Thomas Kokholm

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Nationality: Danish
Date of Birth: February 19, 1980
Civil Status:
Married to Lubna Rafiq Kokholm
Children: Nor Rafiq Kokholm
Aya Rafiq Kokholm
Emma Saeeda Rafiq Kokholm

WORK:

School of Business and Social Sciences, Aarhus University — **Department of Economics and Business Economics**

Full Professor	June 2021 – Now
Associate Professor	January 2013 – May 2021
Assistant Professor	February 2010 – December 2012

Aarhus School of Business, Aarhus University — **Department of Business Studies**

Research Assistant	September 2009 – January 2010
Ph.D. student in Finance	September 2006 – September 2009

EDUCATION:

Aarhus School of Business, Aarhus University — **Department of Business Studies**

Ph.D. in Finance — January 2010

Faculty of Science, Aarhus University — **Department of Mathematics**

Master's Degree in Mathematics-Economics (cand.scient.oecon) — August 2006

VISITING POSITIONS:

- Visiting Scholar at the Department of Mathematics, Imperial College, London, February – March 2013.
- Visiting Scholar at Columbia Center for Financial Engineering, Columbia University, New York, February – June 2011.
- Visiting Scholar at Columbia Graduate School of Business, Columbia University, New York, January – September 2008.

PUBLICATIONS:

- "The Lead-Lag Relation between VIX Futures and SPX Futures", (joint work with Christine Bangsgaard), *Journal of Financial Markets*, vol. 67, (2024).
- "Shock Waves and Golden Shores: The Asymmetric Interaction between Gold Prices and the Stock Market", (joint work with Alice Buccioli), *European Journal of Finance*, vol. 28, no. 7 (2022), pp. 743-760.
- "Expected Shortfall and Portfolio Management in Contagious Markets", (joint work with Alice Buccioli and Marco Nicolosi), *Journal of Banking and Finance,* vol. 102, (2019), pp. 100-115.
- "Constant Proportion Portfolio Insurance Strategies in Contagious Markets", (joint work with Alice Buccioli), Q*uantitative Finance*, vol. 18, no. 2 (2018), pp. 311-331.
- "Pricing and Hedging of Derivatives in Contagious Markets", *Journal of Banking and Finance*, vol. 66, (2016), pp. 19-34.
- "Joint Pricing of VIX and SPX Options with Stochastic Volatility and Jump Models, (joint work with Martin Stisen), *Journal of Risk Finance*, vol. 16, no. 1 (2015), pp. 27-48.
- "An Asset Protection Scheme for Banks Exposed to Troubled Loan Portfolios", (joint work with Anders Grosen and Pernille Jessen), *Journal of Economics and Finance*, vol. 38, no. 4 (2014), pp. 568-588.
- "Central Clearing of OTC Derivatives: bilateral vs multilateral netting", (joint work with Rama Cont), *Statistics and Risk Modeling*, vol. 31, no. 1 (2014), pp. 3-22.

- "A Consistent Pricing Model for Index Options and Volatility Derivatives", (joint work with Rama Cont), *Mathematical Finance*, vol. 23, no. 2 (2013), pp. 248-274.
- "Sato Processes in Default Modelling", (joint work with Elisa Nicolato), *Applied Mathematical Finance,* vol. 17, no. 5 (2010), pp. 377-397.
- "Pricing of Traffic Light Options and other Hybrid Products", *International Journal of Theoretical and Applied Finance*, vol. 12, no. 5 (2009), pp. 687-707.

WORKING PAPERS:

- "The Stock Market Impact of Volatility Hedging: Evidence from End-of-Day trading by VIX ETPs", (joint work with Christine Bangsgaard), best paper award in the catagory "Derivative Markets" at the 29th Finance Forum of the Spanish Finance Association, 2022.
- "A Model for the Hedging Impact of Option Market Makers", (joint work with Sebastian Egebjerg), 2024.

TEACHING:

- Investment and Finance (10 ECTS), with Thomas Kloster, Aarhus University, Fall 2022 – Fall 2023.
- Financial Engineering (10 ECTS), with Elisa Nicolato, Aarhus University, Fall 2021 – Fall 2023.
- Fixed Income Analysis (10 ECTS), with Bezirgen Veliyev/Christine Bangsgaard, Aarhus University, Spring 2018 – Spring 2022.
- Fixed Income Analysis (7.5 ECTS), Reykjavik University, Spring 2014 – Spring 2015.
- Advanced Derivatives Modeling (10 ECTS), with Elisa Nicolato, Aarhus University, Fall 2015 – Fall 2020.
- Advanced Financial Economics (10 ECTS), with Søren Kærgaard Slipsager (Spring 2015) and Daniel Borup (Spring 2016), Aarhus University, Spring 2015 – Spring 2016.
- Volatility Modeling (5 ECTS), Aarhus University, Fall 2014.
- Credit Risk: Theory and Applications (5 ECTS), Aarhus University, Spring 2009, Fall 2009 – Fall 2018.
- Fixed Income Securities (5 ECTS), Aarhus University, Fall 2012 – Fall 2014.
- Asset Pricing II (5 ECTS), Aarhus University, Fall 2009 – Fall 2011.
- Advances in Financial Modeling with a view towards Volatility Derivatives (5 ECTS), with Elisa Nicolato, Aarhus University, Fall 2010.
- Advanced Derivatives (10 ECTS), with Claus Munk, Elisa Nicolato, and David Skovmand, Aarhus University, Spring 2012.
- Supervisor on a number of Bachelor's and Master's Theses.

INVITED SPEAKER:

- Finance Research Seminar Series, IÉSEG School of Management, Paris, November 8, 2018.
- The Accounting and Finance Seminar Series, University of Southern Denmark, May 29, 2013.
- The Finance and Stochastics Seminar Series, Imperial College, London, February 27, 2013.
- The SIAM Conference on Financial Mathematics, Minneapolis, July 9-11, 2012.
- Global Derivatives Trading and Risk Management, Paris, April 12-15, 2011.
- Frankfurt MathFinance Conference: Derivatives and Risk Management in Theory and Practice, Frankfurt, March 14-15, 2011.
- Workshop on Financial Derivatives and Risk Management, Fields Institute, Toronto, May 24-28, 2010.
- International Workshop: Credit Risk, Evry University, Paris, June 25-27, 2008.

CONFERENCE PRESENTATIONS:

- The SIAM Conference on Financial Mathematics and Engineering, Toronto, June 4-7, 2019.
- The 10th World Congress of the Bachelier Finance Society, Dublin, July 16-20, 2018.
- The 11th International Risk Management Conference, Paris, June 7-8, 2018
- The 21st International Congress on Insurance: Mathematics and Economics, Vienna, July 3-5, 2017.
- The 8th World Congress of the Bachelier Finance Society, Brussels, June 2-6, 2014.

- The Midwest Finance Association Annual Meeting, Chicago, March 14-16, 2013.
- Research in Options, Rio de Janeiro, December 8-12, 2012.
- 7th World Congress of the Bachelier Finance Society, Sydney, June 19-22, 2012.
- 22nd Annual Derivatives Securities and Risk Management Conference, Arlington, Virginia, March 30-31, 2012.
- 5th Financial Risks International Forum: Systemic Risk, Paris, March 22-23, 2012.
- International Conference on Financial Intermediation, Competition and Risk, Rome, June 30-July 2, 2011.
- Modeling and Managing Financial Risks, Paris, January 10-13, 2011.
- 6th World Congress of the Bachelier Finance Society, Toronto, June 22-26, 2010.
- 14th International Congress on Insurance: Mathematics and Economics, Toronto, June 17-19, 2010.
- Quantitative Methods in Finance, Sydney, December 16-19, 2009.
- The 22nd Australasian Finance and Banking Conference, Sydney, December 16-18, 2009.
- Nordic Finance Network Workshop, Copenhagen, May 14-15, 2009.
- 19th Annual Derivatives Securities and Risk Management Conference, Arlington, Virginia, April 17-18, 2009.
- The Annual Danish Doctoral School of Finance PhD-Workshop, Sandbjerg, January 10-11, 2008.
- Quantitative Methods in Finance, Sydney, December 12-15, 2007.
- The 20th Australasian Finance and Banking Conference, Sydney, December 12-14, 2007.
- Nordic Finance Network Workshop, Helsinki, May 4-5, 2007.
- Workshop on Credit Risk, Aarhus School of Business, Aarhus University, March 7, 2007.

CONFERENCES WITHOUT PRESENTATION:

- FRIC’17: Conference on Financial Frictions, Copenhagen, August 17-18, 2017.
- AFA 2015 Annual Meeting, Boston, January 3-5, 2015.
- Monitoring Systemic Risk: Data, Models and Metrics, Cambridge, September 22-26, 2014.
- FRIC’14: Conference on Financial Frictions, Copenhagen, August 26-26, 2014.
- Aarhus Quant Day, Aarhus, January 17, 2014.
- Quantitative Methods in Finance, Cairns, June 26-30, 2012.
- PDE and Mathematical Finance III, Kungliga Tekniska Högskolan, Stockholm, August 17-20, 2009.
- Second Princeton Credit Risk Conference, Princeton University, USA, May 23-24, 2008.
- Workshop on Market Liquidity, Columbia University, USA, April 4, 2008.
- Moody’s fourth Credit Risk Conference, CBS, Copenhagen, May 30-31, 2007.
- World Congress on Computational Finance, London, March 26, 2007.
- The Annual Danish Doctoral School of Finance PhD-Workshop, Sandbjerg, January 4-5, 2007.

DISCUSSIONS:

- “*An Explanation of Negative Swap Spreads: Demand for Duration from Underfunded Pension Plans*” by Sven Klingler and Suresh Sundaresan, Young Scholars Nordic Finance Workshop, Aarhus, November 23-24, 2017.
- “*Safe-Haven CDS Premiums*” by Sven Klingler and David Lando, 1st SDU Finance Workshop, Odense, December 1, 2016.
- “*The impact of central clearing on counterparty risk*” by Giovanni Bruno, The PhD Nordic Finance Network Workshop, Bergen, May 19-20, 2016.
- “*The Macroeconomy and Credit Risk: Direct and Indirect Effects*” by Kay Giesecke, David Lando and Mamdouh Medhat, The PhD Nordic Finance Network Workshop, Copenhagen, May 23-24, 2013.
- “*Riding on a Non-Gaussian Smile”* by Sofiane Aboura, Sébastian Valeyre and Niklas Wagner, The Midwest Finance Association Annual Meeting, Chicago, March 14-16, 2013.
- *“Loan Servicers’ Incentives and Optimal CDOs”* by Henri Pagès, The 22nd Australasian Finance and Banking Conference, Sydney, December 16-18, 2009.
- “*Valuation of Life Insurance Surrender and Exchange Options”* by Helge Nordahl, The PhD Nordic Finance Network Workshop, Helsinki, May 4-5, 2007.

SCHOLARLY ACTIVITIES:

- Main Ph.D. supervisor for: Alice Buccioli, Christine Bangsgaard, Sebastian Egebjerg (started 2023).
- Second Ph.D. supervisor for: Søren Slipsager Sørensen, Thomas Kloster.
- Head of the Finance section at Department of Economics and Business Economics, Aarhus University since January 2024.
- Chair of the programme committee for Mathematics-Economics at Aarhus University, since January 2022.
- Member of the academic committee under the Danish FSA for the approval of learning objectives for the certification of financial advisors, since April 2024.
- Research fellow: DFI – Danish Finance Institute and CoRE – Center for Research in Energy: Economics and Markets.
- Coordinator of the cand.merc.finance programme and the finance courses on the math-econ programme at Aarhus University, January 2018 – December 2021.
- PhD committee for: David Sloth Pedersen (chair: AU), Camilla Pisani (chair: AU), Mikael Reimer Jensen (CBS), Giovanni Bruno (NHH).
- Co-organizer of *Aarhus Quant Factory* with Elisa Nicolato, January 14-17, 2014.
- Referee activity: SIAM Journal on Financial Mathematics, Journal of Futures Markets, Quantitative Finance, Journal of Banking and Finance, Mathematical Finance, Management Science.
- Teaching assistant in various courses during my studies: Measure Theory, Probability Theory 1.1, Finance and Investment Theory, Costs and Accounts 1 & 2, Business Economics 1 & 2.
- Co-organizer of the Mathematics-Economics study tour to Copenhagen in 2002 and to Frankfurt in 2005.
- Vice-chairman in the board of the Association for Mathematics-Economics students, Aarhus University in 2001.

Ph.D. COURSES:

- Capital requirements, Credit risk, Collateral and Centralized clearing: how to avoid losing billions in fines while doing your CVA calculations on an iPad Mini (2 ECTS), Aarhus University, January 2014, with Leif Andersen and Jesper Andreasen.
- Understanding and Managing Model Risk (1 ECTS), Aarhus University, January 2014, with Massimo Morini.
- Counterparty Credit Risk Modelling and Restructuring (2 ECTS), Aarhus University, Spring 2012, with Damiano Brigo.
- Dark Markets, Minerva Foundation Lectures, Columbia University, Spring 2011, with Darrel Duffie.
- Commodities and Commodity Derivatives (2 ECTS), Aarhus University, January 2011, with Helyette Geman.
- Stochastic Processes in Financial Applications (2 ECTS), Aarhus University and The Danish Doctoral School of Finance, Winter 2010, with Dilip Madan.
- Credit Risk and Bubbles (2 ECTS), Aarhus University and The Danish Doctoral School of Finance, Summer 2009, with Robert Jarrow.
- The Volatility Surface (2 ECTS), The Danish Doctoral School of Finance, Spring 2009, with Jim Gatheral.
- Summer School on Levy processes (2.5 ECTS), Thiele Centre, Summer 2007, with Jan Kallsen, Davar Khoshnevisan, Andreas Kyprianou and Sidney Resnick.
- Financial Modelling with Jumps (2 ECTS), The Danish Doctoral School of Finance, Summer 2007, with Rama Cont.
- Financial Optimization under Uncertainty (5 ECTS), DTU, Summer 2007, with Hercules Vladimirou.
- LIBOR market models (2 ECTS), The Danish Doctoral School of Finance, Spring 2007, with Fabio Mercurio.
- Asset Pricing 1 (8 ECTS), The Danish Doctoral School of Finance, Fall 2006.
- Corporate Finance (10 ECTS), The Danish Doctoral School of Finance, Fall 2006.

PEDAGOGICAL TRAINING COURSES:

- Go online: course on blended learning, Aarhus University, Fall 2015.
- Supervision of Master/PhD students and collegial supervision, Aarhus University, Fall 2013.
- Pedacogical training programme for assistant professors, Aarhus School of Business, Fall 2010.
- Dissemination course: Introduction to Higher Education Pedagogy and Academic Writing, Aarhus School of Business, 2007.

AWARDS AND GRANTS:

- Best paper award in *Derivative Markets* at the 29th Finance Forum of the Spanish Finance Association for the paper "The Stock Market Impact of Volatility Hedging: Evidence from End-of-Day Trading by VIX ETPs" (co-authored by Christine Bangsgaard).
- Granted 2,652,533 DKK from The Danish Council for Independent Research | Social Sciences for research project entitled "The interplay between volatility speculators, institutional hedgers and market disruptions", January 1, 2021 - December 31, 2023.
- Granted 107,660 DKK from The Danish Council for Independent Research | Social Sciences in support of my research visit to Columbia University in the Spring 2011.
- Offered housing in The Bikuben Foundations Academic Guest House, New York, Spring semester 2008.
- Awarded *Tuborgfondets Erhvervsøkonomiske Pris 2007* (150,000 DKK).
- Third prize (10,000 DKK) in the *Sparinvest Prize Competition 2006* for my master's thesis "*Credit Risk Models and the Pricing of CDOs using Copula Methods".*

OTHER:

- Interview in Campus 8, 2006. "*Niveauet faldt efter Studiereform*".
- Article in Politiken April 10, 2006. "*Naturvidenskab Light I Århus – bekvemt og betænkeligt*".

PERSONAL:

- Fluent in English. Reasonable in German and Spanish.
- Lived in Berlin in the Spring 2000, where I worked as waiter at Café Dante.
- After finishing my undergraduate study I took a sabbatical for 5 months, where I lived in Bolivia working as a volunteer at an orphanage.
- Completed Berlin Marathon in 2002 in the time 3:00:06.