BAHATTIN BUYUKSAHIN

234 Wellington St **Phone:** +1 (6130 782-7790

Ottawa, ON E-mail: bbuyuksahin@bankofcanada.ca Canada Web: http://www.buyuksahin.com **Blog:** buyuksahin.blogspot.com

SSRN: http://ssrn.com/author=663015

RESEARCH INTEREST

Fields: Energy Economics, Commodities, Investment and Market Microstructure, Volatility Estimation Issues: The Role of Speculators in Futures Markets, Cross Market Linkages, Linkages between Financial and Physical Oil Markets, Price Limits, Impact of News in Futures Markets, Realized Volatility; Single Stock Futures, Price Discovery in Futures Markets,

EDUCATION

Ph.D. in Economics, American University, Washington, DC, August 2002 (specialized in international macroeconomics and monetary economics)

M.A. in Economics, American University, Washington, DC, December 1996

B.A. in Economics, Ankara University, Turkey, July 1993

PROFESSIONAL INFORMATION

Bank of Canada, Ottawa, Canada **Commodity Research Adviser**

(February 2013 – present)

- Heading commodity research division
 - Contribute Bank's quarterly Monetary Policy Report
 - Representing the Bank of Canada in G20 Meetings on commodities
 - Organizing seminars on financialization of commodities

International Energy Agency, Paris, France

(November 2012- January 2012)

Consultant

- Analyzing the effect of recent regulatory reform on the energy futures market
- Analyzing the role of speculators on the energy futures market
- Representing the IEA in G20 Meetings on commodities
- Organizing seminars on financialization of commodities

International Energy Agency, Paris France

(November 2010- October 2012)

Senior Oil Market Analyst

- Analyzing inter-linkages between physical and financial markets
- Analyzing asset market linkages and the role of hedge funds
- Analyzing the effect of recent regulatory reform on the energy futures market
- Analyzing the role of speculators on the energy futures market
- Representing the IEA in G20 Meetings on commodities
- Organizing seminars on financialization of commodities

John Hopkins University, Carey Business School, Washington, DC **Adjunct Professor of Finance**

(August 2009 – November 2010)

Teach graduate level courses in Derivatives, Investments and Financial Risk Management

Commodity Futures Trading Commission, Washington, DC **Senior Econometrician**

(October 2009- October 2010)

- Maintain OCE COT Monthly Report ("This Month in Futures Markets")
- Generalized Maximum Entropy Approach to Realized Volatility

Bahattin Buyuksahin Page 2 of 6 8/26/2013

- Asset market linkages and hedge funds
- Analyzing the effect of margin requirements on the development of the single stock futures
- Analyzing the role of speculators on the energy futures market

Commodity Futures Trading Commission, Washington, DC Economist

(August 2005 – October 2009)

- Created and developed OCE COT Monthly Report ("This Month in Futures Markets")
- Research on the functioning of the energy futures market
- Analyzing the effect of margin requirements on the development of the single stock futures
- Analyzing the impact of error trades in futures market
- Analyzing the impact of price limit on the price discovery
- Analyzing the role of speculators on the energy futures market

American University, Washington, DC

(February 2004 – June 2009)

Research Associate at Amos Golan Consulting

• Developed a retention model using Generalized Maximum Entropy approach for US Navy (Navy Personal Research, Studies and Technology)

American University, Washington, DC

(August 2005 – December 2005)

Professorial Adjunct Faculty, Department of Economics

- Taught Microeconomics course to undergraduate students
- Prepared syllabi, lecture notes and web pages for the courses

World Bank, Washington, DC

(April 2004 – June 2005)

Consultant, West Bank and Gaza Country Unit

- Analyze labor market trends in the Palestinian economy using quarterly labor survey data on the West Bank and Gaza 1998-2003
- Data management of the Palestinian labor survey, including data cleaning, tabulation and analysis of results
- Data management and analysis of the Palestinian household survey data
- Develop a new social safety net program for Palestinians through the use of proxy means test formulas
- Advise Palestinian Authority on implementation of social safety net program.

Akdeniz University, Antalya, Turkey

(October 2002–September 2004)

Lecturer, College of Economics and Administrative Sciences

- Taught graduate and undergraduate level courses in International Economics, Microeconomics and Mathematical Economics in the Department of Economics
- Member of editorial board of Journal of Economics and Administrative Sciences
- Founder of Departmental Brown Bag Seminar series
- Advisor to undergraduate and graduate students on graduation theses

Urban Institute, Washington, DC

(March 2001 – August 2002)

Research Assistant, Longitudinal Employer Household Dynamics Program

- Managed large scale databases using SAS in UNIX environment.
- Wrote SAS programs to format census data on state of Illinois, California and Maryland
- Produced transition matrices for labor data to analyze employment and wage patterns of these transitions in the state of Illinois, California and Maryland
- Modeled these transitions in an econometric model using Generalized Maximum Entropy Technique

PUBLICATIONS AND PAPERS

Refereed Articles in Academic Journals

• Speculators, Commodities and Cross-Market Linkages (with Michel Robe), Journal of International Money and Finance, forthcoming, 2013.

Bahattin Buyuksahin Page 3 of 6 8/26/2013

- <u>OPEC 'Fair Price' Pronouncements and the Market Price of Crude Oil</u> (with Michel Robe, Celso Brunetti and Kirsten Soneson), Energy Journal, vol 34(4), 2013
- Herding and Speculation in the Crude Oil Market (with Celso Brunetti and Jeffrey Harris), The Energy Journal, vol 34(3), 2013
- Physical Market Conditions, Paper Market Activity, and the Brent-WTI Spread (with Michel Robe, Jim Moser and Thomas Lee), The Energy Journal, vol 34(3), 2013
- <u>Does It Matter Who Trades Energy Derivatives</u>? (with Michel Robe). Review of Environment, Energy and Economics, March 2012.
- <u>Do Speculators Drive Crude Oil Futures Prices?</u> (with Jeffrey Harris), The Energy Journal, vol 32(2), pp. 167-202
- The Puzzle of Privately-Imposed Price Limits: Are the Limits Imposed By Financial Exchanges Effective (with David Reiffen), IEB International Journal of Business, Winter 2011.
- <u>Commodities and Equities: Ever A "Market of One"?</u> (with Michael Haigh and Michel Robe) Journal of Alternative Investment, Winter 2010, Vol 12(3), pp. 76-95
- An Information -Theoretic Approach for Estimation and Image Reconstruction (with Amos Golan and Avinash Bhati), Proceedings of the American Statistical Association, (2005), Alexandria, VA: American Statistical Association.

Book Chapters and Other Articles

- <u>Speculation Demystified: Virtuous Volatility</u> IEA Energy: The Journal of the International Energy Agency, Issue 3 (Autumn 2012), pp:33-34
- <u>Mechanics of Derivatives Markets</u> Special Supplement to the April 2011 Oil Market Report, IEA, Paris, April 2011.
- The Changing Structure of Energy Futures Markets (*with* Michel Robe, J. Harris & J. Overdahl) in *Finance et Valeurs*, A. Corhay, G. Hubner and A. Mueller Eds., ULg Press, Belgium, 2009.
- An Information-Theoretic Approach for Image Reconstruction: The Black and White Case (with Amos Golan and Avinash Bhati), in K. Knuth, eds., Bayesian Inference and Maximum Entropy Methods in Science and Engineering: 25th International Workshop, (MAXENT 2005).

Papers under Review

- <u>Do Institutional Traders Predict Bull and Bear Market?</u> (with Celso Brunetti and Jeff Harris). Status: "Submit" at the Review of Financial Statistics
- <u>Speculators, Prices and Market Volatility</u> (with Celso Brunetti and Jeffrey Harris).
 Status: "Revise/resubmit" at the Journal of Financial and Quantitative Analysis
- <u>Does 'Paper Oil' Matter? Energy Markets' Financialization and Equity-Commodity Co-</u> Movements (with Michel Robe).
 - Status: "revise/resubmit" at the Energy Journal
- <u>The Prevalence, Sources, and Effects of Herding</u> (with Naomi Boyd, Michael Haigh and Jeffrey H. Harris).
 - Status: "Revise/resubmit" at the Journal of Futures Markets
- Fundamentals, Trading Activity and Derivative Pricing (with Michael Haigh, Jeffrey Harris, Michael Robe and James Overdahl).
 - Status: "revise/resubmit" at the Journal of Financial Economics

Other Completed Papers.

- Speculators and Hedgers: On the Classification of Traders in Commodity Futures Markets, (with Jeffrey Harris, James Overdahl and Michel Robe), CFTC Working Paper, Washington DC, July 2009
- <u>Is speculation Destabilizing?</u> (with Celso Brunetti), CFTC Working Paper, April 2009
- <u>Error Trades in Futures Markets</u> (with Michael Haigh and Jeff Harris), CFTC Working Paper, Washington DC, January 2007.
- Options for Eligibility Criteria and Payment Schemes: A Quantitative Analysis (with Claus Pram Astrup), World Bank, Social Safety Reform Project, Washington, D.C., June 2005.

Work in Progress

• Crude-Product Pricing Relationship: Refining Bottleneck (with Bassam Fattouh)

- Determinants of Contango and Backwardation in Oil Markets: A Markov Switching Approach (with Bassam Fattouh and Celso Brunetti)
- Zooming in the Relationship between Market Positioning and Forex Returns (with Alessio Anzuini and Fabio Fornari)
- Price Discovery in FOREX Markets (with Naomi Boyd and Arek Nowak)
- Speculation, Hedging Pressure, and Commodity Risk Premia (with F. de Roon, M. Szymanowska & M. Robe)
- Trading Strategies in Futures Markets (with Pat Fishe, Michel Robe and Jeffrey Harris)
- Generalized Maximum Entropy Approach to Estimation of Realized Volatility (with Celso Brunetti and Amos Golan)

CONFERENCES AND PRESENTATIONS

<u>Physical Market Conditions, Paper Market Activity, and the Brent-WTI Spread</u> (with Michel Robe, Jim Moser and Thomas Lee)

- 2012: CFTC, Washington DC, USA, November (presented by Michel Robe)
- 2012: Energy Information Agency, Washington DC, USA, September (presented by Michel Robe)

<u>Does it Matter Who Trades Energy Derivatives</u>? (with Michel Robe)

- 2012: Fondazione Eni Enrico Mattei (FEEM), Milano, Italy, July
- 2012: Joint KDI-Bruegel Workshop on Commodity Prices, Brussels, Belgium, June
- 2012: Bank of Canada, Ottawa, Canada, April
- 2012: UNCTAD Multi-Year Expert Meeting on Commodities and Development, Geneva, Switzerland, January
- 2012: Fondazione Eni Enrico Mattei (FEEM), Milano, Italy, January

Do Institutional Traders Predict Bull and Bear Markets? (with Celso Brunetti and Jeff Harris)

- 2012: Fondazione Eni Enrico Mattei (FEEM), Milano, Italy, July
- 2011: European Central Bank, Frankfurt, Germany, November
- 2011: International Monetary Fund, Washington DC, USA, October
- 2011: American University Department of Economics, Washington DC, USA, October
- 2010: 16th International Conference, Society for Computational Economics, City University of London London, UK, July (presented by Celso Brunetti)
- 2010: Queen's University School of Business Seminar Series, Kingstone, Canada, April (presented by Celso Brunetti)
- 2009: American University, Kogod Business School Research Seminar Series, Washington DC, USA, December (presented by Celso Brunetti)

<u>Do OPEC Members Know Something the Market Doesn't? 'Fair Price' Pronouncements and the Market Price of Crude Oil</u> (with Michel Robe, Celso Brunetti and Kirsten Soneson)

- 2011: 30th USAEE/IAEE North American Conference, Washington DC, USA, October
- 2011: "50 Years of OPEC" Conference, University of Tulsa, Tulsa OK, USA, April (presented by Michel Robe)
- 2011: European Financial Management 2011 Conference on Alternative Investments, Toronto, Canada, April
- 2011: European Central Bank, Frankfurt, Germany, February
- 2010: Energy Information Agency, Washington DC, USA, December (presented by Michel Robe)

<u>Does 'Paper Oil' Matter? Energy Markets' Financialization and Equity-Commodity Co-Movements</u> (with M. Robe)

- 2012: 3rd Annual Conference on Quantitative Analysis of Commodities, London, UK, May
- 2011: 30th USAEE/IAEE North American Conference, Washington DC, USA, October
- 2011: ISTCE Business School's Annual Conference on Commodities and Energy Markets, Lisbon, Portugal, May
- 2011: Inter-American Development Bank, Washington DC, USA, March (presented by Michel Robe)
- Federal Reserve Bank of Dallas, Dallas TX, USA, December (presented by Michel Robe)
- Rice University, Houston TX, USA, December (presented by Michel Robe)

- 2010: Annual Meeting of the American Economic Association, Atlanta GA, USA, January (presented by Michel Robe)
- 2010 International Conference of the International Association of Energy Economists, Brazil, June (presented by Michel Robe)

Speculators, Commodities and Cross Market Linkages (with Michel Robe)

- 2011: Oklahoma Conference on Risk Management, May (presented by Michel Robe)
- 2010: IMF, Washington DC, USA, November (presented by Michel Robe)
- 2010 Financial Management Association, New York City NY, USA, October
- 2010 Cornell-FDIC Conference on Derivatives (Arlington, Virginia; April) (presented by Michel Robe)
- 2010 CFTC Mini-conference on the Financialization of Commodity Markets, Washington DC, USA, April
- 2010: CERN 2nd Annual Conference on Hedge Funds, Paris, France, January
- 2009: European Central Bank, Frankfurt, Germany, September
- 2009: Securities Exchange Commission Brown Bag Seminar, Washington DC, USA, July (presented by Michel Robe)

<u>Do Speculators Drive Crude Oil Futures Prices?</u> (with Jeffrey Harris)

- 2011: G20 Conference on Commodity Price Volatility, Istanbul, Turkey, September
- 2011: Standard Chartered Earth's Resources Conference, Honk Kong, June
- 2011: The symposium of the Scientific Council, organized by AMF and CRE, Paris, France, May
- 2009: Liquidity and Volatility in Today's Markets, NYSE Euronext Amsterdam & Tinbergen Institute Workshop, Amsterdam, Netherlands, June (presented by Jeffrey Harris)

<u>Is speculation destabilizing?</u> (with Celso Brunetti and Jeff Harris)

- 2010 16th International Conference, Society for Computational Economics, City University of London, London, UK, July
- 2010 Queen's University School of Business Seminar Series, Kingstone, Canada, April
- 2009: Federal Reserve Board, Washington DC, USA, June (presented by Celso Brunetti)
- 2009: American University Department of Economics Brown Bag Seminar, Washington DC, USA, April

<u>Fundamentals, Trading Activity and Derivative Pricing</u> (with Michael Haigh, Jeffrey Harris, Michel Robe and James Overdahl)

- 2011: CFTC, Washington DC, USA, August (presented by Michel Robe)
- 2011; Energy Information Agency, Washington DC, USA, December (presented by Michel Robe)
- 2011: Universite Paris Dauphine, Paris, France, June
- 2011: Universidad Carlos III, Madrid, Spain, May
- 2009: Meeting of the European Finance Association, Bergen, Norway, August (presented by Michel Robe)
- 2009: Securities Exchange Commission Brown Bag Seminar, Washington DC, USA, June
- 2009: Derivatives Securities and Risk Management Conference, Washington DC, USA, April (presented by Michel Robe)
- 2009: Mid Atlantic Research Conference in Finance, Philadelphia PA, USA, March
- 2008: de Groote-IIROC Conference on Market Structure and Market Integrity, Toronto, Conada, November (presented by Michel Robe)

<u>Commodities and Equities: A Market of One</u> (with Michael Haigh and Michel Robe)

- 2008: European Financial Management Association, Athens, Greece, June
- 2008: EFMA –EDHEC Symposium on Risk Management, Nice, France, April
- 2007: U.S. Commodity Futures Trading Commission, Washington DC, USA, October

Error Trades in Futures Markets (with Michael Haigh and Jeff Harris)

- 2007: Financial Management Association, Barcelona, Spain, June
- 2007: American Economic Association Meeting, Chicago IL, USA, January (presented by Michael Haigh)

<u>The Prevalence, Sources, and Effects of Herding</u> (with Naomi Boyd, Michael Haigh and Jeffrey H. Harris)

- 2007: Southern Finance Association, Charleston SC, USA, November
- 2007: Financial Management Association, Orlando FL, USA, October (presented by Naomi Boyd)
- 2007: Washington Area Finance Association, Washington, DC, USA, May

<u>The Puzzle of Privately-Imposed Price Limits: Are the Limits Imposed By Financial Exchanges Effective?</u> (with David Reiffen)

- 2007: George Washington University, Washington, DC, USA, January (presented by David Reiffen)
- 2006: Financial Management Association, Salt Lake City UT, USA, October

Image Reconstruction: An Information Theoretic Approach (with Amos Golan and Avinash Bhati)

- 2005: Joint Statistical Meetings, Minneapolis MN, USA, August
- 2005: 25th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, San Jose, CA, USA, August (presented by Amos Golan)
- 2004: Midwest Econometrics Group, Evanston, IL, USA, October (presented by Amos Golan)
- 2004: American University Brown Bag Seminar, Washington, DC, USA, September (presented by Amos Golan)

Currency Substitution: Evidence from Turkey

• 2004: Global Finance Conference, Las Vegas NV, USA April

OTHER PROFESSIONAL INFORMATION

Awards, Honors and Grants Received:

- Research Associate, Info-Metrics Institute, American University, 2010
- Special Act Award, Commodity Futures Trading Commission, Washington, DC, September 2009
- The Chairman's Award for Professional Excellence, Commodity Futures Trading Commission, Washington, DC, September 2008
- Special Act Award for creating, developing and designing interactive webpage for OCE COT Monthly Report, Commodity Futures Trading Commission, Washington, DC, February 2009
- Special Act Award for contribution to Interagency Task Force Crude Oil Report, Commodity Futures Trading Commission, Washington, DC, July 2008
- The Dynamics of Worker Reallocation: A Markov Approach. Contractor to National Science Foundation Grant SES-9978093 to Urban Institute, 2001
- American University Dissertation Fellowship, American University, 2000
- Frank Tamagna Award in Monetary Economics, American University, 1999
- Scholarship from Turkish Government toward M.A. and Ph.D. degrees in Economics, 1994
- Honor Student Award, Ankara University, 1993

Refereeing:

Ad-hoc Referee for IMF Economic Review, The Energy Journal, Journal of Futures Market, Review of Futures Markets, Applied Economics, Applied Economics, Akdeniz University Journal of Economics and Business Administration

Computer Skills:

Microsoft Office, E-Views, SAS, RATS, STATA, LIMDEP, MATLAB, GAMS, UNIX, LaTeX, Scientific Word, Microsoft SQL

Languages:

Fluency in spoken and written Turkish and English