

HAYNE ELLIS LELAND

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Berkeley, CA 94708
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Last Revised: November 8, 2011

EDUCATIONAL BACKGROUND

Undergraduate Harvard University

Graduate Studies: London School of Economics
M.Sc. (Econ.)

Harvard University, Ph.D., Economics
Thesis: "Dynamic Portfolio Theory"

ACADEMIC POSITIONS

2012 (April-June) Pembroke Visiting Research Professor (Inaugural holder), Pembroke College,
Cambridge University

2008-present Professor of the Graduate School, Haas School of Business, University of
California, Berkeley

2008-present Professor Emeritus, University of California,

1990-present Arno Rayner Professor of Finance and Management, Haas School of Business,
University of California, Berkeley

1991-2001 Director, Berkeley Program in Finance

1978-1990 Professor, School of Business Administration, University of California, Berkeley

1979-1982 Chairman, Finance Group, School of Business Administration, University of
California, Berkeley

1974-1978 Associate Professor, School of Business Administration, University of California,
Berkeley

1968-1974 Assistant Professor, Department of Economics, Stanford University

2005	Visiting Scholar, Institut d'Etudes Politiques de Paris ("Sciences Po")
1999	Visiting Professor, UCLA
1999	Academic Visitor, U.S. Federal Reserve Bank, Washington D.C.
1998	Visiting Scholar, Financial Markets Group, London School of Economics
1997	Academic Visitor, University of Toulouse
1983-1984	Visiting Scholar, Ministere des Finances, Paris, France

AWARDS, HONORS

2008	Stephen A. Ross Prize in Financial Economics
2008	Lifetime Achievement Award, Financial Intermediation Research Society (FIRS)
2007	Honorary Doctorate (Docteur Honoris Causa), University of Paris, Dauphine
2006	Selected to give Princeton Lectures in Finance
2000-present	Fellow, American Finance Association (one of 25 initial members)
2001-present	Fellow, Financial Management Association
1999	Graham and Dodd Scroll Award, Financial Analysts Journal
1999	Recognition for Contributions to Finance, Financial Management Association
1998	Recognition for Service and Leadership, American Finance Association
1998	University Medal, University of Toulouse (France)
1997	President, American Finance Association, (Vice President and Program Chair, 1996)
1997	Roger Murray Prize, Institute for Quantitative Analysis
1987	Named "Businessman of the Year" (one of 12) by <u>Fortune</u> Magazine, 1987.

PROFESSIONAL ACTIVITIES

2011 Chair, CREDIT Scientific Committee, GRETA/University of Venice

2007-2009 Independent Trustee, Barclays Global Investors Funds

2003-2008 Advisory Board, Swiss National Science Foundation

2002-2007 Scientific Advisory Board, Europlace Institute of Finance

2003-2006 Policy Committee, Goldman Sachs Credit Indices

2003-2005 Scientific Advisory Board, Wells Capital Management

1995-1999 Board of Directors, American Finance Association

1998-2003 M.Sc. Program Advisory Board, University of Singapore

1994-1997 Advisory Board, MBA Program, ITAM (Mexico)

1989-1993 Nikko/LOR Research Advisory Board

1986-1990 New Products Advisory Committee, Chicago Mercantile Exchange

Associate Editor: Financial Management, 1999-2008
Journal of Economic Theory, 1975-1980
International Economic Review, 1972-1979

Committees: Presidential Selection Committee, American Finance Association, 1981

Visiting Academic

Review Committees: UCLA Finance Group (1999); Wharton School Finance Group (1992);
 UCLA Business School (1987); Santa Clara Finance Group (1984)

External Reviewer: Numerous external chair/tenure/promotion cases

Conference Chair: University of Venice, GRETA Credit Risk Conference, 2011
 American Finance Association Annual Meetings, 1997

Keynote Speaker: FARFE Conference, Boston, 2009
 China International Conference in Finance (Guangzhou), 2009
 University of Venice, GRETA Credit Risk Conference, 2008
 Financial Intermediation Research Society, 2008

National Taiwan University, 2008
 Deutsche Bundesbank/Bank of International Settlements, 2007
 NHH (Bergen), Karl Borch Lecture, 2007
 Moody's/Copenhagen Conference on Credit Risk, Keynote 2007
 Princeton Lectures in Finance, 2006 (3 lectures)
 CSEF-IGIER Symposium on Economics and Institutions, Capri, 2006
 Guttmann Center, Vienna, 2005
 Waseda University, Tokyo, 2004 (3 lectures)
 EuroPlace Finance Conference, Keynote Speaker, 2003
 GRETA Credit Risk Conference, Keynote speaker, 2002
 Financial Management Association, Keynote Address, 1999
 University of New South Wales, Keynote Address, 1999
 American Finance Association, Presidential Address, 1998
 London School of Economics, Robbins Lecture, 1998
 University of Toulouse, CCF Bank Lecture, 1997
 French Finance Association (AFFI), Keynote Address, Tunis, 1994

Invited Papers:

American Institute for Management Research (AIMR), 1998
 Bank for International Settlements, 2002, 2007
 Boston College, 2002
 California Institute of Technology, 1979, 1980
 Cambridge University (Churchill College), 1978
 Catholic University, Santiago, Chile 2006
 Columbia University, 1996, 1997, 2003
 Duke University, 2001
 Deutsche Bundesbank, 2007
 Federal Reserve Bank, Washington D.C., 1979, 1999
 Federal Reserve Bank, New York, 1999
 Financial Intermediation Research Society, Alaska, 2008
 Harvard-MIT Mathematical Economics Seminar, 1973, 1985
 Harvard Business School, 1986, 1993, 1995
 Hebrew University, Jerusalem, 1984, 2005
 HEC, Lausanne, 2010
 HEC, France, 1990, 1991, 1994
 INSEAD, France, 2003, 2005
 ITAM, Mexico, 1995, 1996
 Imperial College, London, 2007
 Institutional Investor Conference, 1982, 1985
 London Business School, 1984, 1989, 1994, 1998
 London School of Economics, 1978, 1984, 1994, 1998
 Louvain, Belgium (C.O.R.E.), 1970, 1978, 1984, 1989, 1994
 MIT Battery March Lecture 2003
 Moody's Conference on Credit Risk, NYU 2004, London 2005,
 Copenhagen 2007

National Taiwan University, 2008
 New York University, 1996, 1998, 1999
 NHH, Bergen, Norway, 1978, 1984, 1994, 1998, 2007
 Oxford University (Nuffield College), 1978
 Paris, France (CEPREMAP/ENPC), 1970, 1976, 1984, 1988, 1994
 Princeton University, 2006
 Q-Group (Quantitative Research in Finance): Florida 1996, Barcelona
 1997
 Stanford University, 1975, 1977, 1981, 1988, 1989, 1993, 1994, 1998, 2004
 Stockholm School of Economics, Sweden, 1994, 1998
 Tel-Aviv University, 2005
 Tokyo, Nikko Conference on New Financial Products, 1986, 1987
 University of Alaska, 1981
 University of British Columbia, 2002
 University of Chicago, 1972, 1979, 1980, 1981, 1982, 1989, 1993
 UCLA, 1983, 1985, 1988, 1992, 1996, 1999
 UC Santa Barbara, 1985, 1999
 University of Iowa (Conference on Decision Making Under Uncertainty,
 NSF-NBER), 1972
 University of North Carolina, 2001
 University of Paris IX (Dauphine), 2007
 University of Toulouse (GREMAQ), France, 1994, 1997, 2004
 University of Warwick, England, 1988, 1994
 University of Texas, 1999
 University of Utah, 1994
 University of Vienna, 2005
 Venice, Italy (Conference on Mathematical Investment Theory), 1971
 Venice, Italy (Conference of Default Risk), 2002, 2008, 2010
 Waseda University, Tokyo, 2004 (3 lectures)
 Washington University, St. Louis, 1994
 Wharton School, University of Pennsylvania, 1973, 1986, 1991, 1997, 1999

Other:

AFFI (French Finance Association), Tunis, Tunisia, 1994;
 Bordeaux 1995, Grenoble 1997, Aix-en-Provence 1999
 American Finance/Economics Association Meetings: Numerous
 Econometric Society Meetings in Cambridge, England, 1970;
 New Orleans, 1971; Toronto, 1972; Atlantic City, 1976; Aix-en-
 Provence, 1980; New York, 1980, 1983; Chicago, 1987;
 San Francisco, 1996
 European Finance Association Meetings: Istanbul 1997, Paris 1999
 BARRA Conference, 1995, 1996, 1998, 1999

GRANTS

Government Office for Science (UK), Foresight Project on Computer Trading in Financial Markets

“Leverage, Forced Asset Sales, and Market Stability: Lessons from Past Market Crises and the Flash Crash,” August 2011.

National Science Foundation

"Economic Analysis of Alternative Leasing Policies for Oil and Gas," SOC-75-05690 and SOC-76-21685, 4/75-3/77.

"Licensing and Minimum Quality Standards in Markets with Asymmetric Information," SOC-78-08280, 7/78-3/80.

Q-Group (Institute for Quantitative Research in Finance)

"Corporate Debt Values and Optimal Capital Structure," 1993-1995.

BSI Gamma Foundation (Switzerland)

“Optimal Portfolio Management With Transactions Costs and Taxes”, 1998-1999.

RELEVANT WORK EXPERIENCE

2007-present	Independent Trustee, Barclays Global Investors Funds
1992-present	Consultant, Law and Economics Consulting Group (LECG)
2005	Consultant, W.R. Hambrecht & Co.
2001-2004	Consultant, U.S. Department of Justice
1998-2000	Consultant, Banca della Svizzera Italiana
1981-2000	Director and Founding Principal, Leland/O'Brien/Rubinstein Associates, Inc.
1989-1990	Consultant, California Public Utilities Commission
1987	Testimony to House Subcommittee for Telecommunications and Finance; Brady Commission, 1987.
1986-1995	Board of Directors, LOR/GB
1978-1982	Consultant, Department of Natural Resources, State of Alaska
1977-1979	Consultant, U. S. Department of Energy
1974	Consultant, Office of Energy R&D Policy, National Science Foundation
1968	Consultant, First National City Bank, New York
1967-1968	Consultant to Project in Computer Aided Education in Economics, Harvard University
1966-1967	Consultant, The RAND Corporation

PUBLICATIONS AND COMPLETED WORK

ARTICLES:

1. "Savings and Uncertainty: The Precautionary Demand for Saving," Quarterly Journal of Economics 82, August 1968, 465-473. Reprinted in P. Diamond and M. Rothschild, Uncertainty in Economics, 1978.
2. "Dynamic Portfolio Theory," Journal of Finance 24, June 1969, 543-544. (Invited thesis summary.)
3. "Optimal Forward Exchange Positions," Journal of Political Economy 79, March/April 1971, 257-269.
4. "On the Existence of Optimal Policies Under Uncertainty," Journal of Economic Theory 4, February 1972, 35-44. Reprinted in W. Ziemba et. al. (eds.), Stochastic Optimization Models in Finance, Academic Press, 1976.
5. "The Dynamics of a Revenue Maximizing Firm," International Economic Review 13, June 1972, 376-385.
6. "Theory of the Firm Facing Uncertain Demand," American Economic Review 62, June 1972, 278-291.
7. "On Turnpike Portfolios," in G. Szego and K. Shell (eds.), Mathematical Methods in Investment and Finance, North-Holland, 1972.
8. "Optimal Growth in a Stochastic Environment," The Review of Economic Studies, January 1974.
9. "On Portfolio Selection with Transactions Costs," in D. McFadden and S. Wu (eds.), Proceedings of the Third NSF-NBER Conference on Decision Rules and Uncertainty, North-Holland, 1974.
10. "Production Theory and the Stock Market," Bell Journal of Economics and Management Science, Spring 1974.
11. "Regulation of Natural Monopolies and the Fair Rate of Return," Bell Journal of Economics and Management Science, Spring 1974.
12. "Theory of the Firm Facing Uncertain Demand: A Reply," American Economic Review, March 1975.

13. "Monopoly Pricing Structures with Imperfect Discrimination" (with Robert Meyer), Bell Journal of Economics, Autumn 1976.
14. "Information Asymmetries, Financial Structure, and Financial Intermediation" (with David Pyle), Journal of Finance, May 1976. Reprinted in S. Bhattacharya and G. Constantinides, Financial Markets and Incomplete Information, Rowman and Littlefield, Toronto, 1989. Reprinted in M. Brennan, ed., The Theory of Corporate Finance, Vol. 1, Elgar, 1996.
15. "Quality Choice and Competition," American Economic Review, March 1977.
16. "Optimal Risk Sharing and the Leasing of Natural Resources," Quarterly Journal of Economics, August 1978.
17. "Information, Managerial Choice, and Stockholder Unanimity," Review of Economic Studies, 1977. Reprinted in M. Brennan, ed., The Theory of Corporate Finance, Vol. 1, Elgar, 1996.
18. "Quacks, Lemons, and Licensing: A Theory of Minimum Quality Standards," Journal of Political Economy 87:6, 1979.
19. "Alternative Long-Run Goals and the Theory of the Firm," in P-T Liu (ed.), Dynamic Optimization and Mathematical Economics, New York: Plenum Publishing, 1980.
20. "Who Should Buy Portfolio Insurance?" Journal of Finance, May 1980.
21. "The Effectiveness of Public Utility Price Regulation" (with Robert Meyer), Review of Economics and Statistics, 1980.
23. "Minimum Quality Standards and Occupational Licensing in Markets with Asymmetric Information," in S. Rottenberg (ed.), Occupational Licensure and Regulation, American Enterprise Institute, 1980.
23. "Replicating Options with Positions in Stock and Cash" (with Mark Rubinstein), Financial Analysts Journal, July-August 1981. Reprinted in D. Luskin, ed., Dynamic Hedging: A Guide to Portfolio Insurance, Wiley, 1988; in Readings in Futures Markets published by the Chicago Board of Trade, Vol. VI, 1991; and reprinted in the 50th Anniversary Issue of the Financial Analysts Journal (January/February 1995), selected as one of the 22 best articles out of the 3200 published in the Journal during its 50-year history.
24. "Comments on Grossman's 'The Role of Private Disclosure in Conveying Information'," Journal of Law and Economics, 1981.
25. "An Economic Model of the Brain Drain" (with Viem Kwok), American Economic Review, March 1982.

26. "On Dynamic Investment Strategies" (with John Cox), Proceedings of the Seminar on the Analysis of Securities Prices, CRSP, November 1982.
27. "Prices and Qualities in Markets with Costly Information" (with Yuk-Shee Chan), Review of Economic Studies, 1983.
28. "Prices and Qualities in Costly Markets: A Search Model" (with Yuk-Shee Chan), Southern Economic Journal, 1984.
29. "Option Pricing and Replication with Transactions Costs," Journal of Finance, December 1985. Reprinted in G. Constantinides and A. Malliaris, eds., *The International Library of Critical Writings in Financial Economics—Option Markets*. E. Elgar, forthcoming.
30. "The Evolution of Portfolio Insurance" (with Mark Rubinstein), in D. Luskin, ed., Portfolio Insurance: A Guide to Dynamic Hedging, Wiley, 1988.
31. "Portfolio Insurance and October 19th," California Management Review, Summer 1988.
32. "Comments on the Market Crash: Six Months After" (with Mark Rubinstein), Journal of Economic Perspectives, Summer 1988.
33. "Portfolio Insurance," in F. J. Fabozzi and G. M. Kipnis, eds., The Handbook of Stock Index Futures and Options, Dow Jones-Irwin, 1989.
34. "LBOs and Taxes: No One to Blame But Ourselves?" California Management Review 29, Fall 1989.
35. "Market Liquidity, Hedging, and Crashes" (with Gerard Gennotte), American Economic Review, December 1990, 999-1021.
36. "Margin Requirements and Market Volatility: Lessons From the U.S. Experience" (with Gerard Gennotte), Recent Developments in International Banking and Finance, May 1992, 187-202.
37. "Insider Trading: Should It Be Prohibited?" Journal of Political Economy 100, December 1992, 859-887. Reprinted in M. Brennan, ed., The Theory of Corporate Finance, Vol. 1, Elgar, 1996.
38. "Portfolio Insurance," in The New Palgrave Dictionary of Money and Finance (eds. John Eatwell, Murray Milgate and Peter Newman), MacMillan Press, Volume 3, 1992, 154-156.
39. "On Equilibrium Price Processes" (with Hua He), Review of Financial Studies 6, December 1993, 593-617. Reprinted in G. Constantinides and A. Malliaris, eds., *The International*

Library of Critical Writings in Financial Economics—Continuous Time Finance. E. Elgar, forthcoming.

40. "Low Margins, Derivative Securities, and Volatility" (with Gerard Gennotte), Review of Futures Markets 13, 1994, 709-742.
41. "Corporate Debt Value, Bond Covenants, and Optimal Capital Structure," Journal of Finance 49, September 1994, 1213-1252. Reprinted in M. Brennan, ed., The Theory of Corporate Finance, Vol. 1, Elgar, 1996. Reprinted in S. Schaefer, ed., *The Foundations of Continuous Time Finance*, E. Elgar, 2001. Recipient of first Stephen A. Ross Prize in Financial Economics (honors a paper in financial economics selected from all papers published over the prior 15 years in any finance or economics outlet).
42. "Cash Management for Index Tracking" (with Gregory Connor), Financial Analysts Journal, November/December 1995.
43. "Optimal Capital Structure, Endogenous Bankruptcy, and the Term Structure of Credit Spreads" (with Klaus Toft), Journal of Finance, July 1996.
44. "Options and Expectations," Journal of Portfolio Management, December 1996.
45. "Corporate Risk Management and Derivatives: Promises and Pitfalls," (in French), Risques: Les Cahiers de l'Assurance 30, Avril-Juin 1997.
46. "Agency Costs, Risk Management, and Capital Structure," Journal of Finance, August 1998, 1213-1243.
47. "Beyond Mean-Variance: Risk and Performance Measurement in a Nonsymmetrical World," Financial Analysts Journal, January-February 1999, 27-36. Reprinted in R. Koracyk, ed., *Asset Pricing and Portfolio Performance*, Risk Books, 1999. Received Graham and Dodd Award of Excellence, *AIMR*, 1999.
48. "The Structural Approach to Credit Risk," *Frontiers in Credit Risk Analysis*, AIMR Conference Proceedings, Association for Investment Management and Research, 1999.
49. *L'Assicurazione de Portafoglio: Elementi Teorici e Applicativi*, (monograph on Portfolio Insurance, in Italian), Il Mulino, Bologna, 1999.
50. "On Dynamic Investment Strategies" (with John Cox), *Journal of Economic Dynamics and Control*, 2000. (update of paper 26).
51. "An EBIT-Based Model of Dynamic Capital Structure" (with R. Goldstein and N. Ju), Journal of Business 74, October 2001, 483-512.

52. "Comparing Expected Default Frequencies from Structural Models of Debt", Journal of Investment Management, 2004. Reprinted in Fong, G., *The Credit Market Handbook*, Wiley: 2006
53. "Purely Financial Synergies and the Optimal Scope of the Firm: Implications for Mergers, Spinoffs, and Structured Finance," Journal of Finance 62, April 2007, 765-807.
54. "The Optimal Mix of Bank and Bond Market Debt: An Asset Pricing Approach" (with D. Hackbarth and C. Hennessy), Review of Financial Studies 20, September 2007, 1389-1428.

Miscellaneous Publications

55. "Comment on 'Hedging errors with Leland's option model in the presence of transactions costs,' Financial Research Letters 4, September 2007, 200-202.
56. Published interviews on financial markets in "Match de L'Argent" section of *Paris Match* magazine, 2002 and 1996.
57. Personal interview/profile, "The Man Who Made the Stock Market Gasp," lead article in *Asset Management* (Dow Jones publications), November/December 1997.
58. "Portfolio Insurance Five Years After," Risk Magazine, Vol. 5, 1992.
59. Personal profile/history, "The Ultimate Invention", Chapter 12 in Peter Bernstein, *Capital Ideas*, 1990.
60. "Black Monday: The Catastrophe Theory," Risk Magazine, Vol. 1, No. 10, October 1988.
61. "Review of John Cox and Mark Rubinstein, Options Markets," Journal of Economic Literature, December 1986.
62. "Review of Jan Mossin's Theory of Financial Markets," Journal of Finance, 1974.
63. "An Economic Analysis of Alternative Outer Continental Shelf Petroleum Leasing Policies" (with R. Norgaard and S. Pearson). Prepared for the Office of Energy R&D, National Science Foundation, September 1974.

Current Research

“Leverage, Forced Asset Sales, and Market Stability: Lessons from Past Market Crises and the Flash Crash,” Working Paper DR9, Government Office for Science (UK), Foresight Project on Computer Trading in Financial Markets, 2011

UNIVERSITY AND DEPARTMENTAL SERVICE

Director, Berkeley Program in Finance, 1991 – 2001

Dean Witter Grant Program Head, 1991 - 2001

Elected Member, Policy and Planning (P²) Committee, 1992-1993, 1999-2000

Chair, MBA Committee, 2001-2002

Ethics Committee, 2002-2003

Endowed Chair Selection and Policy Committee, 1994 -

Numerous *Ad Hoc* Tenure Review Committees

Chair, Berkeley Program in Finance Seminar, 1986, 1994, 1996, 2003

Chair, Finance Group, 1983-5