

Curriculum Vitae of Lars Peter Stentoft
(As of February 16, 2014)

Date of birth: December 5, 1972.
Gender: Male.
Nationality: Danish.
Current Position: Associate Professor (joint with Department of Statistical and Actuarial Sciences)
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Research interests

- Finance.
- Financial Econometrics.
- Computational Finance.
- Econometrics.

Employment

- 2014-: Associate Professor, Department of Economics University of Western Ontario, Canada.
- 2012-2013: Visiting Associate Professor, Department of Finance, Copenhagen Business School, Denmark.
- 2010-: Associate Professor, Department of Finance, HEC Montréal, Canada. (on leave)
- 2005-2010: Assistant Professor, Department of Finance, HEC Montréal, Canada.
- 2003-2005: Post doctoral research fellow, Department of Economics, University of Aarhus, Denmark, financed by the Danish Social Sciences Research Council.
- 1997-1999: Professional Researcher, Centre for Analytical Finance, University of Aarhus, Denmark.

Education

- 2004: PhD in Economics, Department of Economics, University of Aarhus, Denmark. Dissertation Title, 'Least Squares Monte-Carlo and GARCH Methods for American Options: Theory and Applications'. The dissertation was awarded the Jyske Banks Fund Price (Jyske Banks Almennyttige Fonds Pris) for the best PhD dissertation in 2004/2005 at the School of Economics and Management, University of Aarhus.
- 2001: MSc in Economics, Department of Economics, University of Aarhus, Denmark.
- 1996: BSc in Economics, Department of Economics, University of Aarhus, Denmark.

Journal publications

1. Rombouts, J. & L. Stentoft (2014?), 'Bayesian Option Pricing using Mixed Normal Heteroskedasticity Models', forthcoming in *Computational Statistics & Data Analysis*.
2. Boyer, M.M., J. Mejza & L. Stentoft. (2014?), 'Measuring Longevity Risk: An Application to the Royal Canadian Mounted Police Pension Plan', forthcoming in *Risk Management & Insurance Review*.
3. Stentoft, L. (2014), 'Value Function Approximation or Stopping Time Approximation: A Comparison of Two Recent Numerical Methods for American Option Pricing using Simulation and Regression', forthcoming in *Journal of Computational Finance*.
4. Létourneau, P. & L. Stentoft (2014), 'Refining the Least Squares Monte Carlo Method by Imposing Structure', *Quantitative Finance*, 14(3), 495-507.
5. Rombouts, J., L. Stentoft & F. Violante. (2014), 'The Value of Multivariate Model Sophistication: An Application to Pricing Dow Jones Industrial Average Options', *International Journal of Forecasting*, 30, 78-98.
6. Denault, M., J.-G. Simonato and L. Stentoft (2013), 'A Simulation-and-Regression Approach for Stochastic Dynamic Programs with Endogenous State Variable', *Computers & Operations Research* 40 (11), 2760-2769.
7. Boyer, M.M. and L. Stentoft. (2013), 'If we can simulate it, we can insure it: An application to longevity risk management', *Insurance: Mathematics and Economics* 52 (1), 35-45.
8. Boyer, M.M., A. Favaro and L. Stentoft. (2012), 'Pricing Survivor Forwards and Swaps in Incomplete Markets Using Simulation Techniques', *Longevity Risk Management for Institutional Investors*, Fall 2012, 69-87.
9. Stentoft, L. (2011), 'American Option Pricing with Discrete and Continuous Time Models: An Empirical Comparison', *Journal of Empirical Finance* 18 (5), 880-902.
10. Rombouts, J. and L. Stentoft. (2011), 'Multivariate Option Pricing with Time Varying Volatility and Correlations', *Journal of Banking and Finance* 35, 2267-2281.
11. Stentoft, L. (2008), 'American Option Pricing Using GARCH models and the Normal Inverse Gaussian Distribution', *Journal of Financial Econometrics* 6 (4), 540-582.
12. Stentoft, L. (2005), 'Pricing American Options when the Underlying Asset Follows GARCH Processes', *Journal of Empirical Finance* 12 (4), 576-611.
13. Stentoft, L. (2004), 'Convergence of the Least Squares Monte Carlo Approach to American Option Valuation', *Management Science* 50 (9), 1193-1203.
14. Stentoft, L. (2004), 'Assessing the Least Squares Monte-Carlo Approach to American Option Valuation', *Review of Derivatives Research* 7 (3), 129-168.
15. B. Brendstrup, S. Hylleberg, M. Nielsen, L. Skipper and L. Stentoft. (2004), 'Seasonality in Economic Models', *Macroeconomic Dynamics* 8 (3), 362-394.

Book contributions

16. Stentoft, L. (2013), 'American Option Pricing using Simulation with Application to the GARCH Model', in *Handbook of Research Methods and Applications in Empirical Finance*, Edited by Adrian R. Bell, Chris Brooks and Marcel Prokoczek, Chapter 5, 114-147.
17. Stentoft, L. (2012), 'American Option Pricing using Simulation and Regression: Numerical Convergence Results', in *Topics in Numerical Methods for Finance*, Springer Proceedings in Mathematics & Statistics 19, Edited by M. Cummins, F. Murphy and J.J.H. Miller, 57-94.

Working papers (available from my homepage)

- Option Pricing using Realized Volatility.
- Option Pricing with Asymmetric Heteroskedastic Normal Mixture Models (joint work with Jeroen Rombouts, *revise and resubmit at Journal of Financial Econometrics*).
- A Theoretical Framework for Trading Experiments (joint work with Maxence Soumare, Jørgen Vitting Andersen, Francis Bouchard, Alain Elkaim, Dominique Guegan, Justin Leroux and Michel Miniconi)
- What We Can Learn From Pricing 139,879 Individual Stock Options (submitted).

Work in progress

- A simple Volatility Risk Premium Model (joint work with Jeroen Rombouts and Francesco Violante).
- Option Pricing with Flexible Conditional Distributions.
- Option Replication with Transaction Costs: An Empirical Comparison of Stochastic Volatility Models and Rebalancing Strategies (joint work with Mathieu Fournier and Pascal François).
- Which Pricing Framework for Option Valuation under GARCH and Non-Normal Innovations? (joint work with Jean-Guy Simonato).
- Valuation of American Style Employee Stock Options with Reload Features.
- Yes we can (Price Survivor Derivatives if we Simulate the Index) (joint work with M. Martin Boyer).

Grants and awards

- 2012: Institut de la finance structurée et des instruments dérivés de Montréal (IFSID) research grant, Project title: 'Pricing and Using Longevity Risk Instruments'. Co-applicant with M. M. Boyer and C. Dorion. CAD 40,000.
- 2012: Institut de Finance Mathématique de Montréal (IFM2) research grant, Project title: 'Pricing Longevity Risk Derivatives'. Co-applicant with M. M. Boyer. CAD 30,000.
- 2011: Social Sciences and Humanities Research Council of Canada (SSHRC) Standard Research Grants Program, Project title: 'The Financing and Management of Longevity Risk'. Co-applicant with M. M. Boyer, M. Marin and J. F. Outreville. CAD 71,500.
- 2007: Institut de Finance Mathématique de Montréal (IFM2) grant for Assistance for Young Researchers, Project title: 'American Option Pricing: A Comparison of Discrete and Continuous Time Equity Return Models'. Principal applicant. CAD 40,800.
- 2007: Fonds québécois de la recherche sur la société et la culture (FQRSC) grant for établissement de nouveaux professeurs-chercheurs, Project title: 'Vérification empirique de modèles de tarification à l'aide de données canadiennes' (Testing option pricing models empirically using Canadian data). Principal applicant. CAD 45,000.
- 2005: Institut de Finance Mathématique de Montréal (IFM2) funding for new professors, Principal applicant. CAD 125,000.
- 2005: Received the first Jyske Banks Fund Price (Jyske Banks Almennyttige Fonds Pris) for the best PhD dissertation in 2004/2005 at the School of Economics and Management, University of Aarhus, Denmark. Travel grant of DKK 25,000.
- 2003: Danish Social Sciences Research Council (SSF) post doctoral research grant, Project title: 'Empirical Evaluation of Option Pricing Models'. Principal applicant. DKK 1,400,000.

Conference presentations (within the last three years)

- Workshop on Modelling and Forecasting Moment Risk Premia, March 13, 2014, Paris, France: “Which Pricing Approach for Options under GARCH with Non-Normal Innovations?” (scheduled).
- 5th Annual CIRPÉE Applied Financial Time Series Workshop, February 8, 2014, Montreal, Quebec, Canada: “Which Pricing Approach for Options under GARCH with Non-Normal Innovations?”.
- 7th CSDA International Conference on Computational and Financial Econometrics, December 14-16, 2013, London, UK: “Which Pricing Approach for Options under GARCH with Non-Normal Innovations?”.
- 33rd International Symposium on Forecasting, June 23-26, 2013, Seoul, Korea: “The Performance of Pricing Approaches for Options under GARCH with Non-Normal Innovations”.
- 4th Annual CIRPÉE Applied Financial Time Series Workshop, February 16, 2013, Montreal, Quebec, Canada: “Option Pricing with Flexible Conditional Distributions”.
- 6th CSDA International Conference on Computational and Financial Econometrics, December 1-3, 2012, Oviedo, Spain: “Option Pricing with Flexible Conditional Distributions”, invited speaker.
- IFSID's First Conference on Structured Products and Derivatives, October 12-14, 2012, Montreal, Quebec, Canada: “If we can simulate it, we can insure it: An application to longevity risk management”, invited speaker.
- 3rd CEQURA Conference on Advances in Financial and Insurance Risk Management, September 24–25, 2012, Munich, Germany: “If we can simulate it, we can insure it: An application to longevity risk management”.
- 54th Annual conference of the Canadian Operational Research Society, June 11-13, 2012, Niagara Falls, Ontario, Canada: “A Simulation-and-Regression Approach for Stochastic Dynamic Programming with Endogenous State Variables”, invited speaker.
- 3rd Annual CIRPÉE Applied Financial Time Series Workshop, February 18, 2012, Montreal, Quebec, Canada: “What We Can Learn From Pricing 139,879 Individual Stock Options”.
- 5th CSDA International Conference on Computational and Financial Econometrics, December 17-19, 2011, London, UK: “Empirical Performance of GARCH Option Pricing Models: Evidence from 139,879 Individual Stock Options”, invited speaker.
- Longevity Seven, September 8-9, Frankfurt, Germany: “Longevity Risk Management in Incomplete Markets using a Least Squares Monte-Carlo Approach”.
- 65th European Meeting of the Econometric Society, August 25-29, 2011, Oslo, Norway: “Option Pricing With Asymmetric Heteroskedastic Normal Mixture Models”.
- 3rd International Conference on Numerical Methods for Finance, June 8-10, 2011, Limerick, Ireland: “American Option Pricing using Simulation and Regression”, invited Keynote Speaker.
- 2nd Humboldt-Copenhagen Conference, May 13-14, 2011, Copenhagen, Denmark: “Option Pricing With Asymmetric Heteroskedastic Normal Mixture Models”.
- FDIC-Cornell-University of Houston Derivative Securities and Risk Management Conference, March 25-26, 2011, Arlington, Virginia, USA: “Option Pricing With Asymmetric Heteroskedastic Normal Mixture Models”.

Seminar presentations

- University of Western Ontario, Ontario, Canada, 2013.
- CORE (Université catholique de Louvain), Louvain-la-Neuve, Belgium, 2010.
- Aarhus School of Business, Denmark, 2009.
- Queen's University, Kingston, Ontario, Canada, 2009.
- CREATES, Aarhus University, Aarhus, Denmark, 2008.
- Brock University, St. Catharines, Ontario, Canada, 2006.
- HEC Montreal, Quebec, Canada, 2005.
- Tilburg University, Holland, 2005.
- Maastricht University, Holland, 2005.
- Aarhus School of Business, Denmark, 2004.
- Financial Mathematics Seminar, North Carolina State University, 2003.
- Financial Econometrics Lunch Group, Duke University, 2002.

Professional presentations

- 2008: IFM² Executive Workshop on “Simulation techniques for American Option pricing under GARCH”, invited speaker.

Professional services and administrative experience:

- 2014: Graduate Affair Committee, University of Western Ontario (statistics).
- 2013: Member of the Scientific Program Committee for the CSDA International Conference on Computational and Financial Econometrics.
- 2012-present: Associate editor for Journal of Empirical Finance.
- 2011-present: Member of the scientific committee at the Montreal Institute of Structured Products and Derivatives (IFSID).
- 2010-present: co-organizer of the Annual CIRPÉE Applied Financial Time Series Workshop.
- 2007-2012: Director of the Trading Room at HEC Montreal.
- 2010-2011: Member of the Research Council at HEC Montreal.
- 2009-2011: Program reviewer for the European Finance Association Meeting.
- 2010: Program reviewer for the Financial Management Association meeting.
- 2010: Program reviewer for the World Congress in the Bachelier Finance Society.
- 2008-2009: Proposal reviewer for the National Science Foundation.
- 2006: Member of the organizing committee for the Northern Finance Meeting.
- Referee for the following journals: Computational Statistics & Data Analysis, Econometric Reviews, Econometrics Journal, Entropy, European Journal of Operational Research, Emerging Markets Finance and Trade, Finance and Stochastics, Financial Review, International Journal of Computer Mathematics, International Transactions in Operational Research, Journal of Applied Econometrics, Journal of Banking and Finance, Journal of Business and Economic Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Financial Econometrics, Journal of Futures Markets, Journal of Risk and Insurance, Journal of Time Series Econometrics, Macroeconomic Dynamics, Management Science, Mathematical Finance, Mathematics and Computers in Simulation, Optimization Letters, TOP, and Studies in Nonlinear Dynamics & Econometrics.

Teaching

- Winter 2014: “Time Series Econometrics”, Ph.D. Program, Department of Economics, University of Western Ontario.
- Fall 2012 and 2013: “Advanced Fixed Income and Derivatives”, HD Program, Department of Finance, Copenhagen Business School.
- Fall 2011, 2012 and 2013: “Trading in Financial Markets”, BAA Program, Department of Finance, Copenhagen Business School.
- Summer 2012, 2011, 2010, 2009 and 2008: “Trading in Financial Markets (previously “Negotiating in a Trading Room”)”, MBA Program, Department of Finance, HEC Montréal.
- Winter 2010, 2009 and 2008: “Négociation en salle des marchés”, BAA Program, Department of Finance, HEC Montréal.
- Winter 2011, 2010, 2009, 2008, 2007, and 2006: “Trading in Financial Markets (previously “Negotiating in a Trading Room”)”, BAA Program, Department of Finance, HEC Montréal.
- Winter 2011, 2010, 2009 and 2007: “Analysis of Fixed Income Securities”, MBA Program, Department of Finance, HEC Montréal.
- Fall 2006 and 2005: “Investment”, BAA program, Department of Finance, HEC Montréal.
- Fall 2010, 2009, 2007 and 2006: “Numerical Methods in Finance”, Ph.D. Program, Department of Finance, HEC Montréal.

PhD student advising (role, school, year, first position):

- Pascal Letourneau (director, HEC Montreal, 2013, University of Wisconsin-Whitewater)
- Mateusz P. Dziubinski (committee, Aarhus University, 2012, Aalborg University)
- Xuhui (Nick) Pan (committee, McGill University, 2012, Tulane University)
- Christian Dorion (committee, McGill University, 2010, HEC Montreal)
- Kin Hung (Felix) Kan (committee, University of Western Ontario, 2010, CIBC)
- Aurelio Vasquez (committee, McGill University, 2010, ITAM Business School)
- Chayawat Ornthanalai (committee, McGill University, 2009, Georgia Institute of Technology)

MSc student advising (role, programme, year):

- Hicha El Ouali (director, financial economics, 2012)
- Liz Tchakounte Nguenpang (co-director, financial engineering, 2012)
- Antoine Acloque (director, financial engineering, 2011)
- Amelie Favaro (co-director, finance, 2011)
- Aymen Hizem (co-director, financial engineering, 2011)
- Pierre Verain (director, financial engineering, 2011)
- Soufian Zitouni (director, finance, 2011)
- Ariane Douyon (co-director, financial engineering, 2010)
- Mourad El-Hila (co-director, financial engineering, 2010)
- Javier Alberto Hernandez (director, financial engineering, 2010)
- Mathieu Fournier (co-director, finance, 2009)
- Thi Thanh Nhât Gillain (director, finance, 2009)
- Pascal Letourneau (director, finance, 2009)
- Polynice Oyono Ngou (co-director, financial engineering, 2009)
- Maxim St-Amant Lamy (director, finance, 2008)
- Louis-Philippe Leblanc (director, finance, 2008)

Memberships and other activities

- 2011-: Research Fellow at the Centre Interuniversitaire de Recherche en Analyse des Organisations ([CIRANO](#)).
- 2009-: Member of Danish Center for Accounting and Finance ([D-CAF](#)).
- 2009-: Member of Centre interuniversitaire sur le Risque, les Politiques Économiques et l'Emploi ([CIRPÉE](#)).
- 2007-2011: Researcher at the Centre Interuniversitaire de Recherche en Analyse des Organisations ([CIRANO](#)).
- 2006-: International Research Fellow at Center for Research in Econometric Analysis of Time Series ([CREATES](#)).
- 2006-: Member of Centre for Research on e-finance ([CREF](#)).
- 2005-: Member of Laboratoire de calcul en finance et assurance ([LACFAS](#)).
- September 2004: Attended the 1st Lindau Meeting of the Winners of the Bank of Sweden Prize in Economics in Memory of Alfred Nobel.
- October 2002–April 2003: Research Scholar at the Department of Economics, Duke University, with Professor Tim Bollerslev as local advisor.
- October 2003: Member of the Mathematical Network in Finance.
- July 2001: Member of the Econometric Society.
- October 1999: Member of Centre for Analytical Finance ([CAF](#)), of the Danish Econometric Society ([DØS](#)), and of the Nordic Econometric Network.