# Inna Khagleeva

College of Business Administration University of Illinois at Chicago 601 South Morgan Street, 2404 UH Chicago, Illinois 60607-1234, USA

#### **EDUCATION**

University of Illinois at Chicago, USA

Ph.D., Business Administration - Financial Econometrics, Derivatives, expected Spring 2013

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St. Petersburg State University, St. Petersburg, Russia

M.S., International Economics, 1998

Baltic State Technical University (Voenmeh), St. Petersburg, Russia

Engineer-Researcher, the Strength of Materials, 1993

M.S., Mechanical Engineering - Fluid Dynamics, 1990, Summa cum Laude, GPA 4.0/4.0

Physics and Mathematics Boarding School, Novosibirsk, Russia, 1984

#### **PUBLICATIONS**

with Ozgür Arslan-Ayaydin. **Dynamics of Crude Oil Spot and Futures Markets**. in *Energy Economics and Financial Markets*, Springer-Verlag (2013)

We discuss whether futures contribute to price discovery in crude oil markets. On the one hand, we review theoretical suggestions that the futures price of crude oil is equal to the spot price of crude oil, plus the cost of carry, and the endogenous convenience yield. On the other hand, our empirical findings built on the Alquist and Kilian (2010) model agree with previous studies documenting that prices of crude oil futures are uninformative for forecasting spot crude oil prices.

### WORK IN PROGRESS

#### Understanding Jumps in the High-Frequency VIX (Job Market Paper)

I conduct a detailed nonparametric study of jumps in the VIX by examining high-frequency data on the VIX and the S&P 500 index futures from 1992 to 2010. I find that jumps in the VIX occur 18.5 times more often than jumps in the S&P. Moreover, when the VIX jumps but the S&P 500 does not, the VIX jump behavior is so unusual that most of them are likely to be *pseudo-jumps*, i.e., they do not represent jumps in true latent volatility process. Specifically, they occur too frequently, rarely correspond to any economic event, and do not contribute much to the leverage effect. Importantly, the frequency of these pseudo jumps has a monotonically decreasing time trend, that is independent of market conditions but consistent with the overall improvement of the quality of the option data. The results of this study have important implications for other studies based on the VIX data, because the pseudo-jumps might considerably distort the inference about volatility dynamics. For example, the jumpiness of volatility might be overstated and the leverage effect might be understated.

High-Frequency Properties of Exchange Rates and the Uncovered Interest Rate Parity with Oleg Bondarenko. We investigate whether high-frequency properties of exchange rates explain the role of carry trades in the violation of the uncovered interest rate parity. Jumps and the leverage effect are considered.

Forecasting of Geopolitical Risks of an Oil Importing Country with Özgür Arslan-Ayaydin. We aim to develop recommendations for diversification of oil import based on the forecast of geopolitical market concentration risk.

#### CONFERENCE PRESENTATIONS

Understanding Jumps in the High-Frequency VIX

Conference on Mathematical Finance and Partial Differential Equations at Rutgers University, New Brunswick, New Jersey, USA, November 2012, postponed to Autumn 2013. SIAM Conference on Financial Mathematics and Engineering, Minneapolis, USA, July 2012. Midwest Finance Association Annual Meeting, New Orleans, USA, February 2012.

The Information Content of the Volatility Index (VIX) in the High Frequency Domain. Midwest Economic Association, 75th Annual Meting St. Louis, USA, March 2011.

An Analysis of Exchange Rates Data Using Multivariate Time Series Models.

International Conference "Computational Mathematics, Differential Equations, Information Technologies", Ulan-Ude, Russia, August 2009.

#### CONFERENCE SERVICE

Midwest Finance Association Annual Meeting 2012

**Discussant:** Juan C. Cardona "Taxable REITs Subsidiaries (TRSs): The Long-Run Performance from REITs with TRS and Non-TRS"

Midwest Economic Association, 75th Annual Meting, 2011,

Discussant: Grace Wang "Asset Allocation and Risk in Banking Failures"

Session Chair: Private and Public Banking

### HONORS AND AWARDS

\$500 travel grant, Midwest Finance Association Annual Meeting, 2012

Liautaud Scholarship, University of Illinois at Chicago, 2007-2011

Second prize, Soviet Union Students' Olympiad in the Strengths of Materials, Russia, 1986

#### TEACHING EXPERIENCE

Lecturer, University of Illinois at Chicago

Business Statistics II, Spring 2012, large class of 110 students,

Business Statistics I, Fall 2008

Teaching Assistant, The University of Illinois at Chicago

Investments, Business Statistics, Portfolio Management, Corporate Finance 2007-2011

#### RESEARCH EXPERIENCE

Research Assistant, University of Illinois at Chicago

Prof. Oleg Bondarenko, 2009 - present

Nonparametric analysis of jump processes in price and volatility

## ADMINISTRATIVE EXPERIENCE

Research Assistant, Office of the Dean, University of Illinois at Chicago, Fall 2012 AACSB 2012 maintenance report.

## RELATED COURSEWORK

Financial Derivatives (Stanley Pliska), Financial Engineering (Pietro Veronesi)

Dynamic Asset Pricing (Costis Skiadas), Empirical Finance (Lan Zhang)

Investments (Oleg Bondarenko), Time Series Analysis (Ruey Tsay)

### OTHER PROFESSIONAL EXPERIENCE - St. Petersburg, Russia

Tax and accounting consultant Joystik Ltd., February 2007 - July 2007

Chief Financial Officer Petroagroprom Ltd., 1999 - 2006

Liquidation Committee Analyst The Construction Company "20th Trust" Inc., 2000 - 2001

Chief Accountant Balt-Invest Plus Ltd, 1993 - 1999

#### PROFESSIONAL MEMBERSHIP

AFA, AWM, FMA, MFA, SIAM

#### **SKILLS**

Software: Matlab, R, Maple, Mathematica, MiniTAB

Language: Russian (native), English (fluent), French (intermediate)

#### REFERENCES AVAILABLE FOR CONTACT

Dr. Oleg Bondarenko (e-mail: olegb@uic.edu; phone: +1-312-996-2362)
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2419 University Hall 601 S. Morgan Street (MC 168) Chicago IL 60607-7124, USA
Dr. Bondarenko is the Chair of my PhD Dissertation Committee.

Dr. Gilbert Bassett (e-mail: gib@uic.edu; phone: +1-312-996-5777)
Professor, Department of Finance, The University of Illinois at Chicago
2401 University Hall 601 S. Morgan Street (MC 168) Chicago IL 60607-7124, USA

Dr. Stanley Sclove (e-mail: slsclove@uic.edu; phone: +1-312-996-2681)
Professor, Department of Information and Decision Sciences, The University of Illinois at Chicago
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