CURRICULUM VITAE – PROFESSOR CAROL ALEXANDER

A PERSONAL

1. Details

Name: Carol Olivia Alexander
Appointment: Professor of Financial Risk Management
D.O.B: 31 December 1955

2. Education and Qualifications

1976	B.Sc. (Sussex) in Mathematics with Experimental Psychology
1980	Ph.D. (Sussex) in Algebraic Number Theory
1985	M.Sc. (LSE) in Mathematical Economics and Econometrics

2. Previous Appointments

1977 – 1978	Editor, John Wiley (one-year, interim PhD research)
1981 – 1982	Postdoctoral Research Fellow, University of Amsterdam
1982 – 1983	Bond Analyst, UBS Phillips and Drew, London
1983 – 1985	Part-Time Teaching and Research Assistant, London School of Economics
1985 – 1996	Lecturer in Mathematics and Economics, University of Sussex
1996 – 1998	Lecturer in Mathematics, University of Sussex (Part-Time)
	Academic Director, Algorithmics Inc., London (Part-Time)
1998	Director, Head of Market Risk Modelling, Nikko Securities, London
2000 – 2008	Director of Research, ICMA Centre
1999 – 2008	Chair of Financial Risk Management, ICMA Centre

B TEACHING

Courses:

I convene the following courses, providing all the lectures (except *). Credits and approximate numbers of students given in parentheses

1999 – 2004	Market Risk	(20 Credits, 60 students)
2002 –	Volatility Analysis	(20 Credits, 35 students)
2005 – 2006	MSc Research Projects	(20 Credits, 180 students)
2005 –	Quantitative Methods in Finance	(20 Credits, 200 students)
2008 – 2009	Mathematics for Financial Engineers*	(20 Credits, 5 students)

Enhancement in Programme Development:

- Established the Eurekahedge prize for the best research project on Hedge Funds
- Obtained PRM accreditation for the MSc in Financial Risk Management
- Set up a very successful student exchange programme with the Elite Masters programme, Technical University of Munich

Supporting Students Learning:

- Established a large database of self-assessment questions for Masters students, available through the BlackBoard Learning Management System

Involvement in Quality Management Process:

- Designed spreadsheets for teaching allocations and for student feedback
- Provided faculty and administration staff at ICMA with statistics on student intake and their pre-course assessment results

C CONSULTANCY

1990 - 1991 First generation GARCH models, Hill Samuel Bank, London
1992 Volatility trading models, Equitable House Investments, London
1994 - 2003 Hedge-fund software design, Pennoyer Capital Management, New York
1996 - 1997 Spot-futures arbitrage models, EDF Man, London
1996 Internal VaR model implementation, Shell Pension Fund, Den Haag, Holland
1997 - 1998 Orthogonal GARCH models, Robert Fleming, London
1998 - 1999 Academic Director, Algorithmics Inc., Toronto
2003 - 2006 Expert witness, Richards Butler, London
2009 VaR model design, Credit Agricole Asset Management, London

D INTERNAL AND EXTERNAL ACTIVITIES

2000 – 2008: *Director of Research, ICMA Centre*

- Started online discussion paper series
- Started weekly research seminar
- Active role in structuring research plans
- Active role in management of website research section

2002 – : *Chair of the Academic Advisory Council of Professional Risk Manager's International Association* (and *Board Member* since 2009)

E RESEARCH AND SCHOLARSHIP

1. Research Grants: with year of award

1981 Leverhulme post-doctoral research grant, University of Amsterdam
1986 Nuffield award for new lecturers in science, University of Sussex
1994 ESRC grant for time series analysis in financial markets
2003 FDMR grant for research into hedge funds
2003 British Academy grant for collaborative research in Romania – with Simon Burke, Henley Business School, Economics
2003 International Financial Risk Institute Award
2005 Australian Prudential Regulatory Authority – with Elizabeth Sheedy, MacQuarie University, Sydney
2008 Europlace Institute of Finance – with Steve Ohana, ESCP-EAP, Paris

2. Research Students: with (expected) year of completion

2004 Ali Yigitbasioglu: *Defaultable Convertible Bonds with Volatility Uncertainty and Call Notice Periods*
2004 Anca Dimitriu: *Portfolio Optimization Models for Traditional and Alternative Investments*
2005 Dmitri Lvov: *Pricing Convertible Bonds and Bermudan Swaptions by Monte Carlo Simulation*
2006 Leonardo Nogueira: *Pricing Options with Local and Stochastic Volatility Models*
2006 Emese Lazar: *Multi-state Volatility Models: Theory and Applications*
2007 Andreza Barbosa: *Exchange Traded Funds and Hedge Funds*
2008 Naoufel El Bachir: *Stochastic Default Intensity Modelling with Dependent Jump Processes*
2009 Aanand Venkatrammanan: *Closed Form Multi-Asset Option Pricing*
2009 Joydeep Lahiri: *Pricing CDS with Jump-Diffusion Intensity Models*
2010 Stamatis Leontsinis: *Model-Free Moment Indices*
2010 Silvia Stanescu: *Analytic Moments for GARCH Returns and Variances*
2010 Andreas Kaeck: *Dynamic Properties of Derivative Indices*
2010 Daniel Ledermann: *Random orthogonal Matrix Simulation*
2012 Dimitris Korovilas: *Financial News Impact on Option Implied Densities*
2012 Juan Arismendi: *Tail Covariance, Skewness and Kurtosis*

PUBLICATIONS (2004-2009): SEE WEBSITE FOR COMPLETE LIST

1. Alexander, C. and E. Lazar (2009) 'Modelling regime-specific stock price volatility' *Oxford Bulletin of Economics and Statistics*, 71:6, 761 - 797
2. Alexander, C., A. Kaeck and L. Nogueira (2009) 'Model risk adjusted hedge ratios' *Journal of Futures Markets*, 29: 11, 1021-1045
3. Alexander, C. and E. Sheedy (2008) 'Developing a stress testing framework based on market risk models' *Journal of Banking and Finance* 32:10, 2220-2236
4. Alexander, C. (2008) In *Risk- Management in Commodity Markets: From Shipping to Agriculturals and Energy*, H. Geman (ed.), Wiley
5. Alexander, C. and A. Kaeck (2008) 'Regime dependent determinants of credit default swap spreads' *Journal of Banking and Finance* 32:6, 1008 – 1021.
6. Alexander, C. and A. Barbosa (2008) 'Hedging exchange traded funds' *Journal of Banking and Finance* 32:2, 326-337
7. Alexander, C. (2008) 'Moving average models for volatility and correlation.' In *Handbook of Finance*, Volume 1. F. J. Fabozzi (ed.), Wiley
8. Alexander, C. (2008) 'Statistical models of operational loss' In *Handbook of Finance*, Volume 1. F. J. Fabozzi (ed.), Wiley
9. Alexander, C. and A. Venkatramanan (2008) 'Commodity options' In *Handbook of Commodity Investing*, F.J. Fabozzi, R. Füss and D.G. Kaiser (ed.), Wiley
10. Alexander, C. (2008) *Market Risk Analysis*, Volume I: *Quantitative Methods in Finance*. Wiley
11. Alexander, C. (2008) *Market Risk Analysis*, Volume II: *Practical Financial Econometrics*. Wiley
12. Alexander, C. (2008) *Market Risk Analysis*, Volume III: *Pricing, Hedging and Trading Financial Instruments*. Wiley
13. Alexander, C. (2008) *Market Risk Analysis*, Volume IV: *Value at Risk Models*. Wiley
14. Alexander, C. and E. Sheedy Eds. (2008) *The Professional Risk Manager's Guide to Finance Theory and Application.* (McGraw-Hill)
15. Alexander, C. and E. Sheedy Eds. (2008) *The Professional Risk Manager's Guide to Financial Markets. (*McGraw-Hill)
16. Alexander, C. and E. Sheedy Eds. (2008) *The Professional Risk Manager's Guide to Financial Instruments. (*McGraw-Hill)
17. Alexander, C. and L. Nogueira (2007) 'Model-free price hedge ratios for homogeneous claims on tradable assets' *Quantitative Finance* 7:5, 473 – 479.
18. Alexander, C. and A. Barbosa (2007) 'Effectiveness of minimum variance hedging' *Journal of Portfolio Management* 33:2, 46 - 59
19. Alexander, C. and L. Nogueira (2007) 'Model-free hedge ratios and scale-invariant models' *Journal of Banking and Finance,* 31:6, 1839-1861
20. A. Yigitsbasioglu and C. Alexander (2006) 'Pricing and hedging convertible bonds: delayed calls and uncertain volatility' *International Journal of Theoretical and Applied Finance,* 9:2, 415-437
21. Alexander, C. and E. Lazar (2006) 'Normal mixture GARCH(1,1): applications to foreign exchange markets' *Journal of Applied Econometrics,* 21:2 307-336

22. Alexander, C. and A. Dimitriu (2006) ‘Rank alpha funds of hedge funds’, in *Fund of Hedge Funds: Performance, Assessment, Diversification and Statistical Properties*, Edited by Greg N. Gregoriou, Elsevier Press
23. Alexander, C. and A. Dimitriu (2005). ‘Hedge Fund Index Tracking’. In G.N. Gregoriou, G. Hübner, N. Papageorgiou, and F. Rouah (ed.), *Hedge Funds: Insights in Performance Measurement, Risk Analysis, and Portfolio Allocation*. John Wiley & Sons, Inc., 165–179
24. Alexander, C. and A. Dimitriu (2005) ‘Rank alpha funds of hedge funds’, *Journal of Alternative Investments*, 8:2, 48-61
25. Alexander, C. and A. Dimitriu (2005) ‘Detecting switching strategies in equity hedge funds returns’, *Journal of Alternative Investments*, 8:1, 7-13.
26. Alexander, C. (2005) ‘The present and future of risk management’ *Journal of Financial Econometrics,* 3:1, 3-25
27. Alexander, C. and A. Barbosa (2005) ‘The spider in the hedge’ *Review of Futures Markets*, 11:1, 89-113
28. Alexander, C. and A. Dimitriu (2005) ‘Indexing and statistical arbitrage: tracking error or cointegration?’ *Journal of Portfolio Management,* 31:2, 50-63.
29. Alexander, C. and A. Dimitriu (2005) ‘Indexing, cointegration and equity market regimes’ *International Journal of Finance and Economics,* 10, 213-231.
30. Alexander, C. and A. Scourse (2004) ‘Bivariate normal mixture spread option valuation’ *Quantitative Finance,* 4:6 1-12.
31. Alexander, C. (2004) ‘Normal mixture diffusion with uncertain volatility: modelling short and long term smile effects’ *Journal of Banking and Finance,* 28:12 2957-2980
32. Alexander, C. and A. Dimitriu (2004) ‘Sources of out-performance in equity markets: common trends, mean reversion and herding’ *Journal of Portfolio Management,* 30:4, 170-185
33. Alexander, C. and A. Dimitriu (2004) ‘Equity indexing: optimising passive investments’ *Quantitative Finance*, 4:3 30 - 33
34. Alexander, C. and E. Sheedy Eds. (2004) *The Professional Risk Manager’s Handbook: Volume 1, Finance Theory, Instruments and Markets* (PRMIA Publications, Illinois)
35. Alexander, C. and E. Sheedy Eds. (2004) *The Professional Risk Manager’s Handbook: Volume 2, Financial Mathematics* (PRMIA Publications, Illinois)
36. Alexander, C. and E. Sheedy Eds. (2004) *The Professional Risk Manager’s Handbook: Volume 3, Financial Risk Management* (PRMIA Publications, Illinois)
37. Alexander C. and A. Dimitriu (2004), 'The Art of Investing in Hedge Funds: Fund Selection and Optimal Allocations', in *Intelligent Hedge Fund Investing*, Ed. Barry Schachter, Risk Publications
38. Alexander, C. and L. Nogueira (2004) ‘Stochastic local volatility’ *Proceedings of the second international IASTED conference on financial engineering and applications,* MIT, 136-141
39. Alexander, C. and E. Lazar (2004) ‘Time aggregation of normal mixture GARCH’ *Proceedings of the second international IASTED conference on financial engineering and applications*, MIT, 210-215
40. Alexander, C. (2004) ‘Principles of the skew’ in Alexander Lipton (ed.) *Exotic Options.* Risk Publications, 57-64.
41. Alexander, C. (2004) ‘Correlation in crude oil and natural gas markets’ in *Managing Energy Price Risk* (3rd Edition) V. Kaminsky (ed.). Risk Publications 573-606