#### **CURRICULUM VITAE**

## STEPHEN M SCHAEFER

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# University

1979	University of London, Faculty of Economics <u>Doctor of Philosophy</u>
1969	University of Cambridge <u>Certificate of Postgraduate Study in Engineering</u> Control Theory
1968	University of Cambridge Bachelor of Arts, Mechanical Sciences

### **Honours and Awards**

2017	Honorary Fellowship, Ca' Foscari, University of Venice
2016	Treynor Prize: Institute for Quantitative Research in Finance ('Q-Group') Award
2012	First Prize, Fama-DFA award for the Best Paper Published in the <i>Journal of Financial Economics</i> in the Areas of Capital Markets and Asset Pricing, 2011.
2005	Institute for Quantitative Research in Finance ('Q-Group') Award.
1982	Institute for Quantitative Research in Finance ('Q-Group') Award.
1977	Graham and Dodd Award.

## Career

- C.	
2016 -	Academic Director (Lead), AQR Asset Management Institute, London Business School
2012 - 2016	Deputy Dean, Faculty, London Business School
2010 - 2011	Deputy Dean, Faculty, London Business School
2004 - 2005	Deputy Dean, Research, London Business School
2004 - 2005	Governor, London Business School
2001 - 2004	Faculty Governor, London Business School
1992 - 1995	Faculty Governor, London Business School
1992 - 1995	Research Dean, London Business School
1985 - 1992	Director, Institute of Finance and Accounting and Chair, Finance Subject Area, London Business School
1985 -	Professor of Finance, London Business School
1998 - 2003	Tokai Bank Professor of Finance, London Business School
1985 - 1998	Esmée Fairbairn Professor of Finance, London Business School
1981 - 1985	Senior Research Fellow, London Business School.
1979-1981	Stanford University, Graduate School of Business. Assistant Professor
1970-1978	London Business School. Research Officer/Senior Research Officer/Lecturer and Prudential Research Fellow.

# **Visiting Appointments**

2017 (Jan/Feb)	Visiting Professor, Melbourne Business School
2016 (Nov/Dec)	Visiting Professor, University of New South Wales
2011 (Dec)	Visiting Professor, Graduate School of Business, Stanford University.
2011 (Oct/Nov)	Visiting Professor, Einaudi Institute for Economics and Finance, Rome
2008 (October)	Visiting Professor, Graduate School of Business, Stanford University.
1996	Visiting Professor, University of Cape Town
1991 (Mar/Jun)	Cassa di Risparmio di Venezia Visiting Professor, Dipartmento di Scienze March-June Economiche, Universitá di Venezia
1985 (Summer)	Leslie Wong Visiting Professor, University of British Columbia
1982-2009	Guest Lecturer. International Centre Fame, Geneva.

1977 (Sep/Dec) Visiting Assistant Professor of Finance, Schools of Business Administration. University of California, Berkeley.
 1977 (Mar/Aug) Visiting Assistant Professor of Finance, Graduate School of Business. University of Chicago.
 1976 Visiting Professor. University of Bergamo, Italy.

# Other professional activities

2017	Member of audit review panel, College of Management, École Polytechnique Fédérale de Lausanne.
2012 - 15	Consortium on Systemic Risk Analytics , Academic Advisory Board
2009-10	Member of EU Commission Expert Committee "State aid assessment of valuations of impaired assets and asset relief measures"
2006 - 08	Member, National Advisory Board, Isaac Newton Institute for the Mathematical Sciences, University of Cambridge
2005 - 15	Advisory Board, Centre for International Macroeconomics and Finance, University of Cambridge
2004 - 12	Member, Moody's Academic Advisory and Research Committee
2002 - 12	Member, Fondation, Banque de France, Scientific Committee
2001 -	Member: Financial Economists Roundtable
1991-96	The Securities and Futures Authority (SFA), Independent Board Member 1991-96 Member Capital Committee (1991-96), Deputy Chairman, Capital Committee (1993-1994), Member Finance Committee (1993-96)
	(The SFA, formed in 1991 as a result of a merger between TSA and the corresponding futures regulator, the AFBD, was the main regulator of the securities and derivatives trading and broking industry in the UK).
1989-91	The Securities Association (TSA), Independent Board Member, Member Capital Committee (1990-91)
1984-1986	Associate Director, Centre for Economic Policy Research (Research Programme in Financial Institutions and Markets).
1984-1987	Research Fellow, Centre for Economic Policy Research.

## **Editorial Boards etc.**

2000 -	Co- Editor (with Darrell, Duffie, Stanford University), <u>Princeton Series in Finance</u> , Princeton University Press.
1999 - 2016	Editorial Board, Economic Notes
1998 - 2004	Editorial Board, European Financial Services Law
1997 -	Editorial Board, International Journal of Theoretical and Applied Finance
1996 - 2004	Editorial Board, Review of Derivatives Research
1996 - 2004	Editorial Board, Asia-Pacific Financial Markets
1996 - 2004	Editorial Board, <u>European Finance Review</u> , (Journal of the European Finance Association)
1993 - 2004	Editorial Board, Indian Review of Finance
1993 - 2016	Editorial Board, Research in Economics (formerly Ricerche Economiche).
1991 -	Editorial Board, Journal of Fixed Income.
1988 -1991	Advisory Board Investment Management Review
1984-1985	Joint organiser: ESRC financed International conference on Corporate Finance, Oxford, September 1985.
1983-1988	Associate Editor, <u>Finance</u> . (Revue de l'Association Française de Finance).
1983-1988	Associate Editor, <u>Journal of Finance</u> .
1982	Member, Nominating Committee, American Finance Association.
1976 -1979	Council Member, European Finance Association.
Ad hoc	Referee for Journal of Financial Economics, Journal of Finance, Journal of Financial and Quantitative Analysis, Economic Journal, and for other

journals in finance and economics.

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# **Publications**

#### Books

- 1. The Foundations of Continuous Time Finance, S.M. Schaefer (Ed.), Edward Elgar, 2001.
- 2. Recent Developments in Corporate Finance, J Edwards, J R Franks, C Mayer & S M Schaefer (Eds.), Cambridge University Press, 1986.

### Articles: published and forthcoming

- 1. "The Myth of the Credit Spread Puzzle", (with Peter Feldhütter), *The Review of Financial Studies*, Vol. 31, No. 8 (2018), Pages 2897-2942.
- 2. "Liquidity Risk and Correlation Risk: A Clinical Study of the General Motors and Ford Downgrade of May 2005", (with Viral V. Acharya and Yili Zhang), *Quarterly Journal of Finance*, Vol. 5, No. 2, (2015).
- 3. "Macroeconomic effects of corporate default crisis: A long-term perspective", (with Kay Giesecke, Francis A. Longstaff, and Ilya Strebulaev), *Journal of Financial Economics* Volume 111 (2014), Pages 297-310).
- 4. "The Efficient Market Theory and Evidence: Implications for Active Investment Management", (with Andrew Ang and William N. Goetzmann) Foundations and Trends® in Finance: Vol. 5: No 3 (2011), pp 157-242.
- 5. "Corporate Bond Default Risk: A 150-Year Perspective", (with Kay Giesecke, Francis A. Longstaff, and Ilya Strebulaev), *Journal of Financial Economics*, Volume 102 (2011), Pages 233-250 (lead article and winner of first prize in Fama/DFA award for the Best Paper Published in the *Journal of Financial Economics* in the Areas of Capital Markets and Asset Pricing, 2011).
- 6. "Structural Models of Credit Risk are Useful: Evidence from Hedge ratios on Corporate Bonds", (with Ilya Strebulaev), *Journal of Financial Economics*, Vol. 90, (2008), pp. 1-19 (lead article).
- 7. "A Comparison of Alternative Non-parametric Estimators of the Short Rate Diffusion Coefficient" (with Roberto Renò and Antonio Roma), *Economic Notes*, Vol. 35, No. 3, pp. 227-252, (November) 2006.
- 8. "Pillar I vs. Pillar II in Basle II Under Risk Management" (with Loriana Pelizzon, U. Venice), in Mark Carey and Rene Stulz (Eds), *The Risks of Financial Institutions*, University of Chicago Press for NBER, 2006. Also published as NBER Working Paper 11666, September 2005.
- 9. "Asset pricing: derivative assets", in: *International Encyclopaedia of Social and Behavioral Sciences, Economics Section, Vol. 2, 833-40* (O. Ashenfelter, Ed.), Elsevier Science, (2001).
- 10. "Introduction", *The Foundations of Continuous Time Finance*, S.M. Schaefer (Ed.), Edward Elgar, 2001.
- 11. "Non-Linear Value-at-Risk" (with Mark Britten-Jones), *European Finance Review*, 2: 161-187, 1999. Reprinted in: *Risk* Management *and Regulation in Banking*, Dan Galai,

- David Ruthenberg, Marshall Sarnat and Ben Schreiber (eds.). Kluwer Academic Publishers, Boston ,1999.
- 12. "Robert Merton, Myron Scholes and the development of Derivative Pricing", Scandinavian Journal of Economics, Vol. 100, no. 2 (June), 1998.
- 13. "Competition Between Regulated Markets in London", European Securities Markets, Guido Ferrarini (ed.), Kluwer Law International, 1998, 205-212.
- 14. "The Direct and Compliance Costs of Financial Regulation", (with J.R Franks, and M. Staunton), Journal of Banking and Finance, Vol. 21, 11-12, (December, 1997), 1547-72. Reprinted in: Issues in Derivative Instruments, Edward J. Swan (Editor), Institute of Advanced Legal Studies, Kluwer Law International, 1999.
- 15. "Ten Years of the Real Term Structure", (with R.H. Brown), Journal of Fixed Income, Vol. 5, No. 4, (March, 1996), 6-22.
- 16. "Equity Market Transparency on the London Stock Exchange", (with J.R. Franks), Journal of Applied Corporate Finance, Vol. 8, No. 1 (Spring, 1995), pp. 70-77.
- 17. "Interest Rate Volatility and the Term Structure", (with R.H. Brown), Philosophical Transactions of the Royal Society A, Vol. 347 (1994), pp 563-576. Reprinted in Howison S.D., F.P. Kelly and P. Wilmott (Eds), Mathematical Models in Finance, Chapman & Hall (1994).
- 18. "The Term Structure of Real Interest Rates and the Cox, Ingersoll and Ross Model" (with R.H. Brown), Journal of Financial Economics, Vol. 35 (1994) pp 3-42. Reprinted in The Debt Markets, Stephen A Ross (Ed.), Edward Elgar, 2000. Summary of paper published as "Beyond the Zero", Futures and Options World, December 1994, pp. 51-53.
- 19. "Financial Regulation: The Contribution of the Theory of Finance", The Internationalisation of Capital Markets and Regulatory Response, J Fingleton (Ed), Graham & Trotham (1992) and also Lectures on Regulation 1992, Centre for Business Strategy Report, London Business School, 1992.
- 20. "Equity Market Transparency" (with J R Franks), Stock Exchange Quarterly, (Summer 1991), pp 7-11.
- 21. "Exchange Risk and International Diversification in Bond and Equity Portfolio", Journal of Business and Economics (1991), Vol. 43 pp 287-307.
- 22. "The Regulation of Banks and Securities Firms", European Economic Review 34 (1990), 587-597.
- 23. "Liability Matching", Chapter 6 in Ingrams, L. (Ed), International Bond Portfolio Management, Euromoney Publications, 1989.
- 24. "Time Dependent Variance and the Pricing of Bond Options" (with E S Schwartz) Journal of Finance Vol. XLII No 5 (Dec., 1987) pp 1113-1128.
- 25. "The Design of Bank Regulation and Supervision: Some Lessons from the Theory of Finance", in Threats to International Stability, R Portes and A K Swoboda (Eds) Cambridge University Press (1987) pp 91-104.
- 26. "Duration and Immunization: A Review of Theory, Performance and Applications", Midland Corporate Finance Journal, Vol., 2, No. 2 (Fall, 1984), pp 41-59. Reprinted in The Debt Markets, Stephen A Ross (Ed.), Edward Elgar, 2000.

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27. "A Two-Factor Model of the Term Structure and an approximate Analytical Solution", with E S Schwartz, Journal of Financial and Quantitative Analysis, December, 1984.

- 28. "Continuous Price Processes in Frictionless Markets Have Infinite Variation", with J M Harrison and R Pittbladdo, Journal of Business, Vol. 57, No. 3 (July 1984), pp 353-365.
- 29. "The Dynamics of the Term Structure and Alternative Immunization Strategies" (with J Nelson) in Innovations in Bond Portfolio Management: Duration Analysis and Immunization. G O Bierwag, G G Kaufman and A Toevs (eds.) JAI Press 1983.
- 30. "Tax-Induced Clientele Effects in the Market for British Government Securities: Placing Bounds on Security Values in an Incomplete Market", Journal of Financial Economics, Vol. 10, No. 2 July 1982) pp 121-159. Reprinted in The Debt Markets, Stephen A Ross (Ed.), Edward Elgar, 2000.
- 31. "Taxes and Security Market Equilibrium", in Financial Economics: Essays in Honor of Paul H Cootner, W F Sharpe and C M Cootner (Eds). Englewood Cliffs: N.J.: Prentice-Hall (1982), 159-178.
- 32. "Measuring a Tax Specific Term Structure of Interest Rates in the Market for British Government Securities", Economic Journal Vol. 91 (June 1981).
- 33. "The Influence of Tax-Induced Clientele Effects on Optimal Investment in Bonds" Proceedings of the Seminar on the Analysis of Security Prices. November 1977. Center for Research in Security Prices, Graduate School of Business, University of Chicago.
- 34. "The Problem with Redemption Yields", Financial Analysts Journal, July/August 1977. Reprinted in: Lorie J H and Brealey R A (Eds), Modern Developments in Investment Management, Holt, Rinehard and Winston, 1978.
- 35. "Term Structure with Uncertain Inflation" (with R A Brealey) Journal of Finance, Vol. 32, No. 2, May 1977.
- 36. "A Model for Bond Portfolio Improvement" (with S D Hodges) Journal of Financial and Quantitative Analysis. June 1977.
- 37. "Alternative Models of Systematic Risk" (with R A Brealey, S D Hodges and H Thomas) in: Elton E J and Gruber M J (Eds) International Capital Markets, North Holland 1975.
- 38. "On the Interpretation of the Geometric Mean" (with S D Hodges). Journal of Financial and Quantitative Analysis, June 1974.

#### Notes and discussion

- Discussion (of "Stock Markets", by Marco Pagano and Ailsa Roell), Economic Policy, Vol. 10 (April 1990) pp 108-110.
- 40. "Taxation and Bond Market Equilibrium in a World of Uncertain Future Interest Rates: Comment", Journal of Financial and Quantitative Analysis, Vol. 16, No. 5 (December 1981).

- 41. Discussion (of "Analyzing Convertible Bonds", by M J Brennan and E S Schwartz), Journal of Financial and Quantitative Analysis. Vol., XV, No. 4 (November 1980) pp 931-932.
- 42. Discussion (of "Conditional Predictions of Bond Prices and Returns by M J Brennan and E S Schwartz), Journal of Finance, Vol. 35 (May 1980), No. 2.

### **Current Working Papers**

- 43. "Debt Dynamics and Credit Risk", (with Peter Feldhütter). November, 2020. Presented at WFA, 2020. Available at SSRN: <a href="https://ssrn.com/abstract=3410079">https://ssrn.com/abstract=3410079</a>. Revise and resubmit, Journal of Financial Economics.
- 44. "Bond Risk Premia: the Information in Really Long-Maturity Forward Rates", (with Andrea Berardi and Roger Brown). January, 2021 Available at SSRN: <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3778178">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3778178</a>.

### **Long Term Working Papers**

- 45. "Risk in Capital Structure Arbitrage", Working paper, June 2006. Presented at VIth International Conference, "Asset Returns and Firm Policies", Verona, June 2006
- 46. "Do Risk Management and Regulation Reduce Risk in Banking?", (with Loriana Pelizzon, U. Padua). Presented Western Finance Association meetings, 2004. Working paper, 2002, revised June 2003.
- 47. "Understanding and Managing Correlation Risk and Liquidity Risk", (with Viral Acharya). Working Paper, September 2005. Presented to Roundtable meeting of prepared for International Financial Risk Institute (IFRI), Roundtable meeting September, 2005.
- 48. "Why Long Term Forward Rates (Almost) Always Slope Downwards", (with R.H. Brown), Working paper November 1994, Revised September 1999 and 2001Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=213390

# City of London Research Project

- 49. "Custodianship and Protection Against Misuse of Client Property" (with J.R. Franks), City Research Project, Subject Report XIV, London Business School, July 1994.
- 50. "The Costs and Effectiveness of the UK Financial Regulatory System" (with J.R. Franks), Subject Report II, City Research Project, London Business School, March 1993.

# **Newspaper Articles, Opinion Pieces**

51. "Financial Transaction Taxes", (Statement of the Financial Economists Roundtable, October, 2013), (with Harris, L and Ritter, J), Financial Analysts Journal, January/February 2014.

- 52. "Managing the risks of liquidity and correlation", (with Viral Acharya), in Mastering Financial Management, Financial Times, April 2006.
- 53. "Principles of bond portfolio management", in Mastering Investment, Financial Times, 14 May 2001. Reprinted in James Pickford (ed.), Mastering Investment, FT-Prenice Hall, London, 2002.
- 54. "Corporate Bonds and Other Debt Instruments", in Mastering Investment, Financial Times, 21 May 2001. Reprinted in James Pickford (ed.), Mastering Investment, FT-Prentice Hall, London, 2002.

### PhD Supervision

- 1. Wayne Ferson (Chair, PhD Stanford University, 1982) "Expected Real Interest Rates and Consumption in Efficient Financial Markets: Theory and Tests". Current Position: Emeritus Professor of Finance, Marshall School, USC.
- 2. Roger Brown (Chair, PhD 1988, London Business School) Topic: "Index-Linked Government Bonds". Current Position: Consultant, formerly: Managing Director, UBS Warburg.
- 3. Anthony Neuberger (Chair, PhD 1991, London Business School) Topic: "Trading Strategies in the Presence of Private Information and Transaction Costs". Current Position: Professor, City University; formerly, Professor, University of Warwick.
- 4. Cecelia Reyes, (Chair, PhD) 1992, "Statistical Properties of Daily Returns on Foreign Exchange rates and a test of the Black-Scholes Paradigm on Foreign Exchange Options". Formerly: Chief Risk Office, Zurich Insurance.
- 5. Antonio Scallia (Chair, PhD 1996, London Business School), Topic: "Futures Markets". Current Position: Bank of Italy.
- 6. Man-Kit Lai, (Chair, PhD 1996, London Business School), Topic: "Market Transparency and Intraday Trade Behaviour in the London Stock Exchange). Currrent Position: Executive Training and Management Consultancy
- 7. Andrea Berardi (Chair, PhD 1997, London Business School), Topic: "Econometrics of the Real and Nominal Term Structure". Current Position: Researcher University of Venice; formerly, Full Professor, University of Verona.
- 8. David Cox, (Chair, PhD 1999, London Business School), "General Equilibrium Models of Bond Markets with Taxation". Current Position: London Financial Studies.
- 9. Davide Menini (Chair, PhD 1999, London Business School), "A Study of 'Specialness' in the German Bond Market". Current Position: Managing Director, Morgan Stanley
- 10. Loriana Pelizzon (Chair, PhD 2002), "Risk Management and Capital Regulation in Banking". Current Position: Professor, Goethe University, Frankfurt and Professor, University of Venice.
- 11. Nicholas Rallis (Chair, PhD 2004, London Business School), Topic: "Asset Pricing with Non-Separable Utility".

- 12. Ilya Strebulaev (Chair, PhD 2004, London Business School) "Essays in Financial Economics", Current Position: Professor, Graduate School of Business, Stanford University.
- 13. Ellen Paulus (Chair, PhD 2014), "Essays on Liquidity and Funding Frictions". Current position: Cornerstone Research, Boston.
- 14. Ishita Sen (Committee, PhD 2019), "Regulatory Limits to Risk Management". Current position: Assistant Professor, Harvard Business School.

#### Other activities

- 1. Robeco Indices BV, member of Oversight Committee (2019 present)
- 2. Permian Global Ltd, Chair of Valuation Committee (2018 2021)
- 3. Joint author of report for Norwegian Ministry of Finance on management of Fixed Income component of Norwegian Government Pension Fund (2011). (Available at: <a href="http://www.regjeringen.no/Upload/FIN/Statens%20pensjonsfond/2011/Behrensschaefer.pdf">http://www.regjeringen.no/Upload/FIN/Statens%20pensjonsfond/2011/Behrensschaefer.pdf</a>).
- 4. Joint author of report for Norwegian Ministry of Finance on active management of the Norwegian Government Pension Fund (2010). (Available at: <a href="http://www.regjeringen.no/en/dep/fin/Selected-topics/the-government-pension-fund/published-material-on-the-government-pen/reports-on-active-management-of-the-gove.html?id=588819">http://www.regjeringen.no/en/dep/fin/Selected-topics/the-government-pension-fund/published-material-on-the-government-pen/reports-on-active-management-of-the-gove.html?id=588819</a>).
- 5. Moody's KMV (Senior Research Advisor, 2006-08)
- 6. Leo Fund Managers, (Non-Executive Director, 2004 2011)
- 7. UFJ Bank, (Member Risk Committee, 2002 -2005)
- 8. Goldman Sachs, (Index Policy Committee, European Currency High Yield Indices, 2000 2005)
- 9. Tokai Bank Europe (Non-Executive Director, 2000 2002; Member Audit Committee, 2000 2002)
- 10. Tokai Derivative Products Ltd., (Non-Executive Director, 1998 1999)
- 11. OMLX, The London Futures and Derivatives Market, Chairman, Market Advisory Board (1992 96)
- 12. Smith Breeden Mutual Funds (Trustee, Director, 1992 2000)