



**Dominic O'Kane, Ph.D.**

Professor - Speciality: Finance

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## EDUCATION

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- 1990 - 1993**      **Theoretical Physics Department, Oxford University**  
Doctorate in Theoretical Physics  
*Includes 6 months at the Laboratoire de Physique Théorique de l'ENS.*  
Thesis: *"Statistical Mechanical Studies of Autoassociative and Feedforward Neural Networks"*
- 1987 – 1990**      **Physics Department, Imperial College, London**  
B.Sc. (1<sup>st</sup> Class Honours) in Physics

## PROFESSIONAL EXPERIENCE

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- 2021 –**              **EDHEC Business School – EDHEC-Risk Institute**  
Professor of Finance.
- 2007 – 2021**      **EDHEC Business School**  
Affiliate Professor of Finance.
- 2012 –**              **Quantitative Insights Ltd**  
*Consulting and testifying expert in financial litigation disputes such as the Lehman Bankruptcy, Libor manipulation, CPDO rating case, London "Whale" case, and the London Reuters FX Fix Manipulation.*
- 1997 – 2006**      **Lehman Brothers (Europe)**  
MD, Head of Quantitative Research  
*Managed team of 20 PhD quants developing the pricing models for the interest rate, currency, credit, and commodity trading desks.*
- 1994 – 1997**      **Salomon Brothers, London**  
Interest Rate Quantitative Analyst  
*Developing the risk and pricing models used in a large internal proprietary hedge fund.*
- 1993 - 1994**      **Mathematics Department, Imperial College, London**  
Postdoctoral Research Fellow  
*Models for understanding High Temperature Superconductivity.*

## TEACHING EXPERIENCE

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- 2017: M.Sc. in Finance, which I have taught since 2008 was ranked #1 worldwide by FT.
- 2015, 2017: Taught Executive Education in Fixed Income at Yale University.
- 2015: Awarded EDHEC Teaching Prize
- 2017-2019: 30-hour course - Data and Machine Learning at EDHEC
- 2017-2019: 15-hour course - Python for Finance at EDHEC
- 2012-2017: 15-hour course - C++ for Finance at EDHEC
- 2013-2019: 30-hour course - Advanced Derivatives at EDHEC
- 2009-2017: 30-hour course - Advanced Fixed Income at EDHEC.
- 2008-2013: 15-hour course - Credit Modelling at EDHEC
- 2010-2013: 15-hour course - Structured Products at EDHEC
- 2012: 25-hour course - Risk Measurement and Management, EDHEC
- 2015: Taught course on Insurance Regulation
- 2009: Taught masters course *Derivatives, Markets and Models* at London Business School
- 2000-2004: Taught Credit module at the Oxford University Master’s Degree in Finance.
- Supervised over 20 student M.Sc. theses at EDHEC including 3 on machine learning in finance.

## ACADEMIC PUBLICATIONS

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### FINANCE

- O’Kane D and Meyfredi J.C., *An Examination of the Impact of the EU Ban on Naked Purchases of Sovereign CDS*, Banks, Markets, and Investors, 2017, 147, 25-35
- O’Kane, D., *Optimising the Multilateral Netting of Fungible OTC Derivatives*, Quantitative Finance, 2017, Volume 17, 10, 1523-1534
- O’Kane, D., *Initial Margin for Non-Centrally Cleared OTC Derivatives*, EDHEC Position paper, July 2016
- O’Kane, D., *Counterparty Risk Minimization by the Optimal Netting of OTC Derivative Trades*, Journal of Derivatives, 2016, Volume 24, 48-65
- O’Kane, D. *Oxford Handbook of Credit Derivatives*, Quantitative Finance, 14,1,25-26. 2014
- O’Kane, D., *The Link between Eurozone Sovereign Debt and CDS Prices*, Banks, Markets and Investors, Number 117, March-April 2012
- O’Kane, D., *Approximating independent loss distributions with an adjusted binomial distribution*, Journal of Credit Risk, Volume 7/Number 4, Winter 2011/12
- O’Kane, D., *Force-fitting CDS Spreads to CDS Index Swaps*, Journal of Derivatives, Volume 18, 3, 2011
- O’Kane, D. and Sen, S., *Credit Spreads Explained*, Journal of Credit Risk, Volume 1/Number 2, Spring 2005
- O’Kane D. and Schloegl, S., *A note on the large homogeneous portfolio approximation with the student-t copula*, Finance and Stochastics, Volume 9 Number 4, 577

## MACHINE LEARNING

- O’Kane, D., and Treves, A, *Why the simplest notion of the neocortex and an associative memory would not work*, Network Computation in Neural Systems, 3 (1992) 379-384
- O’Kane, D., and Treves, A. *Short- and Long-range connections in Autoassociative Memory*, Journal of Physics A, 25 (1992) 5055-5069
- O’Kane, D., and Sherrington, D., *A feature retrieving attractor neural network*, Journal of Physics A, 26 (10) 2333-2342, (1993)
- Monasson R. and O’Kane D, *Domains of Solutions and Replica Symmetry Breaking in Multilayer Neural Networks*, Europhysics Letters, 27, 85, (1993)
- O’Kane, D. and Winther, O., *Learning to Classify in Large Committee Machines*, Physical Review E, 50, 3201 (1994)

## BOOKS

- *Modelling Single-name and Multi-Name Credit Derivatives*, D. O’Kane, Wiley Finance, August 2008, (Google Scholar – 230 citations)
- Chapters 66 and 67 of *The Handbook of Fixed Income Securities*, Edited by F. Fabozzi, McGraw-Hill 8<sup>th</sup> Edition
- *The Valuation of CDS*, R. Chen, F. Fabozzi, D. O’Kane, *Professional Perspectives on Fixed Income Portfolio Management*, Frank Fabozzi Series, Wiley Finance, V4, 2003

## INDUSTRY PUBLICATIONS

- *Global Guide to Corporate Bankruptcy*, D. O’Kane, and P. Bawlf, Nomura, 2010
- *Credit Spreads Explained*, D. O’Kane and S. Sen, Lehman Brothers, 2004
- *Base Correlation Explained*, D. O’Kane and M. Livesey, Lehman Brothers, 2004
- *Upfront Credit Default Swaps*, D. O’Kane and S. Sen, Lehman Brothers, 2003
- *Valuation of Credit Default Swaps*, D. O’Kane and S. Turnbull, Lehman Brothers, 2003
- *Leveraging Spread Premia*, D. O’Kane, and L. Schloegl, Lehman Brothers, 2003
- *Lehman Guide to Exotic Credit Derivatives*, Risk Magazine, 2003, D. O’Kane et al.
- *A Counterparty Risk Framework for Protection Buyers*, D. O’Kane and L. Schloegl, Lehman Brothers, 2002
- *Cross Currency Credit Explained*, D. O’Kane and L. Schloegl, Lehman Brothers, 2002
- *Analytical Portfolio Credit Model with Tail Dependence*, D. O’Kane, and L. Schloegl, Lehman Brothers, 2002
- *Explaining the Basis: Cash versus Default Swaps*, D. O’Kane, Lehman Brothers, May 2001
- *Credit Modelling: Theory and Practice*, D. O’Kane, and L. Schloegl, Lehman, 2000
- *Credit Derivatives Explained*, D. O’Kane, Lehman Brothers, March 2000
- *Introduction to Asset Swaps*, D. O’Kane, Lehman Brothers, 1999
- *Introduction to Default Swaps*, D. O’Kane, Lehman Brothers, 1999

## CONFERENCES AND OTHER TALKS

- *PyConf Hyderabad India*: December 2020, invited to present talk on FinancePy.
- *ERI Conference London*, March 2014, *Optimising the Compression Cycle*
- *Financial Regulation Conference*, Paris June 2013. *Optimising the Compression Cycle*
- *ERI London*, May 2012, *Shooting the Messenger: The CDS market and Greece's Default*
- *ERI Conference*, London March 2010, *Credit Derivatives After the Crisis*

- Numerous presentations at Risk conferences and training courses
- Presented talk on credit derivatives at London Business School, 2003.
- Invited Lecture at the WBS Conference in Prague, 2004
- Invited Lecture at Bank for International Settlements, Basel, September 2004
- Invited Lecture at the ICBI Conference in Barcelona, May 2004
- Invited Lecture at the ICBI Conference in Paris, May 2005
- WBS Credit Derivative training course, November 2005

## FINANCE SOFTWARE

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- Author of FinancePy. Open-source financial pricing and risk-management software which can be found at <https://github.com/domokane/FinancePy>.

## LANGUAGES

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- English – fluent spoken and written
- French – fluent spoken, excellent written