

**WILLIAM THOMAS ZIEMBA**  
**Alumni Professor of Financial Modeling**  
**and Stochastic Optimization, Emeritus**  
**University of British Columbia, Vancouver**

**Visiting Professor**  
**Mathematical Institute, University of Oxford**  
**ICMA Centre, University of Reading**  
**Dept of Mathematics, Statistics, Informatics and Applications, University of Bergamo**

**Short Curriculum Vitae and Selected List of Publications**  
**Complete list available on request**  
**February 2009**

**Education**                      University of California, Berkeley, Ph.D.(Business Administration), Essays on Stochastic Programming and the Theory of Economic Policy, 1969

**Academic Position:**        University of British Columbia, July 1968 – December 2006 (mandatory retirement at 65, birthdate August 30, 1941)

**Leaves of Absence and University Visits:**

July 1972-June 1973	One year study leave spent at Stanford/Berkeley
January 1978 - 1979	One year study leave spent at Berkeley/U.B.C.
Sept 1981-June 1982	One year study leave spent at U.C.L.A.
July 1984-June 1985	One year study leave spent at U.B.C./Stanford
Sept 1988-Aug 1989	Unpaid leave at University of Tsukuba, Japan
Sept 1992-Aug 1993	One year study leave spent at U.B.C, London School of Economics, and Warwick University
July 1997-June 1998	One year study leave spent at the National University of Singapore, University of Bergamo and University of Cambridge.
July 2002-June 2003	One year study leave at University of Bergamo, Helsinki School of Economics, Oxford University and University of Zurich
January-June 2005	Visit at Sloan School of Management, Finance Department, Massachusetts Institute of Technology
March 2004, Jan-Feb 2005, 2006, 2007, 2008, 2009	Visits at Mathematical Institute, Oxford University
November 2005	Visit at Statistics Department, University of Washington, Seattle
February 2006, 2007, 2008	Visits at ICMA, University of Reading
March 2006	Visit at EDHEC, Nice
April - May 2006, May-June 2007	Visits at Luiss Guido Carli University, Rome
May, October 2006, April 2007, May 2008	Visits at University of Bergamo

November 2006, June 2008	Visit at Swiss Banking Institute, University of Zurich
March 2007	Visit at Mathematics Department, University of Edinburgh
April-May 2009	Visit at NTU, Singapore
May-June 2009	Visits at Economics Department, University of Toulouse, University of Bergamo
October 2009	Visit at Luiss Guido Carli University, Rome

### **Academic or Professional Awards:**

Seagram-Bronfman Business Faculty Research Fellow, 1972-73

Canadian Council Leave Fellowship, 1978

Social Sciences & Humanities Research Council Leave Fellowship, 1984

Co-winner of Second Prize 1993 Franz Edelman Award for the Practice of Management Science with research team from the Frank Russell Company for The Russell-Yasuda Asset-Liability Management Model.

Gold medal for contributions to Financial Modeling, Technical University of Crete, 1996.

Faculty of Commerce: Research Prize for Practice, 1998.

Named one of the ten pioneers who helped develop the field of stochastic programming at the 10<sup>th</sup> International Conference on Stochastic Programming, Tucson, Arizona, October 2004.

### *Referee for professional journals:*

Management Science: Theory; Management Science: Application; SIAM Journal; SIAM Review; U.B.C. Journal of Business; Operations Research; Opsearch; INFOR; Mathematics of Operations Research; Utilities Mathematica; Journal of Industrial Engineering; Journal of Optimization Theory and Applications; Journal of Financial and Quantitative Analysis; Journal of Finance; Mathematical Programming; Economic Inquiry; OMEGA; Economic Journal; International Review of Financial Analysis; Contemporary Policy Issues, American Economic Review, Applied Mathematical Finance, Journal of Economic Dynamics and Control, Manchester Quarterly, Journal of Political Economy, Annals of Operations Research, Interfaces, Journal of Futures Markets, Economica, Financial Analysts Journal, Journal of Banking and Finance, Quanttve Finance, and American Mathematical Monthly

### *Referee for book publishers:*

Academic Press, Inc., Holden-Day, Harper and Row Inc., Holt Rinehart Winston Inc., John Wiley and Sons Inc., Basil Blackwell, Kluwer Publishers, Baltzer Science Publishers, Cambridge University Press and Princeton University Press.

### *Referee for tenure and promotion cases:*

Brandeis, University of Chicago, Harvard, Tel-Aviv University, Stanford, University of Florida, University of Ottawa, New York University, Technion, Yale, the University of California, Berkeley, the Hebrew University, the University of Missouri, St. Louis, Santa Clara University, University of Wisconsin, University of Hong Kong, Canterbury University, Australian National University, University of Sydney, University of Pennsylvania, Southern Methodist University, Simon Fraser University, University of Woolagong (New Zealand), the London School of Economics, Dalhousie University, University of Waterloo, Clemson University, Princeton University, Rutgers University, Bilkent University, National University of Singapore, University of Florida and Cass Business School.

### **Visiting Professorships**

Yamaichi Visiting Professor of Finance, Tsukuba University, Japan, August 1988-July 1989.

Visiting Professor of Finance, London School of Economics and Warwick University, February - March 1993; Swiss Institute of Banking, St. Gallen, June 1994; University of Chicago, Spring 1996, National University of Singapore, September - October 1997 (Cycle and Carriage Chair), University of Bergamo, October 1997, May 1999, May 2004, Judge Institute of Management Studies, University of Cambridge, January - April 1998 (Arthur Anderson Chair), University of Catania, Sicily, May 1999, ISMA Centre, Reading University, April 2000 Imperial College Management School, May-June 2000, University of Cyprus, May 2001, Helsinki School of Economics, September 2002, Nomura Visiting Professor of Mathematical Finance, St. Catherine's College, Oxford University, January-June 2003, and Swiss Banking Institute, University of Zurich, June-July, 2003, November 2006 and June 2008, Visiting Professor of Finance, Massachusetts Institute of Technology, January-June, 2005, Visiting Professor of Statistics, University of Washington, Seattle, November 2005, Visiting Professor of Finance, ICMA, University of Reading February 2006, 2007, 2008, 2009, EDHEC, Nice, March 2006, Oxford University, March 2004, 2005, Jan-Feb 2006, 2007, 2008, 2009, Luiss University, Rome, April-May 2006 and 2007, University of Bergamo, May and October 2006, April 2007, May 2008, June 2009, June 2009 and University of Edinburgh, March 2007, Visiting Professor of Economics, University of Toulouse, May-June 2009.

**Program Advisor:**

Financial Studies Graduate Program at HSB - Nowy, Sacz, Poland; Inaugural lecturer, October 1998 Banking Institute, University of Cyprus, 1996 --  
Financial Engineering Centre, National University of Singapore, 1999 –  
RBC Centre for Risk Management, Dalhousie University, 2004-

**Editorships:**

*CORS-INFOR*, Editor, January 1979-July 1981.

Co-Editor, July 1981- September 1982.

*Management Science*, Department of Finance

Associate Editor, September 1980-November 1982

Departmental Editor, November 1982 - September 1992

The department had eleven associate editors and handled about 50 papers a year. A special issue of the Journal on financial modelling jointly edited with Stavros Zenios of the Wharton School appeared in November 1992.

**Series Editor**

Handbooks in Finance, North Holland-Elsevier 1999 –

WTZ will co-edit four of the 40+ handbooks planned in the series during 2006-2009. The handbooks on *Heavy Tailed Distributions in Finance* edited by S.T. Rachev, 2003 and *Asset and Liability Management, Volume 1: Theory and Methodology* 2006 and *ALM, Volume 2: Applications and Case Studies, 2007* edited by S.A. Zenios and W.T. Ziemba., *Equity Risk Premium* edited by R. Mehra 2007, *Emperical Corporate Finance, Vol 1, 2007* edited by E. Eckbo and *Financial Intermediation and Banking* edited by A.V. Thakor and A.W.A. Boot, 2008 have appeared. Five other volumes are in press and will appear in 2008 and 2009 including *D. B. Hausch and W. T. Ziemba, Sports and Lottery Markets*.

**Advisory Editors:** Kenneth J. Arrow, Stanford University, George C. Constantinides, University of Chicago, B. Espen Eckbo, Dartmouth College, Harry M. Markowitz, University of California, San Diego, Robert C. Merton, Harvard University, Stewart C. Myers, Massachusetts Institute of Technology, Paul A. Samuelson, Massachusetts Institute of Technology, and William F. Sharpe, Stanford University.

**Consultant to:**

Yamaichi Research Institute, Tokyo, August 1988-December 1989, on worldwide security market anomalies and portfolio strategy.

Edward O. Thorp and Associates, on Global Investment Strategies, December 1990-1996.  
 Gordon Capital Corporation, on Global Investment Strategies, 1990-91.  
 Frank Russell Company, on Global Asset Allocation and Portfolio Management Research, June 1989-  
 April 1998.  
 Buchanan Partners, on Global Investment Strategies, London, England, March 1992 - April 1994.  
 Morgan Stanley, New York, on U.S. and global investment strategies, March 1993.  
 Market Research, Nassau, Bahamas, October 1996 – July 2000.  
 Credit Swiss First Boston, London, December 1999.  
 Innovest (Siemens Austria Pension Plan), Vienna, December 1999- July 2001.  
 Gruppo Uni Credit, Milan, January, 1999- July 2001.  
 SCA Insurance, Dallas on sports insurance guarantees, August 2001-March 2006.  
 ORS, Alba, Italy, August 2000 – 2005.  
 Mansion on lottery strategies, January 2004 – to present  
 IS Partners, Zurich, October 2005-January 2006  
 RAB Capital, Hedge Funds, London, February 2006 to March 2007  
 Canyon Capital Advisors, LLC, Los Angeles, February 2007  
 Private International Wealth Management, 2002 – present; Director of Research, 2006 - present

## **RESEARCH ACTIVITIES**

### **Cluster Chair**

Finance and Economics Sessions, 19<sup>TH</sup> Mathematical Programming Society Meeting, Rio de Janeiro, Brazil, July-August 2006

Sessions on Capital Growth Theory and Practice, XI International Conference on Stochastic Programming, Vienna, August, 2007

### **Research Areas:**

Incentives in Hedge Fund Management  
 Risk Control of Investment and Hedge Fund Portfolios  
 Global Asset Allocation  
 Asset and Liability Management for Insurance Companies, Pension Funds, Wealthy Individuals and Retirement  
 Stochastic Programming Applications in Finance  
 Worldwide Security Market Valuation  
 Portfolio Theory and Management  
 Programmed Trading  
 Mathematics of Investment and Gambling  
 Sports Betting and Insurance  
 Efficient and Inefficient Security Markets  
 Option and Warrant Pricing  
 Arbitrage Theory and Arbitrage Pricing  
 Dynamic Portfolio Theory and Applications  
 Financial Planning  
 Risk Aversion, Risk Measures and Stochastic Dominance

Stochastic Programming Theory  
 Applications of Mathematical Programming  
 Japanese and Asian Financial Markets  
 Land and Stock Prices in Japan and Asia  
 Japanese Derivative Markets  
 Energy Policy Modeling  
 Information Analysis

## PUBLICATIONS

### B – Selected Books, Published and In Progress

- B1 Ziemba, W.T., Vickson, R.G., Eds., *Stochastic Optimization Models in Finance*, Academic Press, July 1975, 744 pages (388 pages reprinted and 356 pages new). 2<sup>nd</sup> edition with new preface, World Scientific, Singapore, 2006.
- B3 Hausch, D.B., Ziemba, W.T., *Beat the Racetrack*, Harcourt, Brace and Jovanovich, 1984; revised 2<sup>nd</sup> edition, William Morrow, 1987.
- B3 Amershi, A., Feltham, J., Ziemba, W.T., Eds., *Economic Analysis of Information and Contracts: Essays in Honour of John E. Butterworth*, Kluwer Academic Publishers, Boston, July 1988, 415 pages.
- B4 Ziemba, W.T. and Schwartz, S.L., *Invest Japan: The Structure, Performance and Opportunities of Japan's Stock, Bond and Fund Markets*, Probus Publishing, Chicago, November 1991, 596 pages
- B5 Ziemba, W.T., Bailey, W., Hamao, Y., Eds., *Japanese Financial Market Research*, North Holland Publishers, Amsterdam, December 1991, 616 pages.
- B6 Hausch, D.B., Lo, V., Ziemba, W.T., Eds., *Efficiency of Racetrack Betting Markets*, Academic Press, 1994, 648 pages, reprinted in 2008 by World Scientific with a new preface.
- B7 Jarrow, R.A., Maksimovic, V., Ziemba, W.T., Eds., *Finance*, North Holland Handbook Series, December 1995, 1165 pages. Reprinted in Japanese, 1998, and in Chinese, 2002.
- B8 Keim, D.B., Ziemba, W.T., Eds., *Security Market Imperfections in World Wide Equity Markets*, Cambridge University Press, 2000, 531 pages.
- B9 Ziemba, W.T., Mulvey, J.M., Eds., *Asset and Liability Management from a Global Perspective*, Cambridge University Press, 1998, 665 pages, and in Chinese, 2003. [A review by Ton Vorst is in the *Journal of Finance*]
- B10 Wets, R.J.B., Ziemba, W.T., Eds., *Stochastic Programming - State of the Art 1998*, (main lectures VIII International Conference on Stochastic Programming), Baltzer Science Publishers BV (Special Issue Annals of Operations Research), March 1999, 285 pages.
- B11 Birge, J.B., Edirisinghe, N.C.P., Ziemba, W.T., Eds. *Research in Stochastic Programming* (selected, refereed papers from the VIII International Conference on Stochastic Programming), Baltzer Science Publishers BV (Special Issue Annals of Operations Research), June 2001, 306 pages.
- B12 Ziemba, W.T., *The Stochastic Programming Approach to Asset Liability and Wealth Management*, AIMR, December 2003, 192 pages plus 72-page appendix. [A review by Alan King is in *Interfaces* April 2006]
- B13 Wallace, S.W., Ziemba, W.T., Eds. *Applications of Stochastic Programming*, SIAM - Mathematical Programming Society Series on Optimization, 2005, 707 pages.

- B14 Zenios, S.A., Ziemba, W.T., Eds, *Handbook of Asset and Liability Modeling*, North Holland Volume 1: *Theory and Methodology*, 2006, pages 1-487.  
Volume 2: *Applications and Case Studies*, June 2007, pages 489-1147.
- B15 Ziemba, R.E.S. and Ziemba, W.T., *Scenarios for Risk Management and Global Investment Strategies*, Wiley, November, 2007 in UK and January 2008 in US.
- B16 Hausch, D. B., Ziemba, W.T., Eds., *Handbook Sports and Lottery Markets*, North Holland Handbooks in Finance Series, September 2008.
- B17 Constantinides, G.M., Mallariar, A.G., Ziemba, W.T. Eds. *Handbook of Futures Markets*, North Holland Handbooks in Finance Series, forthcoming 2009.
- B18 Ruoen, R., Ziemba, R.E.S., Ziemba, W.T.Z., Eds., *Chinese Investment Markets and their Impact*, forthcoming, 2009.
- B19 MacLean, L.C., E. O. Thorp, Ziemba, W.T., Eds., *The Kelly Capital Growth Criterion: Theory and Practice*, World Scientific, forthcoming, 2009.
- B20 Bertocchi, M., Schwartz, S.L., Ziemba, W.T., *Optimizing the Aging, Retirement and Pensions Dilemma*, Wiley, forthcoming, 2009.

#### **J – Selected Published Journal Articles**

- J1 Ziemba, W.T., "Note on 'Optimal Growth Portfolios when Returns are Serially Correlated,'" *Journal of Financial and Quantitative Analysis* VII: 1995-2000 (1972).
- J2 Ziemba, W.T., Parkan, C., Brooks-Hill, F.J., "Calculation of Investment Portfolios with Risk Free Borrowing and Lending," *Management Science* XXI: 209-222 (1974).
- J3 Ohlson, J.A., Ziemba, W.T., "Optimal Portfolio Policies for an Investor with a Power Utility Function Facing a Log Normal Securities Market," *Journal of Financial and Quantitative Analysis* XI: 57-71 (1976).
- J4 Ziemba, W.T., "Multiperiod Consumption-Investment Decisions: Further Comments," *American Economic Review* LXVII: 766-767 (1977).
- J5 Huang, C.C., Vertinsky, I., Ziemba, W.T., "On Multiperiod Stochastic Dominance," *Journal of Financial and Quantitative Analysis* XIII: 1-13 (1978).
- J6 Kira, D., Ziemba, W.T., "The Demand for a Risky Asset," *Management Science* XXVI: 1158-1165 (1980).
- J7 Hausch, D.G., Ziemba, W.T., Rubinstein, M.E., "Efficiency of the Market for Racetrack Betting," *Management Science* XXVII: 1435-1452 (1981).
- J8 Kallberg, J.G., White, R., Ziemba, W.T., "Short Term Financial Planning Under Uncertainty," *Management Science* XXVIII: 670-682 (1982).
- J9 Kallberg, J.G., Ziemba, W.T., "Comparison of Alternative Utility Functions in Portfolio Selection Problems," *Management Science* XXIX: 1257-1276 (1983).
- J10 Kusy, M.I., Ziemba, W.T., "A Bank Asset and Liability Management Model," *Operations Research* XXXIV: 356-376 (1986).
- J11 Clark, R., Ziemba, W.T., "Playing the Turn-of-the-Year Effect with Index Futures," *Operations Research* XXXV: 799-813 (1988).
- J12 Thaler, R.H., Ziemba, W.T., "Parimutuel Betting Markets: Racetracks and Lotteries," *Journal of Economic Perspectives* II: 161-174 (1988).

- J13 Ziemba, W.T., "Discussion of 'The Buying and Selling Behavior of Individual Investors at the Turn of the Year' by Jay R. Ritter," *Journal of Finance* XLIII: 717-719 (1988).
- J14 Li, Y., Ziemba, W.T., "Characterizations of Optimal Portfolios by Univariate and Multivariate Risk Aversion," *Management Science*, XXXV (1989) 259-269.
- J15 Hausch, D.B., Ziemba, W.T., "Arbitrage Strategies for Cross Track Betting on Major Horseraces," *Journal of Business*, 1990, LXIII, 61-78.
- J16 Ziemba, W.T., "Japanese Security Market Regularities: Monthly, Turn of the Month and Year, Holiday and Golden Week Effects," *Japan and the World Economy*, 3, 1991, 119-146.
- J17 Markowitz, H.M., Schaible, S., Ziemba, W.T., "An Algorithm for Portfolio Selection in a Lognormal Market," *International Journal of Financial Analysis*, 1992, Vol. 1, No.2, 109-113.
- J18 Chopra, V., Ziemba, W.T. "The Effect of Errors in Mean and Co-Variance Estimates on Optimal Portfolio Choice," *Journal of Portfolio Management*, Winter 1993, 6-11.
- J19 Stone, D. Ziemba, W.T., "Land and Stock Prices in Japan", *Journal of Economic Perspectives*, Summer 1993, 149-165.
- J20 Ziemba, W.T., "Worldwide Security Market Regularities", *European Journal of Operational Research*, 74, 1994, 198-229.
- J21 Cariño, D. et al., Ziemba, W.T., "The Russell-Yasuda Kasai Model: An Asset/Liability Model for a Japanese Insurance Company Using Multistage Stochastic Programming", *INTERFACES*, January - February 1994, (Edelman Prize issue), 29-49. (A story about this paper is in the March 31, 1991 issue of the *New York Times*.)
- J22 Hensel, C.R., Ziemba, W.T., "U.S. Small and Large Capitalized Stocks, Bonds and Cash Returns During Democratic and Republican Administrations, 1928-1993", *Financial Analysts Journal*, 51:2, March/April 1995, 61-69.
- J23 Hensel, C.R., Ziemba, W.T., "The January Barometer: Swiss, European and Global Results", *Finanzmarkt and Portfolio Management*, 9:2, 1995, 187-196.
- J24 Shaw, J., Thorp, E.O, Ziemba, W.T., "Convergence to Efficiency of the Nikkei Put Warrant Market of 1989-90", *Applied Mathematical Finance*, 2, 1995, 243-271.
- J25 Hensel, C.R., Sick, G., Ziemba, W.T., "Investment Results from Exploiting Turn-of-the-Month-Effects", the *Journal of Portfolio Management*, Spring 1996, 17-23. (A story about this paper is in the November 7, 1995 issue of the *Wall Street Journal*.)
- J26 Cariño, D., and Ziemba, W.T., "Formulation of the Russell-Yasuda Kasai Financial Planning Model", *Operations Research*, 46:4, July/August 1998, 433-449.
- J27 Cariño, D., Myers, D., and Ziemba, W.T., Concepts, Technical Issues and Uses of the Russell-Yasuda Kasai Financial Planning Model, *Operations Research*, 46:4, July/August 1998, 450-462.
- J28 MacLean, L.C., W.T. Ziemba, Growth Versus Security Tradeoffs in Dynamic Investment Analysis, in R. J-B. Wets and W.T. Ziemba (eds), *Stochastic Programming: State of the Art 1998*, *Annals of Operations*, ResearchBalzer Science Publishers, 1999, 193-226.
- J29 Zhao, Y., Ziemba, W.T. A stochastic programming model using an endogeneously determined worst case risk measure in a risk-return framework for dynamic asset allocation, *Mathematical Programming*, 2001, Series B, 89 (2): 293-309.
- J30 Zhao, Y., Ziemba, W.T. A dynamic asset allocation model with downside risk control, *The Journal of Risk* 3 (Fall 2000): 91-113.
- J31 MacLean, L.C., Sanegre, R., Zhao, Y., Ziemba, W.T., Capital Growth with Security, *Journal of Economic Dynamics and Control* 28:4 (2004): 937-954.

- J32 Rudolf, M., Ziemba, W.T., Intertemporal Asset-Liability Management *Journal of Economic Dynamics and Control*, 28:4 (2004): 975-990.
- J33 Zhao, Y., Haussmann, U., Ziemba, W.T., A Dynamic Investment Model with a Minimum Attainable Wealth Requirement, *Mathematical Finance* 13 (October 2003): 481-501.
- J34 Board, J.L.C., Sutcliffe, C.M.S., Ziemba, W.T. Applying Operations Research Techniques to Financial Markets *Interfaces*, 32 (March-April 2003) 2: 12-34.
- J35 Lane, D., Ziemba, W.T. Jai-Alai Hedging Strategies, *European Journal of Finance* (2004): 353-369.
- J36 Douglass, J., Wu, O., Ziemba, W.T. Stock ownership decisions in defined contribution pension plans, *Journal of Portfolio Management*, Summer, 2004, 92-100.
- J37 Ziemba, W. T., The symmetric downside risk Sharpe ratio and the evaluation of great investors and speculators, *Journal of Portfolio Management*, 2005 (Fall): 108-122.
- J38 MacLean, L. C., Zhao, Y., Ziemba, W. T. (2006) Dynamic portfolio selection with process control. *Journal of Banking and Finance* 30 (2) 317 - 339
- J39 MacLean, L., Ziemba, W.T., Li, Y. (2005) Time to Wealth Goals in Capital Accumulation and the Optimal Trade-off of Growth versus Security, *Quantitative Finance*, 5(4):343-357.
- J40 Zhao, Y., Ziemba, W.T. (2008) Calculating risk neutral probabilities and optimal portfolio policy in a dynamic investment model with downside risk control, *European Journal of Operational Research* 185:1525–1540
- J41 Koivu, M., Pennanen, T., Ziemba, W.T. Cointegration analysis of the FED model, *Finance Research Letters* 2 (2005): 248-259.
- J42 Hausch, D.B., Bain, R., Ziemba, W.T. (2006) An Application of Expert Information to Win Betting on the Kentucky Derby”, 1981-2001, *European Journal of Finance* 12: 283-301. (featured on BCTV, May 1999 and in *Louisville Times*, June 2001).
- J43 Zhao, Y., Ziemba, W.T. (2007) On Leland’s Option Pricing and Hedging Strategy with Transactions Costs, *Finance Research Letters* 4:49-58.
- J44 Kouwenberg, R., Ziemba, W.T. (2007) Incentives and risk taking in hedge funds, *Journal of Banking and Finance* 31: 3291–3310.
- J45 MacLean, L.C., Foster, M., Ziemba, W.T. (2007) Empirical Bayes estimation with dynamic portfolio models, *Journal of Banking and Finance*, 31 3503–3523.
- J46 Kallio, M., Ziemba, W.T. (2007) Using Tucker’s theorem of the alternative to simplify, review and expand discrete arbitrage theory, *Journal of Banking and Finance* 31: 2281-2302.
- J47 Rendon, J. and Ziemba, W.T. (2007) Is the January effect still alive in the futures markets? *Finanzmarkt and Portfolio Management*, 21: 381-396.
- J48 Geyer, A., Ziemba, W.T., (2008) The Innovest Austrian Pension Fund Planning Model InnoALM, *Operations Research* 56 (4); 797-810.
- J49 Berge, K, Consigli, G., Ziemba, W.T, (2008) The predictive ability of the bond stock earnings yield differential, *Journal of Portfolio Management* (Spring): 63-80.
- J50 Rodriguez, J., Ziemba, W.T. (2008) Duality relations of hedge fund managers’ incentive fee optimization problems, *Mathematical Programming*, 35pp, forthcoming.
- J51 Zhao, Y, Ziemba, W.T. (2007) Comments on and corrigendum to “Hedging errors with Leland’s option model in the presence of transaction costs” [*Finance Research Letters* 4 (2007):49-58] *Finance Research Letters* 4:196-199.



- J52 Ziemba, W.T. (2008) Use of stochastic and mathematical programming in portfolio theory and practice: Keynote address. *Annals of Operations Research* (October)
- J53 Consigli, G., MacLean, L.C., Zhao, Y., Ziemba, W.T. (2009) The bond-stock yield differential as a risk indicator in financial markets. *Journal of Risk*, 11 (3): 3-24.
- J54 MacLean, L.C., Consigli, G., Zhao, Y., Ziemba, W.T. Risk indicators in equity markets. *Computational Management Science*, in press.

#### K – Selected Articles in Books

- K1 MacLean, L.C., Ziemba, W.T. (2006) Capital growth theory and practice in *Handbook of Asset and Liability Modeling*, Volume 1: *Theory and Methodology*, S.A. Zenios, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 429-473.
- K2 Ziemba, W.T. (2007) The Russell Yasuda, InnoALM and related models for pensions, insurance companies and high net worth individuals in *Handbook of Asset and Liability Modeling*, Volume 2: *Applications and Case Studies*, S.A. Zenios, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 861-962.
- K3 Schwartz, S.L., Ziemba, W.T. (2007) ALM in social security, in *Handbook of Asset and Liability Modeling*, Volume 2: *Applications and Case Studies*, S.A. Zenios, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 1069-1117.
- K4 MacLean, L.C., Zhao, Y., Ziemba, W.T. (2008) Growth-security models and stochastic dominance, in *Stochastic Optimization: Planning under Uncertainty*, G. Danzig and G. Infanger, Kluwer, forthcoming
- K5 MacLean, L., Zhao, Y., Consigli, G., Ziemba, W.T. (2006). Estimating parameters in a pricing model with state dependent shocks. to appear in *Handbook of Financial Engineering*, P.M. Paradolos and C. Zopounidis (Eds).
- K6 Purnanandam, A, Warachka, M., Yonggan Zhao, Y., Ziemba, W.T. (2007) Incorporating diversification into risk management, in *Advances in Risk Management*, G.N. Gregoriou (ed), Palgrave, pp 22-46.
- K7 MacLean, L.C., Zhao, Y., Ziemba, W.T. (2003) A process control approach to investment risk. *IEEE International Conference on Computational Intelligence for Financial Engineering*, 265-270.
- K8 Tompkins, R.G., Ziemba, W.T., Hodges, S.H. (2008) The favorite-longshot bias in S&P500 futures options: the return to bets and the cost of insurance, in *Handbook of Sports and Lottery Markets*, D.B. Hausch, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 161-180.
- K9 Ziemba, W.T. (2008) Efficiency of racetrack betting markets, in *Handbook of Sports and Lottery Markets*, D.B. Hausch, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 183-221.
- K10 Lane, D., Ziemba, W.T. (2008) Arbitrage in team Jai Alai, in *Handbook of Sports and Lottery Markets*, D.B. Hausch, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 253-271.
- K11 Gramm, M., Ziemba, W.T. (2008) The dosage breeding theory for horseracing predictions, in *Handbook of Sports and Lottery Markets*, D.B. Hausch, W.T. Ziemba (eds) in *Handbooks in Finance*, North Holland, 307-332.
- K12 Ziemba, W.T. (2008) Ideas in asset liability management in the tradition of H.M. Markowitz in *Essays in Honor of H.M. Markowitz*, J. Guerard (ed), Springer.

- K13 MacLean, L.C., Ziemba, W.T. (2009) The Kelly strategy, in *Encyclopedia of Quantitative Finance*, B. Cont and M. Stutzer (eds)

### **P – Papers Submitted for Publication**

- P1. MacLean, L.C., Zhao, Y., Ziemba, W.T., Intertemporal mean variance efficiency with Markovian state price density, submitted to *Journal of Banking and Finance*, 27 pp.
- P2. Edirisinghe, N.C.P., Ziemba, W.T., An algorithm for large-scale linear programming, submitted to *Mathematical Programming*, 22 pp, in second round.
- P3. Ziemba, W.T. What operations research can contribute to your personal financial situation including your retirement, solicited article for *Interfaces*, 22 pp.
- P4. MacLean, L.C., Zhao, Y. and Ziemba, W.T. Weak interest rate parity and currency portfolio diversification. Submitted to *Journal of Financial and Quantitative Analysis*, 50 pp.
- P5. Ghosh, S, Bhalla, G. and Ziemba, W.T. The January Barometer, 1926-2005, Technical Report, Sauder School of Business, submitted to *Financial Analysts Journal*, 22 pp.
- P6. Berge, K., Ziemba, W.T., The predictive ability of the bond and stock earnings yield differential in US and foreign markets, 1970-2005, submitted to *Journal of Financial and Quantitative Analysis*, 40 pages.
- P7. MacLean, L.C., Zhao, Y. , Ziemba, W.T., Endogenous volatilities for hedging and pricing option with transaction costs, submitted to *Journal of Financial and Quantitative Analysis*, 30 pages.
- P8. Consigli, G., MacLean, L., Zhao, Y., Ziemba, W., Speculative bubbles: asset prices with yield dependent market corrections.” submitted to *Journal of Financial Markets*.
- P9. Ziemba, RES, Ziemba WT, Optimality of rogue traders, submitted to *American Economic Review*, 12 pp.
- P10. Ziemba, W.T., Understanding the finite properties of the Kelly capital growth criterion: a tale of five investors, submitted to *Journal of Economic Perspectives*, 20 pp.
- P11. Gramm, M., Ziemba,W.T., Market efficiency of America’s triple crown races, submitted to the *Journal of Economic Perspectives*, 20 pp.

### **Recent Presentations at Universities**

- 2009 Oxford University, ICMA Centre, University of Reading, Nanyang Technical University, Singapore, University of Toulouse,
- 2008 Oxford University, ICMA Centre, University of Reading, University of Zurich, University of Bergamo, University of Venice, University of Firenze, Dalhousie University
- 2007 Universities of Bergamo, Dalhousie, Chicago, Warwick, Oxford, Edinburgh, Wollongong (Australia), Southwestern (Chengdu, China)
- 2006 European Central Bank, Oxford University, University of Bergamo, London Business School, University of Verona, University of Venice, University of Zurich, Behang University (Bejing)

- 2005 University of Florida, Free University of Bolzano, University of Louisville, University of Washington (Statistics), ETH-Zurich, University of Zurich Economics and Finance; and second talk to Operations Research, University of Washington (IE Dept)
- 2004 Campus for Finance (WHU, Germany), Stanford University, Oxford University, Princeton University, University of Bergamo, Peoples' University of China, Beijing and University of Colorado
- 2003 London School of Economics, Helsinki School of Economics, Said Business School, Mathematical Finance Seminar, Stochastic Analysis Seminar and Differential Equations Seminar, Oxford University, Mathematical Finance and Stochastic Analysis Seminars Humboldt University, University of Zurich, University of Bergamo, and ETH-Zurich University
- 2002 Helsinki School of Economics, Imperial College, University of Southampton, Ecole Polytechnic, University of Bergamo and London School of Economics
- 2001 Princeton University, UCLA and University of Arizona
- 2000 and previous years  
Stanford, Yale, Michigan, Yale, Chicago, Cornell, London Business School, Trinity College (Dublin), Cambridge, Oxford, NYU, Harvard, Berkeley, Zurich, St Gallen, Venice, Vienna, Bergamo, Hong Kong, Singapore, and others

See also listing of institutional investor talks and academic seminars 1989-2009.