüközmen and Ozan Toros, the CAPM methodology is applied using data from listed energy companies and the Turkish ISE National-100 index. The findings show that the GARCH (1, 1) model outperforms other models. In addition the CAPM suggests that only one factor affects asset prices, but as noted by the authors, that view ignores other risk factors. They note that "… one factor may be needed to describe security pricing while using the bootstrapping technique when enough numbers of observations are not available".

Henk von Eije and Wim Westerman have noted that the Northern part of the Netherlands has a focus on natural gas exploration, but the cost of this is gradual soil decline, which disrupts the water balance and generates small earthquakes requiring work on water to be carried out. Their paper entitled "*The Long-Term Value of the Costs of Soil Decline Caused by Gas Exploration in the Netherlands*" implies that, when considering the costs of soil decline through net present value methodology "….the water councils may need an additional amount for the risk of discounting at a real interest rate of 3%, while the investment returns might be smaller than 3%".

3. Capital budgeting

The paper entitled "*Multicriteria Decision Analysis Approaches in Energy Project Evaluation Process and Turkey Applications*" by Kazım Barış Atıcı and Aydın Ulucan says that "The use of Decision Analysis techniques is gaining popularity in energy and environment issues. These issues generally involve many sources of uncertainty, long time frame, capital intensive investment and a large number of stakeholders with different views and preferences, which make the application of Decision Analysis methods particularly suitable". In the study two applications are used where hydro-electric and wind-power projects are evaluated and a priority ranking is applied to the projects based on pair-wise comparisons of alternatives.

The paper by Hamed Ghoddusi entitled "*Real Options Meet Hotelling Problem: Optimal Investment in Extraction Capacity of Exhaustible Resources*" promotes a useful partial equilibrium model where the demand shocks,

the price of the investment good and the amount of the initial energy reserves are given exogenously. The interest lies in the examination of the capacity building behaviour of a single energy resource producer possessing market power.

4. Corporate finance

William Dimovski has produced a paper entitled "*The Underpricing of Energy IPOs in Australia*"**.** This is an important issue as underpricing of IPOs may enable subscribing investors the opportunity of making a return on the day of listing. The study finds that the mean underpricing return for Australian energy IPOs is 22.8% and statistically significant. "The model used to investigate variables that might help explain the level of underpricing in this industry sector is also particularly useful. "Importantly, a finding "...is that those energy IPO firms that used underwriters had substantially lower underpricing. The other finding that larger issues are likely to have lower underpricing is consistent with prior industrial company IPO studies".

Mehmet Baha Karan, Özgür Arslan and Murat Alatlı in their paper entitled "Detection of Factors Leading to Business Failures for Gasoline Distribution Sector" find that firm specific characteristics rather than financial data are more important to consider when examining business failure risks. Gasoline distribution firms can select gasoline filling stations in an efficient way and can earn a sufficient rate of return to protect against adverse impacts in the economy.

5. Energy risks

Sasa Zikovic and Bora Aktan have produced a paper entitled "*Extreme Movements and Measuring Risk in Oil Prices*". The information in this paper is equally important for risk management purposes and in the pricing of structured commodity derivatives. Extreme value theory is uniquely applied to commodity markets. This solid quantitative paper makes a contribution to the analysis of riskiness and volatility in oil and probably other commodity markets.

C. Coşkun Küçüközmen and Nadi Serhan Aydın say in their paper entitled "*Stress Testing of Energy Related Derivative Instruments Based on Conditional Market Risk Models*" that stress testing is already part of Basel II, but many banks were unprepared and held a large amount of energy derivatives when the energy markets were distressed recently. GARCH and EGARCH conditional volatility frameworks are analysed using daily crude oil, heating oil and natural gas futures contract data. Some of the main findings are that "…energy shocks can lead to greater stress losses than those observed in major currency pairs. When compared to a conditional empirical model, the EGARCH model leads conservative stress loss estimates over a 10-day risk horizon".

6. Energy futures

Riza Demirer and Ali Kutan have produced a paper entitled "*The Middle East Turmoil and the Time Varying Risk Premium in Crude Oil Futures*". The importance of the impact of political and regional unrest to volatility in oil markets is undoubted. The findings lend support to hypotheses about the existence of a time varying risk premium and that "…the Middle East unrest, in particular the Iraqi conflict, has a significant contribution to perceived risk, thus the risk premium embedded in futures prices". The authors also find that "…there is a systematic positive bias built into the futures price as a predictor of future spot price with the bias varying with the situation in Iraq".

The paper by Giovanna Zanotti, Giampaolo Gabbi and Manuela Geranio is called "*Hedging with Futures: The Efficacy of GARCH Correlation Models in the European Electricity Markets*". This paper addresses the important issue of hedging volatility in European electricity prices using futures contracts. Some of the main findings are that it is possible to reduce the variance of electricity markets using futures hedging. In addition, the time varying hedge ratio possesses superior hedging performance compared to traditional hedge ratios. Moreover, "...time varying variances and correlations models reduce the volatility of the hedge portfolio whereas traditional OLS

models occasionally led to an increase of risk".

The paper entitled "*The Hedging Effectiveness in Crude Oil Futures*" by Tarkan Cavuşoğlu and Soner Gökten compares OLS and GARCH versions of hedge ratios where prior investigations have used univariate analysis of time series relying on descriptive statistics and unit root tests. According to the analysis OLS forecasts spot prices better implying that "…. in crude oil futures markets the hedging strategy based on the traditional constant minimum variance hedge ratio may as well outperform the one based on a more complex computation method".

7. Energy markets

Andre Dorsman, Mehmet Baha Karan, Erdinc Telatar and Göknur Umutlu have taken note that the Californian energy crisis of 2000 and 2001 produced substantial price volatility and have addressed the importance of risk management, which they feel should have and could have been undertaken using derivatives. This may also involve coupling with other efficient markets. Their paper entitled "*Electricity Markets: A Research about Efficiency and Market Coupling*" provides evidence that "…the Netherlands electricity market is efficient and coupling reduces the volatility of the electricity prices substantially. Based on our study, we advise Turkey to enlarge these interconnections and to couple the Turkish markets with the markets of her neighbours".

Deregulation of the energy markets of particular countries is also an important theme. Country studies have obvious implications for other country electricity regulatory environments. Necmiddin Bagdadioglu and Orcun Şenyücel have produced a paper entitled "*Service Quality Regulation in Electricity Distribution*" with particular reference to Turkey. The main findings are that "distribution utilities in the Western part of Turkey have significantly higher average efficiency scores compared with those in the Eastern part". It shows that firm size is an important variable in relation to efficiency. Moreover, "the results strongly imply that incorporation of quality in the efficiency model have a significant effect upon price regulation".

The paper entitled "*Security of Electricity Supply*" by Necmiddin Bagdadioglu and Çağlar Özel discusses the effectiveness of the Turkish energy sector reforms that commenced in 1984. The authors note that despite these reforms, the installed capacity of electricity generation still relies to a large extent on thermal energy sources. Long-term gas contracts have delayed Government energy diversification plans. Whilst Turkey is self sufficient in energy at this point, shortages are likely as demand is growing and private capital needs to be mobilised to correct this imbalance. It is hoped, despite the current global financial crisis, that legal and institutional infrastructures put in place by government, will assist in the reform.

In their paper entitled "*Electricity Market Analysis: A New Simulation Approach for Turkey*", Korcan Kayrın, Şule Ergun and Sencer İmer have recognised the importance of the electricity trade and valuation in Turkey where the market is evolving from a monopoly to an open market. The authors find that, in the case of Turkey, "The electricity market is an example of a complex adaptive system. The agents in the market transfer either information, electricity or money to each other, by obeying the rules determined and the agents make decisions and plans to increase their profits, drop the cost of electricity and establish and check the rules for safe and continuous electricity supply. The agents of the electricity market learn and adapt to new situations".

8. Sustainable energy

In the paper "*Renewables in the Netherlands and Turkey*", Andre Dorsman and Göknur Umutlu have noted that "The European Union holds an Emissions Trading Scheme for carbon dioxide and other greenhouse gases" and that "The increasing awareness of the pollution problem stimulates the development of renewable energy". The authors feel that benefit for both the Netherlands and Turkey would derive from greater exploitation of these sources and would reduce dependence on imported fuels and reduce the environmental impact. In addition cost competitiveness would be enhanced with inexhaustible fuel sources. However, it needs to be noted that

even though "…generating energy by means of renewables is more costly than generating by fossil energy, Governments should support the use of renewable energy".

With the global importance of reduction of greenhouses gases prominent in the minds of all who are concerned with global warming, a paper has been written by Don Bredin and Cal Muckley entitled "*An Analysis of the EU Emissions Trading Scheme*". The authors uniquely take account of both structural and time series properties in examining the behaviour of EU allowance prices. The model accounts for both structural and time series properties and indicates whether or not at times volatile prices are explained by a stable relationship. The study among other findings, contributes additional evidence of increased efficiency in the EU allowance market. This is anticipated to be interesting to "…traders, policy makers and those seeking to improve the design of the European Union's Emissions Trading Scheme".

Sudi Apak and Erhan Atay note that a country's energy policy is a vital part of its economic policy. Their paper entitled "*Is Nuclear Energy a Solution to Rising Energy Prices in the Balkan Countries*" aims to examine the future of nuclear energy on the basis that it is carbon dioxide and other pollutant free. The paper also notes importantly that nuclear power generation will succeed in the long-run only if it is associated with lower costs compared to other energy sources.

9. Energy politics

John Simpson and Jennifer Westaway have produced a paper entitled "*A Theoretical Market Based Composite Political Risk Indicator for Country Energy Systems: Legal and Economic Perspectives*". This paper is motivated by a perceived need to return to a basic political risk indicator and risk valuation model in light of recent global turbulence. In addition, it is noted that international law needs to play a greater stabilisation role. A theoretical composite political risk indicator for country energy markets, controlling for relative informational efficiency and interrelationships between global stock markets and energy markets, would leave a country energy composite political risk model better specified. The efficacy of such a model, to a large part, depends on unified and standardised global legal intervention.

John Simpson has also produced two papers that discuss the innate inefficiency in the global oil market and the involvement of cartels and pseudo cartels in the context of imperfect markets. The first paper entitled "*The Effect of OPEC Production Allocation Meetings on Oil Prices*" analyses various oil price series and OPEC series and examines both unlagged and optimally lagged data. The writer reminds the global players in oil of the contribution to global financial instability of the late 1980s and early 1990s of oil supply restriction and cartel behaviour.

The second paper to be referred to, entitled *"Do the Major Oil Companies Anticipate OPEC Production Allocations?*" uses regression analysis in an event study together with VAR based tests of cointegration and exogeneity to infer that questions relating to whether or not the major oil companies have prior knowledge of production allocation meeting outcomes should be asked.

10. Energy consumption

Aydoğan Durmuş and Ahmet Selçuk Dizkırıcı in their paper entitled "*Energy Rating for Residential Dwellings and 5-Stars Rating Model*" have provided a model rating dwellings as to their degree of energy efficiency. It is felt by the authors that the ratings model for energy efficiency will assist institutions involved to work towards greater energy efficiency. This is considered to be most important for energy dependent countries similar to Turkey.

Deniz Aytaç and M. Cahit Güran note that past research shows causality running from energy consumption to economic growth, but has not considered energy prices in this relationship and energy prices are affected by government intervention in taxes and subsidies. These relationships in Turkey are tested in their paper "*The Relationship Between Economic Growth and Energy Prices*" and the findings are that there is a causality relationship between electricity consumption and

GDP and that the former also affects economic growth, but that the role of prices is negligible and thus tax policy changes are not likely to yield positive outcomes in terms of economic growth.

An interesting debate may emerge in the conference as Funda and Erdinc Telatar also examine the relationship between energy consumption and real GDP in Turkey, but feel that no consensus could be reached on the direction of causality. Their paper entitled "*The Relationship between Energy Consumption and Real GDP in Turkey*" uses GARCH, VAR methodology and Granger causality and comments that "reduction of electricity consumption would not have an effect on the real GDP. If there is a causal relationship running from electricity consumption to the real income, then an electricity conservation policy would lead to a fall in the real GDP. Thus, analysing the relationship between electricity consumption and income has very important implications for economic policy".

The paper by Hasan Kazdağlı, Erdinc Telatar and Funda Telatar entitled "*Is There a Unit Root in the Electricity Consumption/GDP Ratios for Turkey?*" recognises that a major sector of the Turkish economy is the electricity sector. Their paper analyses the stochastic behaviour of electricity consumption GDP ratios and applies both linear and non-linear unit root tests to determine whether the series is stationary. Results suggest that testing for a unit root without taking into account the properties of the data generating process may provide results that are misleading and thus it is important to control for non-linear adjustment of the series to equilibrium.

11. Conclusion

As mentioned earlier, the papers briefly discussed above, are discussed from the list of papers for the 2009 Istanbul conference. They are provided to not just give an impression about the individual papers, but also to give a taste of the types of research being undertaken by researchers into energy and value. That a growing number of financial economists are getting together in a conference environment to discuss their research, demonstrates that all who participate have something important to contribute to the body of knowledge in relation to energy and value issues.

The themes covered are basically the same as those of the Amsterdam conference in 2007. Asset pricing, capital budgeting and corporate finance topics discussed show that much interesting research can be done at the individual level. Energy markets and sustainable energy topics refer to an increasing interest in intermediate meso level issues. Energy politics and energy consumption topics deal with persistent macro level issues. The conference has an interesting balance between corporate finance, micro economics and macro economics. Let it all help to allow the light in!