

BO YOUNG CHANG

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Market Risks and Vulnerabilities Division
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EDUCATION

- PhD in Finance, McGill University, Montreal, Canada, 2011
- MSc in Mathematical Finance, University of British Columbia, Vancouver, Canada, 2002
- BSc (Honours) in Mathematics, Queen's University, Kingston, Canada, 2000

RESEARCH INTERESTS

- Asset pricing
- Option pricing
- Risk management
- Pension fund investment
- Skewness
- Downside risk

PROFESSIONAL EXPERIENCE

- 2011-present Senior Economist
Financial Market Policy Analysis Division (2011-2014), Market Risks and Vulnerabilities Division (2015-present), Financial Markets Department, Bank of Canada, Ottawa, Canada
I worked as a researcher in various topics pertaining to the monetary policy and financial stability in Canada. I also developed and implemented a pricing methodology for NHA mortgage backed securities for the purpose of the Bank's collateral valuation.
- 2002-2004 Actuarial Analyst
Eckler Partners Ltd., Toronto, Canada
I worked as an analyst in the pension investment consulting practice of the firm. Responsibilities included investment performance monitoring, investment manager search, research related to pension fund investment, and database maintenance.

2001 Financial Software Developer
 Financial CAD Corporation, Vancouver, Canada
 I examined different credit derivative products in the market and did a
 survey of existing valuation models for credit derivatives.

TEACHING EXPERIENCE

Derivatives, Carleton University, Winter 2016
Derivatives and Risk Management, McGill University, Summer 2009

DISSERTATION

Three Essays on Option-Implied Risk Measures and Equity Pricing

PUBLICATIONS

Bo Young Chang and Greg Orosi, 2016, “Equity Option Implied Probability of Default and Equity Recovery Rate,” forthcoming in *Journal of Futures Markets*.

Bo Young Chang and Bruno Feunou, 2014, “Measuring Uncertainty in Monetary Policy Using Realized and Implied Volatility,” *Bank of Canada Review*, Spring 2014, 32-41.

Peter Christoffersen, Kris Jacobs, and Bo Young Chang, 2013, Chapter on Forecasting Using Option Prices, Handbook of Economic Forecasting, Volume 2, edited by Graham Elliott and Allan Timmermann, in the Handbooks in Economics Series edited by Kenneth J. Arrow and Michael D. Intriligator

Bo Young Chang, Peter Christoffersen, and Kris Jacobs, 2013, “Market Skewness Risk and the Cross-Section of Stock Returns,” *Journal of Financial Economics*, 107 (1), 46-68.

Bo Young Chang, Peter Christoffersen, Kris Jacobs, and Gregory Vainberg, 2012, “Option-Implied Measures of Equity Risk,” *Review of Finance*, 16 (2), 385-428.

WORKING PAPERS

Bo Young Chang, Bruno Feunou, Jean-Sébastien Fontaine, and Sergii Pypko, 2016, “Common Idiosyncratic Variance and Global Risk Factors in Exchange Rates and Option-Implied Volatilities,” Working Paper, Bank of Canada.

Bo Young Chang and Bruno Feunou, 2013, “Measuring Uncertainty in Monetary Policy Using Implied Volatility and Realized Volatility,” Bank of Canada Working Paper 2013-37.

“Option-Implied Risk around Mergers and Acquisitions,” with Gregory Vainberg

“Option-Implied Quantiles and the Expected Stock Market Return”

WORK IN PROGRESS

“Term Structure of Option Implied Skewness and the Cross-Section of Stock Returns,”
with Mathieu Fournier

POLICY REPORTS

“Shadow Banking Monitoring Note,” October 2015

“Potential Impact of Minimum Haircuts on Repo Collaterals in Canada,” September 2012

“Option-Implied Probability of a Large Decline in the Euro,” July 2012

AWARDS / SCHOLARSHIPS

- Participation in the 5th Lindau Meeting of the Winners of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, granted to 450 most qualified young economists, August 2014
- Runner up for Whitebox Prize for Best Financial Research (\$5,000), Whitebox Advisors LLC, 2013
- Excellence in Teaching Award, Desautels Faculty of Management, McGill University, 2009
- PhD Management Research Award, Desautels Faculty of Management, McGill University, 2009
- American Finance Association (AFA) Travel Grant, 2008
- Fonds de recherche sur la société et la culture Doctoral Fellowship, 2008-2009
- Institut de Finance Mathématique de Montréal Doctoral Fellowship, 2005-2008
- Desautels Faculty of Management of McGill Doctoral Fellowship, 2004-2005
- Summer Internship, Mathematics of Information Technology and Complex Systems (MITACS), 2001
- Teaching and Research Assistantship, University of British Columbia, 2000-2002
- Natural Sciences and Engineering Research Council of Canada (NSERC) Undergraduate Student Research Award, Queen’s University, 1999
- Nellie and Ralph Jeffery Award in Mathematics, Queen’s University, 1999
- The Susan Near Prize in Mathematics, Queen’s University, 1998

ACADEMIC / PROFESSIONAL SERVICE

- Program committee, Northern Finance Association annual meeting, 2016

- Program committee, Midwest Finance Association annual meeting, 2014
- Journal referee: Journal of Financial and Quantitative Analysis, Management Science, Journal of Futures Markets, Journal of Business and Economic Statistics, Quarterly Journal of Finance, Studies in Economics and Finance, Studies in Nonlinear Dynamics & Econometrics, European Financial Management, Journal of Empirical Finance

QUALIFICATIONS

- Languages: English (fluent), French (advanced), and Korean (native).
- Passed Courses 1-4 of the Society of Actuaries.
- Passed CFA Level I.
- Extensive programming experience in MATLAB.

CONFERENCE PRESENTATIONS

“Equity Option Implied Probability of Default and Equity Recovery Rate”

- Derivatives Markets Conference, Auckland, New Zealand, 2016
- Asia-Pacific Association of Derivatives (APAD) Annual Conference, Busan, Korea, 2016
- Institut de la finance structurée et des instruments dérivés de Montréal (IFSID), Montreal, Canada, 2016

“Measuring Uncertainty in Monetary Policy Using Implied Volatility and Realized Volatility”

- Financial Management Association (FMA) Annual Meeting, Nashville, USA, 2014
- Northern Finance Association (NFA) Annual Conference, Ottawa, Canada, 2014
- Sungkyunkwan (SKK) University, Seoul, Korea, 2013
- International Conference of the Financial Engineering and Banking Society (FEBS), Paris, France, 2013
- Western Economic Association International (WEAI) Annual Conference, Seattle, USA, 2013
- National University of Singapore Annual Risk Management Conference, Singapore, 2013
- Italian Academy of Management (AIDEA) Bicentenary Conference, Lecce, Italy, 2013

“Market Skewness Risk and the Cross-Section of Stock Returns”

- Financial Management Association (FMA) European Conference, Turin, Italy, 2009

- Centre interuniversitaire de recherche en économie quantitative (CIREQ), 5th PhD Student Conference, Montreal, Canada, 2009
- Western Finance Association (WFA), Victoria, Canada, 2010 (presented by a co-author)
- European Finance Association (EFA), Frankfurt, Germany, 2010
- Northern Finance Association (NFA), Winnipeg, Canada, 2010
- Bank of Canada, 2010

“Option-Implied Risk around Mergers and Acquisitions”

- Doctoral Consortium of Financial Management Association (FMA) European Conference, Turin, Italy, 2009

References available upon request