CURRICULUM VITAE

Richard T Baillie

Present Positions:

A J Pasant Chair Professor of Economics and Finance Michigan State University, USA. Email address: baillie@msu.edu Web page: www.msu.edu/~baillie/

Addresses:

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Personal data:

Nationality: US citizen and UK citizen. Marital Status: Married

Education and Degrees:

PhD, Economics, London School of Economics, 1978. (Dissertation title: "Prediction Errors in Time Series Models and Dynamic Econometric Models". Dissertation advisors were Professor Kenneth F. Wallis and Professor James Durbin).

MSc, University of Kent at Canterbury, 1972. BSc, Economics and Mathematics, Middlesex University, 1970.

Concurrent Positions

Part time Professor, School of Economics and Finance, Queen Mary University of London, UK. Visiting Scholar, Research Department, Federal Reserve Bank of Atlanta, GA. Senior Research Fellow, Rimini Center for Economic Analysis, Italy.

Appointments:

A J Pasant Chair Professor of Economics and Finance, Department of Economics and Department of Finance, Michigan State University; 2000 to present.

Professor, Department of Economics, Michigan State University; 1993 through 1998.

Professor, Department of Economics, Georgetown University, Washington, DC; 1993.

Professor, Department of Economics, Michigan State University; from 1988 through 1992. Associate Professor, Department of Economics, Michigan State University; 1986 through 1988.

Lecturer, Department of Economics, University of Birmingham, UK, 1981 to 1986.

Lecturer, University of Aston Management Centre, 1977 to 1981.

Economic Statistician in Central Statistical Office, London, UK, 1971 to 1976.

Honors:

Michigan State University Distinguished Faculty Award, conferred 2009.

Fellow of the American Statistical Association, conferred 2001.

Fellow of the Journal of Econometrics, conferred 1997.

Biography included in <u>Who's Who in Economics</u>, third edition, edited by Mark Blaug, Edward Elgar Publishing Ltd., 55-56, 1999; and also included in <u>Who's Who in Economics</u>, fourth edition, edited by Mark Blaug and

Howard R Vane, Edward Elgar Publishing Ltd., 44-46, 2003.

Included in <u>Who's Who in America</u>, 57th edition, Marquis Publishers, 2001; <u>Who's Who in the World</u>, 21st edition, Marquis Publishers, 2004; <u>Who's Who in Science and Engineering</u>, 7th edition, Marquis Publishers, 2005; and <u>Who's Who in Finance and Business</u>, 35th edition, Marquis Publishers, forthcoming 2006.

Program Chair, Business and Economic Statistics section of the American Statistical Association, January 1994 through September 1995.

Citations:

ISI Highly Cited Researcher, Institute for Scientific Information, with a citation "h" statistic of 21, in 2009. Ranked in the top 3% of the most cited economists by <u>http://repec.org</u> in 2008.

Included in lists of most productive econometricians, in article by Cribari-Neto, Jensen and Novo, "Research in Econometric Theory: Quantitative Productivity Rankings", *Econometric Theory*, 15, 719-752, 1999.

Teaching:

Econometrics (PhD and undergraduate levels). International Finance (PhD, MBA and senior undergraduate levels). Survey of International Economics; Trade and Finance (undergraduate level). International Financial Management (MBA level). Macroeconomics (intermediate and principles level). Empirical Methods in Financial Economics (PhD level). Quantitative Methods and Business Statistics (MBA and undergraduate levels).

Member of Editorial Boards:

Journal of Empirical Finance, Co-Editor, 1993 to present. Journal of Econometrics, Guest editor, 1994. Journal of International Money and Finance, Guest editor, 1995. Journal of Economic Surveys, 2006 to present. Quantitative and Qualitative Analysis in Social Sciences (QASS), Advisory editor, 2006 to present.

Associate Editor:

Econometric Reviews, 1992 to 1995. *International Journal of Forecasting*, 1983 to present. *Journal of International Financial Markets, Institutions and Money*, 1996 to 2004. *Review of International Economics*, 1996 to present. *Review of Quantitative Finance and Accounting*, 1992 to present.

Grants:

National Science Foundation Grant #DMS-0071619: "Inference in Heteroskedastic Nonlinear Time Series Under Long Memory with Applications to Finance". Funding for \$308,526; joint with co-Principal Investigator, H L Koul, from August, 2000 through July, 2003.

Michigan State University Intramural Research Grant: "Predicting Commodity Price Volatility and Modeling Hedge Ratios in Commodity Markets". Funding for \$52,438; joint with R J Myers, for January 1, 2000 through December 31, 2001.

Michigan State University Summer Research Grants. Funding for \$10,000 for each of the summers of 1998, 2000 and 2001.

National Science Foundation Grant # SES-9022807: "Prediction from Dynamic Models with Time Dependent Heteroskedasticity". Funding for \$72,906 from August, 1991 through June, 1993.

Columbia Center for the Study of Futures Markets; \$5,000 awarded in October, 1987 for "Estimating Commodity Price Volatility and Optimal Hedge Ratios via Time Dependent Conditional Variance Models".

Michigan State University Initiation Grant: "Estimation of Time Dependent Risk Premium from GARCH Models". Funding for \$6,000; joint with R J Myers, for January, 1988 through December, 1988.

Selected Appontments and Activities:

Visiting Professor, Academica Sinica, Taipei, Taiwan; March, 2002.

Visiting Professor, City University of Hong Kong, Kowloon, Hong Kong; April and May, 2002.

Visiting Scholar and Research Associate, Research Department, Federal Reserve Bank of Cleveland, Ohio; 1994 to 2000.

Visiting Scholar, Research Department, Federal Reserve Bank of St Louis; Sept and October, 1994. Visiting Professor, Department of Finance, University of Southern California; Spring semester, 1994. Visiting Professor, Department of Econometrics, Monash University, Australia, June and July 1992. Visiting Professor, Center for Economic Research, Tilburg University, Netherlands; June and July, 1991. Visiting Professor, Department of Economics, Arizona State University; Winter quarter, 1990. Visiting Professor, Department of Economics, University of California, San Diego; Winter and Spring quarters,

1986.

Visiting Associate Professor, Department of Economics, University of Toronto; Fall semester, 1985. Visiting Research Fellow, Australian National University; Summer 1981. Visiting Associate Professor, Department of Economics, Wayne State University, Fall 1979 through Summer

1980.

Visiting Lecturer, Civil Service College, Sunningdale, Berkshire, UK; 1976 to 1985.

Chairman of the following PhD students:

(Initial job in parentheses). Chaleampong Kongchareon (Thammasat University, Bangkok, Thailand, 2010), Sanders S Chang (Dayton University, OH, 2010), Gabriele Lepori (University of Copenhagen, Denmark, 2008), Junbyong Jun (Suffolk University, MA, 2004), Jeongseok Song (Korean Economic Research Institute, Seoul, 2004), Pinar Ozbay (Central Bank of Turkey, 2004), Rehim Kilic (Georgia Institute of Technology, GA, 2002), Young-Wook Han (City University of Hong Kong, 2001; now at Hallym University, Korea), Kabsoo Hong (Central Bank of Korea, 2001), Taego Kwon (Industrial Bank of Korea, 1998), Huimin Chung (Tamkang University and National Chiao-Tung University, Taiwan), Sang-Kuck Chung (INJE University, Korea, 1997), Jin Tsay (Academica Sinica, Taiwan, 1995), Margie Tieslau (University of North Texas, TX, 1993), Michael Redfearn (University of North Texas, TX, 1991), Kevin Jacques (Comptroller of the Currency, Washington, DC, 1990).

LIST OF PUBLICATIONS:

Articles in Refereed Journals by Richard T. Baillie

- [1] "The Asymptotic Mean Squared Error of Multistep Prediction from the Regression Model with Autoregressive Errors," *Journal of the American Statistical Association*, 74, 175-184, 1979.
- [2] "Asymptotic Prediction Mean Squared Error for Vector Autoregressive Models," *Biometrika*, 66, 675-678, 1979.
- [3] "Predictions from ARMAX Models," *Journal of Econometrics*, 12, 365-374, 1980.
- [4] "Testing the Permanent Income Hypothesis Using a General Rational Lag Formulation," (with P.C. McMahon and D.J. Smyth), *Economics Letters*, 5, 39-43, 1980.
- [5] "Causality and the Free Liquid Reserves in the Federal Republic of Germany," (with P.C. McMahon and H.J. Reigier), *Journal of Institutional and Theoretical Economics*, (Zeitschrift fur die Gesamte Staatswissenschaft), 136, 642-657, 1980.
- [6] "Multivariate Causality and the Relationship between the Free Liquid Reserves and Interest Rates," (with P.C. McMahon), *Journal of Institutional and Theoretical Economics*, (Zeitschrift fur die Gesamte Staatswissenschaft), 137, 284-288, 1981.
- [7] "Interest Rates and Investment in West Germany," (with P.C. McMahon), *Empirical Economics*, 6, 1-9, 1981.
- [8] "Predictions from the Dynamic Simultaneous Equation Model with Vector Autoregressive Errors," *Econometrica*, 49, 1331-1337, 1981.
- [9] "Testing Rational Expectations and Efficiency in the Foreign Exchange Market," (with R.E. Lippens and P.C. McMahon), *Econometrica*, 51, 553-563, 1983.
- [10] "Asymptotic Tests on Moving Average Representation Coefficients with an Application to Innovations on Spot and Forward Exchange Rates," *Economics Letters*, 13, 201-206, 1983.
- [11] "Small Sample Properties of Predictions from the Regression Model with Autoregressive Errors," (with J.J. Spitzer), *Journal of the American Statistical Association*, 78, 258-263, 1983.
- [12] "International Currency Speculation, Market Stability and Efficiency in the 1920's: a Time Series Approach," (with R.W. Bailey), *Journal of Macroeconomics*, 6, 127-137, 1984.
- [13] "Interpreting Econometric Evidence on Efficiency in the Foreign Exchange Market," (with R.W. Bailey and P.C. McMahon), *Oxford Economic Papers*, 36, 67-85, 1984.
- [14] "Some Joint Tests of Market Efficiency: the Case of the Forward Premium," (with P.C. McMahon), *Journal of Macroeconomics*, 7, 137-150, 1985.
- [15] "Rational Forecasts in Models of the Term Structure of Interest Rates," (with P.C. McMahon), in <u>The</u> <u>Operation and Regulation of Financial Markets</u>, edited by C.A.E. Goodhart, D. Currie and D.T. Llewellyn, Macmillan, 189-206, 1987.
- [16] "Estimation and Testing of the Term Structure of the Forward Premium Under Rational Expectations," (with

P.C. McMahon), Journal of Macroeconomics, 8, 387-391, 1987.

- [17] "Estimating the Relationship Between Output and Hours Worked in U.K. Manufacturing and Production Industries," (with M.S. Silver) in <u>Working Below Capacity</u>, edited by D. Bosworth and D.F. Heathfield, MacMillan, 304-316, 1987.
- [18] "Empirical Regularities of Exchange Rate Behavior," (with P.C. McMahon), in <u>Exchange Rates and Open</u> <u>Economy Macroeconomics</u>, edited by K.A. Chrystal, Macmillan, 7-29, 1987.
- [19] "Cointegration and Models of Exchange Rate Determination," (with D.D. Selover), *International Journal of Forecasting*, 3, 43-51, 1987.
- [20] "Inference in Dynamic Models Containing 'Surprise' Variables," *Journal of Econometrics*, 35, 101-117, 1987.
- [21] "The Message in Daily Exchange Rates: a Conditional Variance Tale," (with T. Bollerslev), *Journal of Business and Economic Statistics*, 7, 297-305, 1989.
- [22] "The Impact of Delivery Terms on Stock Return Volatility," (with R.P. DeGennaro), *Journal of Financial Services Research*, 3, 53-74, 1989.
- [23] "Common Stochastic Trends in a System of Exchange Rates," (with T. Bollerslev), *Journal of Finance*, 44, 167-181, 1989.
- [24] "Econometric Tests of Rationality and Market Efficiency," *Econometric Reviews*, 8, 151-186, 1989.
- [25] "Reply to Comments on Econometric Tests of Rationality and Market Efficiency", *Econometric Reviews*, 8, 213-216, 1989.
- [26] "Commodity Prices and Aggregate Inflation: Would a Commodity Price Rule be Worthwhile?", *Carnegie-Rochester Conference Series on Public Policy*, 31, 185-240, 1989.
- [27] "A Multivariate Generalized ARCH Approach to Modeling Risk Premia in Forward Foreign Exchange Rate Markets," (with T. Bollerslev), *Journal of International Money and Finance*, 9, 309-324, 1990.
- [28] "Stock Returns and Volatility," (with R.P. DeGennaro), *Journal of Financial and Quantitative Analysis*, 25, 203-214, 1990.
- [29] "Bivariate GARCH Estimation of the Optimal Commodity Futures Hedge," (with R.J. Myers), *Journal of Applied Econometrics*, 6, 109-124, 1991.
- [30] "The Search for Equilibrium Relationships in International Finance: the Case of the Monetary Model," (with R.A. Pecchenino), *Journal of International Money and Finance*, 10, 582-593, 1991.
- [31] "Intra Day and Inter Market Volatility in Foreign Exchange Rates," (with T. Bollerslev), *Review of Economic Studies*, 58, 565-585, 1991.
- [32] "Nominal Exchange Rates," (with T. Bollerslev), <u>New Palgrave Dictionary of Money and Finance</u>, 37-39, 1992.
- [33] "Prediction in Dynamic Models with Time Dependent Conditional Variances," (with T. Bollerslev), *Journal of Econometrics*, 52, 91-113, 1992.
 Reprinted in Economic Forecasting, editor T.C. Mills, vol 1, Edward Elgar, Cheltenham, UK, 1999.

- [34] "Comment on Modeling Asset Returns with Alternative Stable Distributions," *Econometric Reviews*, 12, 343-345, 1993.
- [35] "Bear Squeezes, Volatility Spillovers and Speculative Attacks in the Hyperinflation 1920's Foreign Exchange," (with T. Bollerslev and M.R. Redfearn), *Journal of International Money and Finance*, 12, 511-521, 1993.
- [36] "Small Sample Bias in Conditional Sum of Squares Estimators of Fractionally Integrated ARMA Models," (with C.-F. Chung), *Empirical Economics*, 18, 791-806, 1993.
- [37] "Comment on the Limitations of Comparing Mean Square Forecast Errors," *Journal of Forecasting*, 12, 639-641, 1993.
- [38] "Cointegration, Fractional Cointegration and Exchange Rate Dynamics," (with T. Bollerslev), *Journal of Finance*, 49, 737-745, 1994.
- [39] "Long Memory in the Forward Premium," (with T. Bollerslev), *Journal of International Money and Finance*, 13, 565-571, 1994.
- [40] "On the Interdependence of International Asset Markets," (with T Bollerslev), in R. Aggarwal (editor), <u>Global Portfolio Diversification</u>, Academic Press, 19-29, 1995.
- [41] "A Minimum Distance Estimator For Long Memory Processes," (with M.A. Tieslau and P. Schmidt), *Journal of Econometrics*, 71, 249-264, 1996.
- [42] "Analysing Inflation by the Fractionally Integrated ARFIMA-GARCH Model," (with C.-F. Chung and M.A. Tieslau), *Journal of Applied Econometrics*, 11, 23-40, 1996.
- [43] "Long Memory Processes and Fractional Integration in Econometrics," *Journal of Econometrics*, 73, 5-59, 1996.
 Reprinted in *Financial Econometrics*, (edited by A. Lo), Edward Elgar Publishing, Cheltenham, UK, 2006.
- [44] "Fractionally Integrated Generalized Autoregressive Conditional Heteroskedasticity," (with T. Bollerslev and H.-O. Mikkelsen), *Journal of Econometrics*, 74, 3-30, 1996.
- [45] "Why do Central Banks Intervene?," (with W.P. Osterberg), *Journal of International Money and Finance*, 16, 909-919, 1997.
 Reprinted in *Foreign Exchange Markets*, (editor R.J. Sweeney), Edward Elgar Publishing, Cheltenham, UK, 2005.
- [46] "Central Bank Intervention and Risk in the Forward Premium," (with W.P. Osterberg), *Journal of International Economics*, 43, 483-497, 1997.
- [47] "Modeling Long Memory Volatility in Asset Returns", *Derivatives Use, Trading and Regulation*, 4, 233-244, 1998.
- [48] Comment on "Real and Spurious Long Memory in Stock Returns", *Journal of Business and Economic Statistics*, 16, 273-276, 1998.
- [49] "Prediction from the Regression Model with One-Way Error Components," (with B.H. Baltagi),

in C. Hsiao, K. Lahiri, L.-F. Lee and M.H. Pesaran (editors), <u>Analysis of Panels and Limited Dependent</u> <u>Variable Models</u>, Cambridge University Press, 255-267, 1999.

- [50] "Deviations from Daily Uncovered Interest Rate Parity and the Role of Intervention," (with W.P. Osterberg), *Journal of International Financial Markets, Institutions and Money*, 10, 363-379, 2000.
- [51] "Intervention from an Information Perspective", (with O.F. Humpage and W.P. Osterberg), *Journal of International Financial Markets, Institutions and Money*, 10, 407-421, 2000.
- [52] "The Forward Premium Anomaly is Not as Bad as You Think," (with T. Bollerslev), *Journal of International Money and Finance*, 19, 471-488, 2000.
- [53] "High Frequency Deutsche Mark-US Dollar Returns: FIGARCH Representations and Non-Linearities", (with A.A. Cecen and Y.-W. Han), *Multinational Finance Journal*, 4, 247-267, 2000.
- [54] Comment on "Testing Target Zone Models Using Efficient Method of Moments", (with Y.-W. Han), *Journal of Business and Economic Statistics*, 19, 273-276, 2001.
- [55] "Estimation of GARCH Models from the Autocorrelations of the Squares of a Process", (with H. Chung), *Journal of Time Series Analysis*, 22, 631-650, 2001.
- [56] "Further Long Memory Properties of Inflationary Shocks", (with Y.-W. Han and T. Kwon), *Southern Economic Journal*, 68, 496-510, 2002.
- [57] "The Message in Daily Exchange Rates: a Conditional Variance Tale," (with T. Bollerslev), *Journal of Business and Economic Statistics*, 20, 60-68, 2002.

This reprinted article appeared in the twentieth anniversary commemorative issue of the *Journal of Business and Economic Statistics* and was selected on the basis of being one of the ten most influential articles to have been published in this journal.

- [58] "Modeling and Forecasting from Trend Stationary Long Memory Models with Applications to Climatology", (with S.-K. Chung), *International Journal of Forecasting*, 18, 215-226, 2002.
- [59] "Price Discovery and Common Factor Models", (with G.G. Booth, Y.T. Tse and T. Zabotina), *Journal of Financial Markets*, 5, 309-321, 2002.
- [60] "Asymptotics of M Estimators in Non-linear Regression with Long Memory Designs", (with H.L. Koul), *Statistics and Probability Letters*, 61, 237-252, 2003.
- [61] "Measuring Non Linearity, Long Memory and Self Similarity in High Frequency European Exchange Rates", (with A.A. Cecen, C. Erkal and Y.-W. Han), *Journal of International Financial Markets, Institutions and Money*, 14, 401-418, 2004.
- [62] "Regression Model Fitting with a Long Memory Covariate Process", (with H.L. Koul and D. Surgailis), *Econometric Theory*, 20, 485-512, 2004.
- [63] "Modelling Volatility", *Handbook of Econometrics*, (edited by T.C. Mills and K. Patterson), volume 1, Palgrave Macmillan, New York, NY, 737-764, 2006.

- [64] "Do Asymmetric and Nonlinear Adjustments Explain the Forward Premium Anomaly?", (with R. Kilic), *Journal of International Money and Finance*, 25, 22-47, 2006.
- [65] "Long Memory Models for Daily and High Frequency Commodity Futures Returns", (with Y.-W. Han, R.J. Myers and J. Song), *Journal of Futures Markets*, 27, 643-668, 2007.
- [66] "Testing for Neglected Nonlinearity in Long-Memory Models", (with G. Kapetanios), *Journal of Business and Economic Statistics*, 25, 447-461, 2007.
- [67] "Nominal Exchange Rates", *New Palgrave Dictionary of Economics*, second edition, (edited by S. Durlauf and L. Blume, Palgrave Macmillan, London, 57-61, 2008.
- [68] "An Obdurate Trading Strategy Perspective on the Forward Premium Anomaly", (with S. S. Chang), *Quantitative and Qualitative Analysis in Social Sciences* (*QASS*), 2, 25-44, 2008.
- [69] "Nonlinear Models for Strongly Dependent Processes with Financial Applications", (with G. Kapetanios), *Journal of Econometrics*, 147, 60-71, 2008.
- [70] "Normal heartbeat series are non-chaotic, nonlinear, and multifractal: new evidence from semiparametric and parametric tests", (with A. A. Cecen and C. Erkal), *Chaos*, 19, 028503-1 – 028503-5, 2009.
- [71] "Modeling Long Memory and Structural Breaks in Conditional Variances: an Adaptive FIGARCH Approach", (with C. Morana), *Journal of Economic Dynamics and Control*, 33, 1577-1592, 2009.
- [72] "Prediction from ARFIMA Models: Comparisons between MLE and Semiparametric Procedures", (with C. Kongchareon and G. Kapetanios), *International Journal of Forecasting*, 28, 46-53, 2011.
- [73] "On Possible Solutions to the Forward Bias Paradox", *Journal of International Financial Markets, Institutions and Money*, 21, 617-622, 2011.
- [74] "Carry Trades, Momentum Trading and the Forward Premium Anomaly", (with S. S. Chang), *Journal of Financial Markets*, 14, 441-464, 2011.

Books

"Input-Output Tables of the United Kingdom in 1968" (with M.J. Green, M.F. Osborn, P.J. Coulson and J.C. Cresswell) Studies in Official Statistics, HMSO, 22, 1973.

"<u>The Foreign Exchange Market: Theory and Econometric Evidence</u>", (with P.C. McMahon), <u>Cambridge University Press</u>, 255 pages, 1989. Translated into French as <u>Le Marche⁷ des Changes</u>, Editions Eska, Paris, 1997.

Book Reviews

Review of Stephen Taylor's book: "Modelling Financial Time Series," Wiley, 1986, *European Journal of Operational Research*, 32, 156-158, 1987.

Review of Robert J. Hodricks' book: "The Empirical Evidence on the Efficiency of Forward and Futures Foreign Exchange Markets," Harwood Academic Publishers, 1987, *Economic Journal*, 99, 209-210, 1989.

Review of Forecast Master PC Software, Journal of Applied Econometrics, 4, 305-307, 1989.

Review of William A Barnett and Kenneth J Singleton's (editors) book: "Domestic Monetary and Financial Theory and Institutions", Cambridge University Press, 1987, *Economic Journal*, 99, 911-912, 1989.

Review of L Alan Winters and David Sapsford's (editors) book: "Primary Commodity Prices: Economic Models and Policy", Cambridge University Press, 1990, *Economic Journal*, 101, 1007-1009, 1991.

Review of Helmut Lutkepohl's book: Introduction to Multiple Time Series Analysis," Springer-Verlag, 1991, *Journal of Applied Econometrics*, 8, 325-326, 1993.

Miscellaneous

"The Clarification of Economic Structure in the United Kingdom," (with M.J. Green), *Economic Trends*, 242, 33-53, 1973.

"By Subsidising Mortgagees, the Government will Further Damage the UK Economy", *The Independent*, (UK national newspaper), December 17, 1991.

Obituary of Patrick McMahon, The Independent, (UK national newspaper), August 2, 1993.