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- **From the CEVI board: on a successful conference and our future plans**
- **Abstracts 4th CEVI conference, Northern Illinois University (NIU), Chicago, May 15-17, 2013**

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Editorial Policy

The Energy and Value Letter brings together academics and practitioners worldwide to discuss timely valuation issues in the energy sector. It publishes news from the Centre for Energy and Value Issues (CEVI), its linked organizations and others (including calls for papers), columns on topical issues, practitioners' papers: short articles from institutions, firms, consultants, etcetera, as well as peer-reviewed academic papers: short articles on theoretical, qualitative or modeling issues, empirical results and the like. Specific topics will refer to energy economics and finance in a broad sense. All of the papers are peer reviewed. The journal welcomes unsolicited contributions. Please e-mail to **energyandvalue@gmail.com**, c/o Özgür Arslan, a copy of a news item, column or a completed paper. Include the affiliation, address, phone, and e-mail of each author with your contribution. A column or news item should not have more than 400 words and a paper should not exceed 3.000 words.

On a successful conference and our future plans

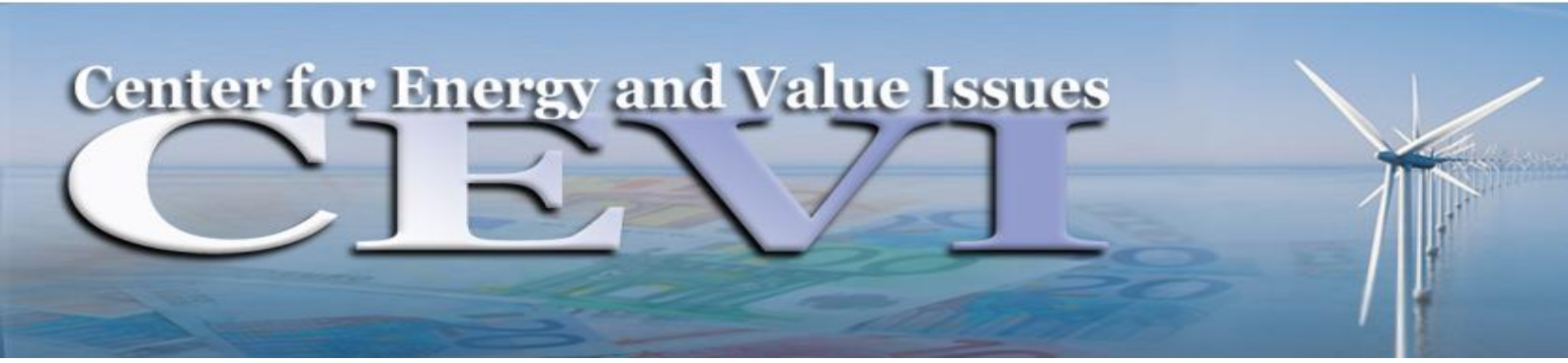
by the CEVI board

It was a wonderful conference! The 4th Multinational Energy and Value Issues conference was definitely a success. With a tightly packed 2-day presentations programme and the follow-up Silk Road conference on the next day, the conference participants got a nice overview of relevant topics from both a practitioner and academic perspective. The discussions had to be kept short, but they were lively. The multiple functions that we had helped to create a great atmosphere, in which new plans were born and friendships were (re-) established. CEVI thanks Northern Illinois University (NIU), in the person of conference chairman Paul Prabhaker, for the effective cooperation. Also, Özgür Arslan-Ayaydin, Mehmet Baha Karan, Harry Lepinske and the other organisers did a fine job with the conference. And luckily, the City of Chicago showed its blossoming mid-May side with lovely weather.

Now the summer of 2013 is already coming to an end and hopefully it was a relaxed one for you. Meanwhile, CEVI secretary and vice chairman Mehmet Baha Karan visited our board member John Simpson in Australia. Among others, they have been working on plans to have the 2015 conference organised at Curtin University, Western Australia. Meanwhile, thanks to Mehmet Karan's efforts, quite some of us will be involved with a special CEVI session on the CBE conference in Qatar (see: http://www.qu.edu.qa/CBEconference/). May this fuel our efforts to further globalise CEVI. And we have also plans for Energy Schools, hopefully already soon in Turkey and perhaps later in other countries. The Energy School concept whereby a small group of students learns from and with lecturers from all over the world has shown to be very fruitful.

The third book in CEVI's Springer series is on energy risk issues. The book is edited by André Dorsman, Timor Gök and Mehmet Baha Karan. Although the content of the book is now definitive, still quite some work behind the scenes has to be done and we wish the editors all the best with it. The book is expected to be published in Spring 2014. The fourth book in the series will, again, point the reader at new developments in our field. Corporate perspectives, regulatory issues, new energy sources and developing countries issues come in mind, amongst others. The new book will reaffirm CEVI's non-conformist attitude. We will start to approach authors early next year.

This 10th issue of the Energy and Value Letter is a special one in that it basically is devoted to the publication of abstracts of several presentations that were held at the 4th Multinational Energy and Value Issues conference. The selection that is shown shows the broadness of the CEVI activities and makes clear how profound the efforts of our CEVI friends are. There is a lot to discuss and to work on in the field of energy and valuation issues and the CEVI contribution in this respect is very well presentable. Feel free to contact the abstract authors for further information and let us close by thanking them for their efforts to make their contributions to practice and academics visible to a broad public.



NORTHERN ILLINOIS UNIVERSITY
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4th Multinational Energy and Value Conference

NORTHERN ILLINOIS UNIVERSITY COLLEGE OF BUSINESS

http://www.cob.niu.edu/energyconference2013/

MAY 15-17, 2013

CHICAGO, USA

ABSTRACTS

The objective of the conference was to bring together leading academic researchers, government energy policy-makers, and leaders in energy-related businesses from all over the world to share advances in energy knowledge and best practices in national energy policies. Empirical papers, conceptual papers and op-ed pieces were welcome. *Specific topics* referred to energy issues and included, but were not limited to: energy economics; oil industry; gas industry; electricity industry; energy industry regulation; national energy polices; alternative energy; scientific advances in energy; financial markets; financial risks; energy security; other topics as appropriate. A variety of abstracts of conference presentations is shown on the next pages. Note that the copyright of the abstracts is with the authors.

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Opening up the Southern Gas Corridor and its implications for European energy security

Dr. Nargiz Gurbanova**,** Deputy Chief of Mission
Embassy of the Republic of Azerbaijan to the United States

Abstract

The presentation focuses on key factors that shaped the politics in the Caspian Sea basin and determined the policies that the Azerbaijani Government chose to implement. It identifies the four key pillars of Azerbaijan's energy policy. First, energy development paved the way to the economic recovery and prosperity. The revenues from oil and gas exploration helped Azerbaijan to kick-start economic rebuilding. Second, Azerbaijan's strategic choice to foster geopolitical pluralism in the region by opening up the Caspian region to US and European companies allowed the country to consolidate its sovereignty and political independence. Third, energy projects launched by Azerbaijan have stimulated social and economic progress in the region and have had a long-term trickle-down effect well beyond its national borders. Fourth, Azerbaijan's energy projects, specifically the landmark Baku-Tbilisi-Ceyhan pipeline, South Caucasus Pipeline and now the Trans-Anatolian Pipeline (TANAP) turned into a powerful tool for the integration of Azerbaijan and Georgia into Euro-Atlantic community. The presentation highlights Azerbaijan's role as an enabler of the Southern Gas Corridor that is aimed at diversifying Europe's energy sources and their delivery routes.

Key words: Azerbaijan**,** Europe, Southern Gas Corridor, energy security

OPEC's influence on oil stock returns

Maarten Croese and Wim Westerman

University of Groningen, the Netherlands.
maartencroese@hotmail.com, w.westerman@rug.nl

Abstract

This study examines the influence of OPEC quota decisions (quota cut, - increase or unchanged decision) on the stock price of 4 typical -listed- oil firms in Europe. In addition, we consider the influence on the WTI crude oil price. Using the event study methodology, 51 announcements are considered in the period 1991 – 2012. The results imply that OPEC quota decisions have a direct influence on both crude oil returns and oil firms' stock returns. This influence is either positive or negative and large or small, depending on the type of decision and the size of the firms in terms of market capitalization. However, since the difference between the 2 small firms is also significant, we conclude that market capitalization alone is not a determining factor.

Key words: OPEC, oil firms, stocks, event study, Europe
JEL codes: C12, G14, L90

The Turkish Natural Gas Market and Its Legal Aspects

Cafer Eminoglu

Yıldırım Beyazıt University, Ankara, Turkey
email:cafereminoglu@hotmail.com

Abstract

The paper examines the legal aspects, liberalization process and policies in the natural gas market of Turkey and its importance for international Transmission of natural gas. The import of natural gas to Turkey started in 1988. Its consumption reached its highest level in 2012 with annual value of 45,2 bcm. Currently only 2% of the total demand is being met by domestic resources. That makes Turkey dependent on import, especially from Russia. The milestone in the liberalization process of Turkish natural gas market was the enacting of the Natural Gas Market Law (NGML) in 2001, which abolished the monopoly rights. With 30% private sector participation, the Turkish domestic gas market is currently in the early stages of liberalization. The close proximity to gas reserves in Middle East and Caspian Basin on one hand and to the industrialized European Market on the other hand makes Turkey become a natural bridge in terms of international transmission of natural gas. The Author holds that Turkey can only reach its target of being a natural gas hub, if it uses its own transmission system for international transmission instead of international projects on which it has almost no control.

Key words: Natural Gas Market of Turkey, Energy Law, BOTAŞ, Energy Policies
JEL codes: L95, Q40, K22, N70, O13

Hedging and Speculation: A Discussion on the Economic Role of Commodity Futures Markets (Including the Oil Markets)

Hilary Till

Research Associate, EDHEC-Risk Institute (Nice, France)
Principal, Premia Risk Consultancy, Inc. (Chicago)

Abstract

In the United States, there is a rich historical experience with controversies over futures trading that date back to the nineteenth century. After a brief recounting of history, the paper notes that a review of U.S. history provides valuable lessons in figuring out what is necessary for commodity futures trading (including oil trading) to continue and prosper during times of political pressure. Essentially, one finds that the following actions have been indispensable in responding to past controversies over futures trading: (1) an increase in transparency in showing how these markets actually work; and (2) an improvement in public education on the economic usefulness of commodity markets. The paper endeavors to help in providing precisely that education.

The Relationship between Electricity Consumption and Real GDP: A case study for Turkey

Erdinç Telatar

Okan University, Turkey

Abstract

The relationship between electricity consumption and real GDP has been the subject of numerous studies. However, no consensus could have been reached on the direction of causality. Finding no causality in both directions means 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, analyzing the relationship between electricity consumption and income has very important implications for economic policy. The objective of this paper is to investigate the relationship between electricity consumption and real GDP for Turkey over the period 1971-2006. An M-GARCH model is used to find the direction of causality. Our results indicate that there is a positive relationship from electricity consumption to real GDP.

Keywords: Turkey; electricity consumption; real GDP
JEL Codes: O52, Q43

Renewable energy integration in European energy markets

N. Abudaldah, A.B. Dorsman, G.J. Franx and P. Pottuijt

Abstract

European wholesale electricity markets have in the last half decade been confronted with a rapid increase in Renewable Energy Source (RES)-generation. RES-generation is characterized by (1) more decentralized production at typically dissimilar locations compared to traditional production and (2) more intermittent patterns of production depending on climatic conditions. However, existing transmission systems were originally designed for electricity transportation from more traditional, centralized production locations and they require long lead times to be changed. Due to the changed pattern of production locations and timings, the European transmission systems are confronted with bottlenecks for transportation and hence local over and under productions occurs. In addition, regulations and subsidies in favor of RES-generation have changed electricity wholesale market prices and patterns significantly in the last years. This paper identifies the changes in day ahead prices due to the increased supply of solar and wind energy.

Key words: solar energy; wind energy; electricity price

Renewable energy in Indonesia:
local economic development, money flows and group entrepreneurship

Niek Jan Willem Verkruijsse, Bartjan Pennink and Wim Westerman

University of Groningen

Abstract

This study investigates the possibilities of implementing renewable energy in the form of Mobile Biodiesel (MBD) in Central Kalimantan, Indonesia. We construct a model in which a local economic development (LED) model is infused with money flows and group entrepreneurship aspects in order to realize the implementation of this technology push. The model development has been supported by empirical findings from a field research (2012) in the Pulang Pisau area in Central Kalimantan. The field study results indicate a great lack of technical-, managerial-, and financial knowledge and skills in the remote villages, resulting in a lack of human capital. Furthermore, the occurrence of frequent electricity blackouts with long durations disturbs the local communities in their daily activities. In order to address these problems, this study argues for the integration of community empowerment, social capital, social franchising and especially group entrepreneurship in combination with a transparent financial system on the flow of money while introducing a new technology.

Key words: Local economic development, renewable energy, money flows, group entrepreneurship

Cost of equity estimation for energy network utilities in emerging economies:
a comprehensive review

Mustafa Gozen

Energy Market Regulatory Authority, Turkey
(mgozen@epdk.org.tr)

Abstract

The models for estimating the cost of equity in developed markets cannot be applied with confidence to most emerging markets. Since the 1990s there have been increases in the number of contributions by which several versions of CAPM have been developed to estimate the cost of equity in emerging markets. However, the majority of contributions are thought to violate the main CAPM assumptions. On the other hand, all estimation methods look at the issue from the perspective of a global investor with a diversified portfolio. As a result, the cost of equity to a local investor could be relatively different from that to a global investor. In conclusion, both in practice and theory, there are very diverse and controversial proposals, which do not provide good guidelines for energy regulators in emerging countries in order to fulfill their duties regarding the tariff regulation of energy network utilities.

Key words: Cost of capital, cost of equity, WACC, CAPM, energy tariff
JEL codes: G3, G12, G15

Effciency and service quality analysis of the Turkish national gas distribution companies

Okan Yardimci

Energy Market Regulatory Authority, Turkey
(*oyardimci@epdk.org.tr)*

Mehmet Baha Karan
Hacettepe University, Ankara, Turkey
(mbkaran@hacettepe.edu.tr)

Abstract

The Energy Market Regulatory Authority (EMRA) sets the tariff that determines the revenue requirements of the Turkish natural gas distribution companies by using a popular type of an incentive regulation, the price cap method. Incentive regulation improves efficiency and reduces costs; on the other hand the companies may not be willing to increase the service quality in this kind of regulation. This paper analyses the efficiency and service quality of the Turkish natural gas distribution companies. The companies' efficiency scores are evaluated both by non-parametric and parametric methods, Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) respectively. The same distribution companies are ranked by the service quality scores that obtained from the service quality data. The results are used to determine the relationship between efficiency and service quality of the companies, to decide the effectiveness of the regulation and to suggest a reward/penalty scheme for the tariff design.

Key words: regulation, price cap, efficiency, service quality, natural gas distribution companies, Turkey
JEL codes: H41, H21, F14, L95

The Value of Environmental Performance to Investors:
A Focus on the Energy Sector

Ozgur Arslan-Ayaydin

University of Illinois at Chicago

James Thewissen

KU Leuven - Faculty of Business and Economics (FBE); Hogeschool-Universiteit Brussel (HUBrussel); Catholic University of Louvain (UCL) - Lessius University College

Abstract

After 40 years of debate, whether a firm's environmental performance influences its financial performance remains controversial. In this paper, we investigate if the market rewards environmentally

good performance over the long term. We use KLD's environmental score to construct, for the different US sectors, two matched portfolios that differ in their environmental performance. We show that only in the energy sector, environmentally-efficient firms outperform environmentally-inefficient firms over the period 2000-2011. A portfolio strategy with a long (resp. short) position in environmentally efficient (resp. inefficient) firms in energy sectors generates an annual abnormal return of 9.624% after correcting for market, size, book-to-market and momentum risks. For all other sectors, the performance of the two portfolios is statistically insignificant. This result is robust to a wide range of performance techniques that address common methodological concerns. Finally, using the VIX index, we show that this positive impact of environmental performance on financial performance is cyclical, as the market rewards the adoption of environmentally efficient policies of energy firms only in periods of low financial volatility.

Keywords: Corporate environmental responsibility, Energy sector, Stock performance
JEL Classification: M0, M14, G3

Boron: a clean energy source and carrier

Birgül Zümreoglu-Karan

Hacettepe University, Ankara, Turkey
(bkaran@hacettepe.edu.tr)

Abstract

The energy policies and economies of the 21st century are shifting from polluting to cleaner fuels and from limited to sustainable energy sources. Clean energy technologies, namely, solar energy, wind power, hydro power, biomass energy, geothermal energy, tidal energy and wave power technologies are improving very rapidly. The main problem with these technologies is that energy produced from these sources is difficult to store or transport. As an important energy carrier, Hydrogen can be a highly effective medium to store and transfer the energy produced by renewable clean energy resources. Boron, Nitrogen, Hydrogen (BNH) compounds are of intense attention due to their potential application as hydrogen storage materials. These compounds liberate hydrogen on reaction with water at room temperature in the presence of catalysts or release hydrogen on heating. Not only its compounds, the element Boron itself can be also considered as a clean energy source. Its reaction with water is able to produce hydrogen gas at a rate fast enough to run a vehicle. Most recently, "Boron-Hydrogen Nuclear Fusion Fuel" was proposed as a safe, unlimited, economical energy with i. available raw materials (hydrogen from ordinary water and boron from deposits), ii. negligible radioactivity, iii. no neutron generation and iv. allowing direct energy conversion, which in turn reduces heat pollution. The main scope of this presentation is to illustrate the innovations and the drawbacks in the scientific and economic aspects of the possible utilization of boron for energy.

Key words: clean energy, hydrogen energy, boron, borohydrides, BNH compounds

JEL codes: O31, Q01, Q32, Q48