

Dr Simon H. Babbs

EXPERIENCE

The Options Clearing Corporation

2007 -13 Head of Quantitative Risk Management. Responsibility for margin analytics, including expansion to incorporate new products (e.g., ELX Treasury futures). Developing a new methodology for setting the size of the clearing fund. Conducting research.

Thureos Capital

2006-07 Co-founder and co-manager. Building up a long/short portfolio of corporate bonds, dynamically hedged with company equity and ETFs. Positions are carefully selected by screening candidates suggested by a sophisticated and innovative mathematical model which has been rigorously backtested.

Delaware Street Capital

2004-07 Director. Developing and backtesting a quantitatively-based and dynamically-hedged credit strategy. Undertaking a small amount of convertible bond “arbitrage”. Internal consulting.

Bank One (formerly First National Bank of Chicago)

1999-04 Head of Quantitative Enterprise Development (QED), Chicago Managing a team of up to 18 professionals in Chicago and London, with PhDs or other higher degrees. Responsibilities included: interest rate, equity, FX, commodity, and credit derivative research; mark-to-market model for loans; tools for credit portfolio management; economic capital model for the bank’s commercial loan portfolio; methodology for counterparty credit risk on derivatives; model risk and review in all non-consumer divisions; quantitative consulting; due diligence prior to Bank One’s acquisition of Zurich Life.

1997-99 Global Head of Quantitative Research (QR), London. Responsible for interest rate, equity, FX, commodity, and credit derivative research in Chicago and London.

1994-96 Head of Quantitative Research, London. Responsible for creation and management of team; valuation and risk analysis of interest rate derivatives; standards for model documentation and review; development and marketing of pension product concept.

HSBC Markets (formerly Midland Montagu)

1989-94 Specialised Derivatives Group. The group was formed to provide complex interest rate derivatives, based on the interest rate model in my PhD thesis. Personal role included: valuation and risk analysis of complex interest rate derivatives; product development; internal consulting to other business groups.

NatWest Markets

1985-89 (valuation models for: lookback FX options, equity warrants and convertibles, interest rate derivatives; presentations to clients)

Bank of England

1982-85 Banking Supervision (supervisory analysis of UK clearing and merchant banks; policy development, notably on currency options)

1978-82 Mathematical Techniques Group (including: seasonal adjustment of money supply; advice on pricing new issues of government bonds)

EDUCATION, AWARDS, ETC.

1993-2002 **Warwick Business School, UK**
Associate Fellowship.

1987-90 **Imperial College, London University, UK**
PhD in Finance. British Airways Prize.

1983 **Federal Reserve Bank of New York**
Banking Supervision Course.

1979-80 **City Polytechnic, London, UK**
Postgraduate Diploma in Business Studies.

1975-78 **Oxford University, UK**
Scholarship at Merton College. First class honours MA in Mathematics.

PERSONAL DETAILS

British and US citizen

Married; one son

PUBLICATIONS IN REFEREED ACADEMIC JOURNALS

“Modeling overnight and daytime returns using a multivariate generalized autoregressive conditional heteroskedasticity copula model” (with L Kang) *Journal of Risk* (June 2012)

“Conditional Gaussian Models of the Term Structure of Interest Rates” *Finance and Stochastics* (2002) 6, 333-353

“Binomial Valuation of Lookback Options” *Journal of Economic Dynamics and Control* (2000) 24:11-12, 1499-1526

“Kalman Filtering of Generalized Vasicek Term Structure Models” (with K B Nowman) *Journal of Financial and Quantitative Analysis* (1999) 34:1, 115-130

“An Application of Generalized Vasicek Term Structure Models to the UK Gilt-Edged Market: a Kalman Filtering Analysis” (with K B Nowman) *Applied Financial Economics* (1998) 8, 637-644

“Econometric Analysis of a Continuous Time Multi-Factor Generalized Vasicek Term Structure Model: International Evidence” (with K B Nowman) *Asia-Pacific Markets* (1998) 5, 159-183

“Pricing by Arbitrage under Arbitrary Information” (with M J P Selby) *Mathematical Finance* (1998) 8:2, 163-168

“The True Cost of Debt Service and the Public Sector Financial Deficit” (with M Miller) *Journal of Banking and Finance* (1986) Supplement, 79-92

OTHER PUBLICATIONS

“Tail dependence of Major US Stocks” (with L Kang), *Risk Management and Corporate Governance* eds A Jalilvand, T Malliaris, Routledge (2010)

“The Valuation of Cross-Currency Interest-Sensitive Claims, With Application to Diff Swaps” *Advances in Computational Economics: Applications in Finance, Investments and Banking* eds D Ho and T Schneeweis, Kluwer Academic Publishers (1999), 285-333

“Empirical Analysis of the Australian and Canadian Money Market Yield Curves: Results using Panel Data” (with K B Nowman) *Decision Technologies for Computational Finance*, eds A-P N Refenes, A N Burgess, J E Moody, Kluwer Academic Publishers (1998)

“Term Structure Modelling under Alternative Official Regimes” (with N J Webber) *Mathematics of Derivative Securities* eds M A H Dempster and S R Pliska, Cambridge University Press (1997), 394-422

“When We Say Jump” (with N J Webber) *RISK* (1995) 8:1, 49-53

“Generalized Vasicek Models of the Term Structure” *Applied Stochastic Models and Data Analysis: Proceedings of the Sixth International Symposium* eds J Janssen and C H Skiadas, (1993), Vol I, 49-62

“Contingent Claims Analysis” (with M J P Selby) *The New Palgrave Dictionary of Money and Finance* eds J Eatwell, M Milgate and P Newman, Macmillan (1992), 437-40

“A Family of Ito Process Models for the Term Structure of Interest Rates” (1990) FORC Preprint 90/24, University of Warwick, UK, also appearing in *Vasicek and Beyond* ed L Hughston, *RISK* (1996), 253-271

“The Term Structure of Interest Rates: Stochastic Processes and Contingent Claims” PhD Thesis, Imperial College, London, UK (1990)

“Mathematical Models in the Market” *Capital Markets* Pilot issue

SELECTED WORKING PAPERS

“(De-)leveraging in a Structural Model of Default” DSC Advisors, internal paper (2005)

“A Structural Model of Default” DSC Advisors, internal paper (2004)

“Severe Loss Probabilities in Portfolio Credit Risk Models” (with A E Johnson) (1999)

“A Theory of the Term Structure with an Official Short Rate” (with N J Webber) (1993) FORC Preprint, University of Warwick

“Pricing by Arbitrage in Incomplete Markets” (with M J P Selby) (1993), FORC Print 96/69, University of Warwick

“Interest Rate Swaps and Default-Free Bonds: A Joint Term Structure Model” (1990) FORC Preprint 91/27, University of Warwick