

BIO-BIBLIOGRAPHY

Richard Roll

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Caltech Office:

235 Baxter, mail code: 228-77
California Institute of Technology
1200 East California Boulevard
Pasadena CA 91125
Phone: 626-395-3890; e-mail: rroll@caltech.edu

Home:

10725 Cranks Road, Culver City, CA 90230
Phone: 310-559-9307 or 310-936-5144; Fax: 310-836-7328

Birth Date: October 31, 1939

Education:

B.A.E. 1961 Auburn University, Auburn, Alabama,
Aeronautical Engineering
M.B.A. 1963 University of Washington, Seattle, Washington
Business Administration
Ph.D. 1968 University of Chicago, Chicago, Illinois
Finance, Statistics, Economics

Work Experience:

1961-64 The Boeing Company, Seattle and New Orleans,
Aeronautical Engineer
1968-73 Carnegie-Mellon University, Pittsburgh,
Assistant and Associate Professor
1973-75 European Institute for Advance Studies in Management, Brussels,
Belgium, Professor
1975-76 Centre d'Enseignement Supérieure des Affaires, Jouy-en-Josas,
France, Professeur Associé
1976-2014 University of California, Los Angeles,
The Anderson School
Professor of Finance, Allstate Chair, 1982-2002, Japan Alumni Chair,
2002-2011, Joel Fried Chair in Applied Finance, 2011-2014,
Professor Emeritus, 2014-
1985-87 Goldman, Sachs & Co., New York,
Vice-President and Director of Mortgage Securities
Research

- 1985-2005 Roll and Ross Asset Management Corporation, Culver City, CA, Co-Chairman of the Board
- 1992-95 WP Capital Management, Greenwich, CT, Managing Director
- 2002 Visiting professor, Université de Toulouse, France
- 2003- Founder and Principal, Compensation Valuation, Inc.
- 2009-2012 Co-Founder and Research Director, Factor Advisors
- 2014- Linde Institute Professor of Finance, California Institute of Technology

Consulting or Similar Service to Civic, State or National Governmental Agencies:

1. Consultant, Interstate Commerce Commission, 1973.
2. Consultant, Securities and Exchange Commission, 1979-80.
3. Consultant, United States Railway Association, 1979-81.
4. Consultant, Federal Energy Regulatory Commission, 1983.
5. Consultant, U.S. Information Agency, 1982.
6. Batterymarch Fellowship Selection Committee, 1989.

Other Consulting Activity:

1. Consultant, Mellon Bank, 1972.
2. Consultant, Pechiney, UGINE, Kuhlman, 1974.
3. Consultant, McKenna and Fitting, 1977.
4. Consultant, American Telephone and Telegraph Co., 1977-81.
5. Consultant, Gottlieb, Locke and Leeds, 1978.
6. Consultant, Morris and Campbell, 1978.
7. Consultant, Occidental Petroleum, 1979.
8. Consultant, Edper Equities, 1979.
9. Consultant, Hogan and Hartson, 1980.
10. Consultant, Howard Hughes Medical Institute, 1980-85.
11. Consultant, O'Melveny and Myers, 1981, 1985.
12. Consultant, Irell and Manella, 1981.
13. Consultant, Fulop and Hardee, 1982-83.
14. Consultant, Morgan, Stanley, 1984.
15. Consultant, Southern California Edison, 1984-86.
16. Board of Directors, Dimensional Fund Advisors, 1984-85.
17. Scientific Advisory Board, Wells Fargo Investment Advisors, 1984-86
18. Board of Directors, UCLA Building Authority, 1984-86.
19. Consultant, Sidley and Austin, 1985-88.
20. Consultant, Davis, Polk, and Wardwell, 1986-87.

21. Consultant, JP Morgan, 1995-97.
22. Consultant, Freddie Mac, 2000-2002, 2005.
23. Consultant, AARP, 2002.
24. Consultant, The Heritage Foundation, 2004
25. Consultant, Mintz and Levin, 2008
26. Consultant, HRH Nordbank, 2011
27. Board of Directors, Western Asset Management Capital Corporation, 2012-

Publications:

Books:

1. Roll, R., *The Behavior of Interest Rates: An Application of the Efficient Market Model to U.S. Treasury Bills*, 1969 Irving Fisher Award, New York: Basic Books, Inc., 139 pp. (1970).
2. Roll R. and Solnik, B., *Systeme Monetaire International et Risque de Change*, Paris: Economica, 146 pp. (1978).
3. Roll, R., *Nominal Interest Rates and Loan Volume with Heterogeneous Beliefs*, Salomon Center of New York University, Series on Financial Markets, Institutions, and Instruments, Blackwell, (1997).
4. Chordia, T., R. Roll, and A. Subrahmanyam, *Common Determinants of Liquidity and Trading*, Association for Investment Management Research, (2001.)

Chapters in Books:

1. Farber, A., Roll, R. and Solnik, B., An Empirical Study of Risk Under Fixed and Flexible Exchange, *Stabilization of the Domestic and International Economy*, Brunner, K. and Meltzer, Allan H. (eds.), supplement to *Journal of Monetary Economics*, Volume 5, 235-265, Amsterdam: North-Holland (1977).
2. Roll, R., Violations of Purchasing Power Parity and Their Implications for Efficient International Commodity Markets, 133-176 in *International Finance and Trade*, 1, Sarnat, M. and Szego, G.P. (eds.), Cambridge, MA: Ballinger (1979).
3. Roll, R., Testing a Portfolio for Ex Ante Mean/Variance Efficiency, 135-149 in *Studies in the Management Sciences*, Elton, E. and Gruber, M. (eds.), Amsterdam: North-Holland Publishing Company (1979).
4. Roll, R., Principles of Valuation, 439-442 in *Geld, Banken und Versicherungen*, Göppl, H., and Henn, Rudolf, (eds.), Athenäum (1981).
5. Hinich, M.J. and Roll, R., Measuring Nonstationarity in the Parameters of the Market Model, 1-51, in *Research in Finance*, Vol. III, Levy, H. (ed.), JAI Press, Inc. (1981).

6. Roll, R., Collateralized Mortgage Obligations: Characteristics, History, Analysis, 7-43 in *Mortgage-Backed Securities*, Fabozzi, F. (ed.), Chicago: Probus (1987).
7. Roll, R., Empirical Evidence on Takeover Activity and Shareholder Wealth, 241-252 in *Knights, Raiders and Targets*, Coffee, J., Rose-Ackerman, S. and Lowenstein, L. (eds.), New York: Oxford University Press (1987).

Reprinted in *Modern Finance & Industrial Economics*, Papers in Honor of J. Fred Weston, Copeland, T. (ed.), New York: Basil Blackwell, 74-91 (1987).

8. Pinkus, S.M., Hunter, S.M. and Roll, R., An Introduction to the Mortgage Market and Mortgage Analyses, 187-233 in *Advances in Bond Analysis and Portfolio Strategies*, Fabozzi, F. and Garlicki, T.D. (eds.), Chicago: Probus (1987).
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10. Roll, R., Weather, in *The New Palgrave Dictionary of Money and Finance*, Newman, P., Milgate, M. and Eatwell, J. (eds.), The Stockton Press (1992).
11. Roll, R., Investment Banking, in *The New Palgrave Dictionary of Money and Finance*, Newman, P., Milgate, M. and Eatwell, J. (eds.), The Stockton Press (1992).
12. Burmeister, E., Roll, R., and Ross, S., A Practitioner's Guide to Arbitrage Pricing Theory, in Institute of Chartered Financial Analysts, *A Practitioner's Guide to Factor Models*, 1994.
13. Roll, R., Style Return Differentials: Illusions, Risk Premiums, or Investment Opportunities?, in *The Handbook of Equity Style Management*, Coggin, T., and F. Fabozzi, (eds.), Frank J. Fabozzi Associates, 1995.
14. Roll, R., Weighting the Components of the *Index of Economic Freedom*, in Miles, M., E. Feulner, and M. O'Grady, (eds), *2004 Index of Economic Freedom*, 2004.
15. Roll, R., Economic and Political Freedom: The Keys to Development, in Miles, M., (ed), *The Road to Prosperity: The 21st Century Approach to Economic Development*, Heritage Books, 2004.

Professional Journal Articles:

1. Roll, R., Interest-Rate Risk and the Term Structure of Interest Rates: Comment, *Journal of Political Economy* (December 1966).
2. Fama, E. and Roll, R., Some Properties of Symmetric Stable Distributions, *Journal of the American Statistical Association*, 63, 817-836 (September 1968).
3. Fama, E., Fisher, L., Jensen, M. and Roll, R., The Adjustment of Stock Prices to New Information, *International Economic Review*, 10, 1, 1-21 (February 1969).

4. Geisel, M., Roll, R. and Wettick, R., The Effectiveness of State and Local Regulation of Handguns: A Statistical Analysis, *Duke Law Journal*, 1969, 647-676 (August 1969).
5. Roll, R., Bias in Fitting the Sharpe Model to Time-Series Data, *Journal of Financial and Quantitative Analysis*, 4, 3, 271-289 (September 1969).
6. Roll, R., Investment Diversification and Bond Maturity, *Journal of Finance*, 26, 1, 51-66 (March 1971).
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16. Roll, R., Rational Response to the Money Supply, *Journal of Political Economy*, 82, 3, 587-597 (May/June 1974).
17. Roll, R. and Solnik, B., A Pure Foreign Exchange Asset Pricing Model, *Journal of International Economics*, 7, 161-179 (1977).
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31. Roll, R., The Turn-of-the-Year Effect and the Return Premia of Small Firms, *Journal of Portfolio Management*, 9, 18-28 (Winter 1983).

32. Geske, R. and Roll, R., The Fiscal and Monetary Linkage Between Stock Returns and Inflation, *Journal of Finance*, 38, 1, 1-33 (March 1983).
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36. Roll, R., After-Tax Investment Results from Long-Term vs. Short-term Discount Coupon Bonds, *Financial Analysts Journal*, 43-54 (January/February 1984).
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46. Roll, R., La Theorie Financiere et les Affaires, *Politique Economique*, 14-19 (October 1986).
47. Queen, M., and Roll, R., Firm Mortality: Using Market Indicators to Predict Survival, *Financial Analysts Journal* (May/June 1987).
48. Roll, R., Adjustable Rate Mortgages: The Indexes, *Housing Finance Review* 6, 2, 137-152 (Summer 1987).
49. Roll, R., Recent Innovations in Collateralized Mortgage Obligations, *Housing Finance Review* (Winter 1988).
50. Bartholomew, L., Berk, J. and Roll, R., Adjustable Rate Mortgages: Prepayment Behavior, *Housing Finance Review*, 7, 1, 31-46 (Spring 1988).
51. Berk, J. and Roll, R., Adjustable Rate Mortgages: Valuation, *Journal of Real Estate Finance and Economics*, 1, 2, 163-184 (June 1988).
52. Roll, R., R^2 , *Journal of Finance*, 43, 2, 541-566 (July 1988). (1987 Presidential Address to the American Finance Association).

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54. Richard, S.F. and Roll, R., Prepayments on Fixed-Rate Mortgage-Backed Securities, *Journal of Portfolio Management*, 73-82 (Spring 1989).
55. Roll, R., Price Volatility, International Market Links, and Their Implications for Regulatory Policies, *Journal of Financial Services Research*, 3, 211-246 (December 1989).
56. Roll, R., La Gestion del Riesgo en Las Instituciones de Ahorro, Mas Alla del Desfase de Duracion (trad. Amadeo Reynes Pascual), *ICE Revista de Economia*, 688, 218-241 (Diciembre 1990).
57. Roll, R. and Ross, S.A., Impôt Progressif et Inégalité du Revenu, *FINECO*, 1, 1, 107-130 (Automne 1991).
58. Roll, R., Industrial Structure and The Comparative Behavior of International Stock Market Indices, *Journal of Finance*, 47, 1, 3-41 (March 1992).
59. Roll, R., A Mean/Variance Analysis of Tracking Error, *Journal of Portfolio Management*, 13-22 (Summer 1992).
60. Roll, R., S.A. Ross, On the Cross-Sectional Relation Between Expected Returns and Betas, *Journal of Finance*, 101-121, (March 1994).
61. Roll, R., What Every CFO Should Know About Scientific Progress in Financial Economics: What is Known, and What Remains to be Resolved, *Financial Management*, 69-75, (Summer 1994).
62. Roll, R., An Empirical Survey of Indonesian Equities, 1985-1991, *Pacific Basin Finance Journal*, (Summer 1995).
63. Roll, R., U.S. Treasury Inflation-Indexed Bonds: The Design of a New Security, *Journal of Fixed Income*, 9-28, (December, 1996).
64. Pedrosa, M. and R. Roll, Systematic Risk in Corporate Bond Credit Spreads, *Journal of Fixed Income*, (December, 1998).
65. Chakrabarti, Rajesh, and R. Roll, Learning from others, reacting, and market quality, *Journal of Financial Markets*, (May, 1999).
66. Roll, R., and Shu Yan, An Explanation of the Forward Premium “Puzzle”, *European Financial Management*, (June, 2000), 121-148.
67. Chordia, T., R. Roll, and A. Subrahmanyam, Commonality in Liquidity, *Journal of Financial Economics*, 56, (April, 2000), 3-28.

Reprinted in *Stock Market Liquidity*, F-S. Lhabitant and G. Gregoriou, eds, John Wiley & Sons, (2008).

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69. Chordia, T., R. Roll and A. Subrahmanyam, Co-Movements in Bid-Ask Spreads and Market Depth, *Financial Analysts Journal* 56, (September/October, 2000), 23-27.
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71. Chordia, T., Roll, R., and Subrahmanyam, A., Order Imbalance, Liquidity and Market Returns, *Journal of Financial Economics* 65, (July 2002), 111-130.

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73. Roll, R., Benefits to Homeowners from Mortgage Portfolios Retained by Fannie Mae and Freddie Mac, *Journal of Financial Services Research* 23, 1 (February 2003), 29-42.
74. Roll, R., and J. Talbott, Political Freedom, Economic Liberty, and Prosperity, *Journal of Democracy* 14, 3, (July, 2003), 75-89.
75. Chordia, T., R. Roll, and A. Subrahmanyam, Determinants of Daily Fluctuations in Liquidity and Trading Activity, *Cuadernos de Economía* 40, 121 (December 2003), 728-751.
76. Roll, R., Empirical TIPS, *Financial Analysts Journal*, 60, 1 (January/February 2004), 31-53. (Winner of the Graham and Dodd Award for the best paper of the year, 2004.)
77. Lee, Y., Liu, Y., Roll, R., and Subrahmanyam, A., Order Imbalances and Market Efficiency: Evidence from the Taiwan Stock Exchange, *Journal of Financial and Quantitative Analysis*, 39, 2 (June, 2004), 327-341.
78. Atkas, N., E. De Bodt, and Roll, R., Market Response to European Regulation of Business Combinations, *Journal of Financial and Quantitative Analysis* 39, 4 (December, 2004), 731-757.
79. Cornell, B., and Roll, R., A Delegated Agent Asset Pricing Model, *Financial Analysts Journal* 61, 4 (January/February, 2005), 57-69. (Winner of a Graham and Dodd Scroll for Excellence, 2005.)
80. Elayan, F., Pukthuanthong, K., and Roll, R., Investors Like Firms That Expense Employee Stock Options AND They Dislike Firms That Fail to Expense, *Journal of Investment Management*, 3, 1 (First Quarter 2005), 75-98.
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82. Chordia, T., Roll, R., and Subrahmanyam, A., Evidence on the Speed of Convergence to Market Efficiency, *Journal of Financial Economics* 76, 2 (May 2005), 271-292.

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93. Roll, R., Schwartz, E., and Subrahmanyam, A., O/S, The Relative Trading Activity in Options and Stock, *Journal of Financial Economics* 91, 1 (April 2010), 1-17.
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4. Roll, R., The Capital Asset Pricing Model: Sixteen Years Later, *Proceedings of the Seminar on the Analysis of Security Prices*, 24, 1 (May 1979), Center for Research on Securities Prices, The University of Chicago.
5. Roll, R., Principles of Valuation, 439-442, *Geld, Banken und Versicherungen*, Band I, Göppel, H. and Henn, R. (eds.), Königstein, Athenäum (1981).

6. Roll, R. The Contributions of Merton Miller to Financial Practice, 117-128, in *Geld, Banken, und Versicherungen*, Band III, Heilmann, W.R. (ed.), VVW Karlsruhe (1990).
7. Roll, R., Volatility of U.S. And Japanese Stock Markets: A Symposium, 25-35 in *Journal of Applied Corporate Finance*, The University of Michigan (Spring 1992).

Book Reviews:

1. Review of *Mathematics and Computers in Soviet Economic Planning*, Hardt, J.P., et. al., in *Journal of Financial and Quantitative Analysis*, 3, 363-366 (September 1968).
2. Review of *Strategies and Rational Decisions in the Securities Options Market*, Malkiel, G. B., and Quandt, L.E., in *Journal of the American Statistical Association* (1970).
3. Review of *An Introduction to Risk and Return from Common Stock*, Brealey, R.A., in *Journal of Financial and Quantitative Analysis*, 5, 501-503 (December 1970).
4. Review of *Essays on Interest Rates*, Guttentag, J.M., and Cagan, P., in *Econometrica* (1972).
5. Review of *New Series on Home Mortgage Yields Since 1951*, Guttentag, J.M., and Beck, M., in *Journal of the American Statistical Association*, 67, 247 (March 1972).
6. Review of *Les Marches Financiers et la gestion de porte-feuille*, Jacquillat, B., and Solnik, B., in *Analyse Financiere* (1975).
7. Review of *Numerical Techniques in Finance*, Benninga, S., in *Journal of Finance*, 45, 4, 1347-1349 (September 1990).

Working Papers:

1. Roll, R. and Ross, S. A., Progressive Taxation and the Inequality of After-Tax Income, #5-80, 32 pp. (May 1980; Revised January 1983), french language version printed as Impôt Progressif et Inégalité du Revenu, *FINECO*, 1, 1, 107-130 (Automne 1991).
2. Roll, R., Capital Formation, Innovation, and Tax Policy: The Situation of Italy, #1-85, 14 pp. (January 1985).
3. Roll, R., The Misuse of Duration and Convexity (August 1986), Spanish language version printed as La Gestion del Riesgo en Las Instituciones de Ahorro, Mas Alla del Desfase de Duracion (trad. Amadeo Reyes Pascual), *ICE Revista de Economia*, 688, 218-241 (Diciembre 1990).
4. Roll, R., Managing Risk in Thrift Institutions: Beyond the Duration Gap, #13-88, 27 pp. (April 1987).

5. Roll, R., and J. Talbott, Why Many Developing Countries Just Aren't, (November, 2001). Available in Spanish as "Países en Vías de Desarrollo no Logran Desarrollarse," from The Heritage Foundation in the series: Proyecto Libertad Económica.
6. Roll, R., and Talbott, J., The End of Class Warfare: An Examination of Income Disparity, (April, 2005), published in French as "Revenue Inégal et Lutte des Classes: L'Angle Positif," *FINECO* 15 (2005), 1-29.
7. Pukthuanthong-Le, K., and Roll, R., Real Interest Rates, Inflation, and Real Estate Returns: A Comparison of the U.S. and Canada, (October, 2007).
Winner of Best Paper Award, International Conference on Economics, Finance and Accounting, Taipei, June 2009.
8. Geske, R., Roll, R., and Zhang, Y., Alternative Variance Estimators for Pricing Options, (May, 2008).
9. Roll, R., and J. Fred Weston, Average and Marginal Tobin's q as Indicators of Future Growth Opportunities, Expected Return and Risk, (December 2008).
10. De Bodt, E., and Roll, R., Rival Reactions, (December, 2013.)
11. Berger, D., Pukthuanthong, K., and Roll, R., On Valuing Human Capital and Relating It to Macroeconomic Conditions, (February, 2014.)
12. Pukthuanthong, K., and Roll, R., A Protocol for Factor Identification, (February, 2014.)
13. De Bodt, E., Cousin, J-G., and Roll, R., The Hubris Hypothesis: Empirical Evidence, (July, 2014).
14. De Bodt, E., Bollaert, H., Grandin, P., and Roll, R., Regulating CEO Narcissism, (February, 2015.)
15. De Bodt, E., Cousin, J-G., and Roll, R., Acquirer Skills or Attrition Bias? (April, 2015.)
16. Levy, M., and Roll, R., Seeking Alpha? It's a Bad Guideline for Portfolio Optimization, (April, 2015.)
17. Bongaerts, D., Roll, R., Rösch, D., van Dijk, M., and Yuferova, D., The Propagation of Shocks Across International Equity Markets: A Microstructure Perspective, (July, 2015.)
18. Pukthuanthong, K., and Roll, R., Agnostic Tests of Stochastic Discount Factor Theory, (July, 2015.)
19. Jegadeesh, N., Noh, J., Pukthuanthong, K., Roll, R. and Wang, J., Empirical Tests of Asset Pricing Models with Individual Assets: Resolving the Errors-in-Variables Bias in Risk Premium Estimation, (July, 2015.)

Abstracts:

1. Hinich, M. and Roll, R., Abstract Measuring Non-Stationarity in the Stochastic Process of Asset Returns, *Journal of Financial and Quantitative Analysis*, 10, 4, p. 687 (1975).

2. Roll, R., Asset Pricing Theory: General Issues and Recent Results (Extended Abstract), *III Symposium on Operations Research*, Oettli, W. and Steffans, F. (eds.), Universität Mannheim, Athenäum (September 1978).

Industry Papers:

1. Roll, R., Current Relative Values of High and Low Coupon GNMMAs, Goldman, Sachs & Co. (March 1986).
2. Roll, R., Collateralized Mortgage Obligations: Characteristics, History, Analysis, Goldman, Sachs & Co. (April 1986).

Printed in *Mortgage-Backed Securities*, Fabozzi, F., (ed.)
Chicago: Probus, 1987.

3. Roll, R., Stripped Mortgage-Backed Securities, Goldman, Sachs & Co., 30 pp. (October 1986).
4. Bartholomew, L., Berk, J. and Roll, R., Adjustable Rate Mortgages: An Introduction, Goldman, Sachs & Co., 19 pp. (November 1986).
5. Roll, R., Adjustable Rate Mortgages: The Indexes, Goldman, Sachs & Co. (December, 1986).

Printed in *Housing Finance Review* (Fall 1987).

6. Roll, R., Recent Innovations in Collateralized Mortgage Obligations, Goldman, Sachs & Co. 44 pp. (January 1987).

Printed in *Housing Finance Review*, 6, 137-152, (Winter 1988).

7. Pinkus, S.M., Hunter, S.M. and Roll, R., An Introduction to the Mortgage Market and Mortgage Analysis, Goldman, Sachs & Co., 41 pp. (February 1987).

Printed in *Advances in Bond Analysis and Portfolio Strategies*,
Fabozzi, F., and Garlicki, T.D. (eds.), Chicago, Probus (1987).

8. Bartholomew, L., Berk, J. and Roll, R., Adjustable Rate Mortgages: Prepayment Behavior, Goldman, Sachs & Co. (February 1987).

Printed in *Housing Finance Review*, 7, 31-46,(Spring 1988).

9. Berk, J. and Roll, R., Adjustable Rate Mortgages: Valuation, Goldman, Sachs & Co. (August 1987).

Printed in *Journal of Real Estate Finance*, 1, 163-184 (June 1988).

Teaching:

Courses Taught at UCLA:

Mgt. 213A	Intermediate Probability and Statistics, Fall 1977, Fall 1978
Mgt. 213B	Empirical Statistical Modelling, Winter 1989
Mgt. 230	Theory of Finance, 1979
Mgt. 231D	Mergers, Acquisitions and Restructuring, Spring 2013
Mgt. 232A	Security Analysis and Portfolio Management, Summer 1978, Fall, 1997
Mgt. 232B	Fixed Income Markets, Spring 1988, Winter 1989, Spring 1995, Spring 1997, Spring 2001
Mgt. 233A	Money and Capital Markets, Fall 1976, Winter 1977, Spring 1977, Fall 1978, Winter 1978, Spring 1980, Spring 1981
Mgt. 233B	Financial Institutions, Fall 1976, Winter 1977, Winter 1981, Fall 1981, Spring 1984
Mgt. 234A	International Financial Markets, Fall 1992, Spring 1993, Fall 1993, Fall 1994, Spring 1996, Spring, 1999, Fall, 1999, Spring 2000, Fall 2000, Spring 2002, Spring 2004, Spring 2005, Spring 2006, Spring 2007, Spring 2008, Spring 2009, Spring 2010.
Mgt. 237E	Empirical Methods in Finance (MFE), Fall, 2012
Mgt. 239B	Doctoral Seminar in Finance, Winter 1984, Winter 1985
Mgt. 239B	Finance Research for MBAs, Fall 2012
Mgt. 239C	Doctoral Course on Empirical Research in Finance, Spring 1978, Spring 1980, Spring 1981, Spring 1982, Spring 1983, Fall 1999, Spring 2002, Spring 2004, Spring 2005, Spring 2010.
Special	Quantitative Finance, UCLA/ISB (Hyderabad) joint certificate program in financial engineering, Summer, 2008
Special	Quantitative Portfolio Management, UCLA/Fudan (Shanghai) joint program in financial engineering, October, 2011
Special	Quantitative Portfolio Management, UCLA/Fudan (Shanghai) joint program in financial engineering, September, 2012

Courses taught at Caltech

BEM 103	Introduction to Finance, Fall, 2014
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Chairmanships of Doctoral Committees:

1. James Scott, 1972, Columbia University, Professor
2. John Long, 1972, University of Rochester, Professor.
3. Michel Levasseur, 1975, Université de Lille, Professeur.
4. Nai-fu Chen, 1981, University of California, Irvine, Professor.

5. Ashok Korwar, 1982, Indian Institute of Management, Professor.
6. Peter Bossaerts, 1986, University of Melbourne, Professor.
7. Aswath Damodaran, 1986, New York University, Professor.
8. Laura Field, 1996, Pennsylvania State University, Professor.
9. Rajesh Chakrabarti, 1999, Indian School of Business, Assistant Professor.
10. Pansy Lin, 2000, UCLA (Fink Center Executive Director, 2008-12)
11. Shu Yan, 2000, University of South Carolina, Professor.
12. Belén Villalonga, 2001, New York University, Professor.
13. Amit Goyal, 2002, Swiss Finance Institute, Professor.
14. Laura Frieder, 2004, Purdue University, Assistant Professor.
15. Jason Hsu, 2004, Research Affiliates
16. Yuzhao Zhang, 2008, Oklahoma State University, Assistant Professor
17. Konark Saxena, 2011, University of New South Wales, Assistant Professor
18. Phillip Wool, 2013, State University of New York at Buffalo, Assistant Professor

Membership of Doctoral Committees:

1. Ramon Botas Vigon, Economics, 1978
2. Frederick Furlong, Economics, 1978
3. Robert Stillman, Economics, 1978
4. Michael Melvin, Economics, 1980
5. Kuldeep Shastri, 1981
6. Gertrud Fremling, Economics, 1983.
7. David Cary, 1983
8. Maggie Queen, 1988
9. Erik Sirri, 1989
10. Paul Velapat, 1994
11. Gordon Delianedes, 2000
12. Javier Biscarri, 2001
13. Shingo Goto, 2002
14. Selale Tuzel, 2004
15. Feifei Li, 2004
16. Ehud Peleg, 2008
17. Emre Erkut, 2009, (Rand Graduate School)
18. Alberto Plazzi, 2010
19. Florian Shultz, 2012

Awards and Honors:

1. Irving Fisher Award for the Best American Dissertation in Economics, 1968.
2. Third Prize, The Institute for Quantitative Research in Finance paper competition, 1980.

3. Second Prize, The Institute for Quantitative Research in Finance paper competition, 1983.
4. Distinguished Scholar Award, Eastern Finance Association, 1988.
5. Graham & Dodd Award for Best Financial Writing, Financial Analysts Federation and Institute of Chartered Financial Analysts, 1988, 1990, and 2004.
6. Fellow of The Econometric Society, 1989.
7. Leo Melamed Prize for outstanding scholarship by a business school Professor, 1990.
8. *Doctor Honoris Causa*, Universität Karlsruhe, Germany, 1995.
9. *Doctor Honoris Causa*, Université de Lille, France, 1998.
10. Distinguished Scholar Award, Southern Finance Association, 1999
11. Honorary Fellow of the European Institute for Advanced Study in Management, 1999.
12. Fellow of the American Finance Association, 2000
13. Fellow of the Financial Management Association, 2000
14. DFA/Fama Award for the best paper in the *Journal of Financial Economics* during 2000.
15. Roger F. Murray Prize, The Institute for Quantitative Research in Finance, 2001.
16. Nicholas Molodovsky Award for outstanding contributions to the profession, Association for Investment Management Research, 2002.
17. Winner of a Graham and Dodd Scroll for excellence, *Financial Analysts Journal*, 2005.
18. Named “Financial Engineer of the Year for 2009” by the International Association of Financial Engineers.
19. Winner of the Harry Markowitz prize for the best paper published during 2012 in the *Journal of Investment Management*, “A New Perspective on The Validity of The CAPM: Still Alive and Well.”
20. Winner of the Bernstein-Fabozzi/Jacobs-Levy award for the best paper published during 2013 in the *Journal of Portfolio Management*, “Volatility, Correlation, and Diversification in a Multi-Factor World.”
21. Winner of the Ross Best Paper Award for 2013 in *Finance Research Letters*, “Development and Freedom as Risk Management.”
22. Dean’s Award for Mentoring Doctoral Students, 2014, UCLA Anderson.
23. Winner of the Onassis Prize for Finance, 2015.

Contracts, Grants, Fellowships:

1. Principal Investigator, National Science Foundation, Economics of Asset Pricing, 1973.
2. Principal Investigator (with R. Geske), Institute for Quantitative Research in Finance, Option Pricing, 1982.
3. Principal Investigator, Columbia Center for the Study of Futures Markets, Information Processing in the Futures Market, 1983.
4. Principal Investigator, Federal Home Loan Bank Board, Risk Management in Thrift Institutions, 1985-86.
5. Principal Investigator, Mid-America Institute for Public Policy Research, The International Crash of October, 1987.

6. Co-Principal Investigator, Association for Investment Management Research, Common Determinants of Liquidity, 2000.
7. Co-Principal Investigator, UCLA Ziman Center for Real Estate, Real Interest Rates, Inflation, and Real Estate Returns: A Comparison of the U.S. and Canada, 2007.
8. Co-Principal Investigator, Center for International Business and Economic Research, UCLA, 2009, 2010, 2011.
9. Co-Principal Investigator, Global Association of Risk Professionals, 2009.

Membership in Scholarly and Professional Societies:

1. Western Finance Association, 1971-
Board of Directors, 1980-82
2. American Finance Association, 1972-
Board of Directors, 1979-80
Vice-President, 1985
President-Elect, 1986
President, 1987
3. American Statistical Association, 1972-
4. European Finance Association, 1975-
5. Association Française de Finance, 1988-

Editorial Service:

1. *Journal of Financial and Quantitative Analysis*, Associate Editor, 1972-76.
2. *Journal of the American Statistical Association*, Associate Editor, 1973-77.
3. *Journal of Financial Economics*, Associate Editor, 1974-93.
4. *Journal of Finance*, Associate Editor, 1975-2000
5. *Management Science*, Associate Editor, 1978-79.
6. *American Economic Review*, Associate Editor, 1978-80, 1986-93.
7. *Journal of International Money and Finance*, Associate Editor, 1981-
8. *Finance*, (Journal of The French Finance Association), Associate Editor, 1982-
9. *FINECO*, (Finance Journal of French Canada), 1993-

Reviewer of manuscripts for all of the above journals plus *Journal of Banking and Finance*, *Pacific Basin Finance Journal*, *Journal of Empirical Finance*, *Econometrica*, *Journal of Political Economy*, *Journal of Business*, *Journal of Business and Economic Statistics*, *Journal of the American Real Estate and Urban Economics Association*, *Journal of Statistical Computation and Simulation*, *The Engineering Economist*, *European Economic Review*, *Review of Financial Studies*, *Journal of Real Estate Finance and Economics*, *European Journal of Operations Research*, *Financial Management*, *Journal of Portfolio Management*, *Journal of Fixed Income*, *Journal of Money, Credit and Banking*.

10. Editor of the *International Library of Critical Writings in Financial Economics*, Edward Elgar Publishing, 1996-present; 37 volumes have appeared thus far covering 16 different sub-areas of finance.

Academic Lectures:

Scholarly papers presented at Alabama, Alberta (Canada), Arizona, Aix-Marseilles (France), Banking Institute of China (Taiwan), Beijing Institute of Foreign Trade (China), Bergamo (Italy), Boston, Butaré (Burundi), British Columbia (Canada), California Berkeley, California Davis, California Irvine, California Riverside, California Santa Barbara, California State Fullerton, Carnegie-Mellon, Chicago, Colorado, Columbia, Dartmouth, Duke, École National d'Administration (Togo), Fudan (Shanghai), Georgetown, Georgia Tech, Grenoble (France), Harvard, Hebrew (Jerusalem), Hong Kong Science and Technology, Illinois, Indian School of Business (Hyderabad), Indiana, ISTCE Lisbon (Portugal), ITAM (Mexico), Kansas State, Karlsruhe (Germany), Konstanz (Germany), Lausanne (Switzerland), Laval (Quebec), Lille (France), London Business School, London School of Economics, Lugano (Switzerland), Mannheim (Germany), Massey (New Zealand), MIT, McGill (Canada), Miami, Michigan, Minnesota, Missouri, Nanyang Technological University (Singapore), National Taiwan, National Sun-Yat Sen, (Taiwan), New York, New South Wales (Sydney), Ohio State, Oklahoma, Otago (New Zealand), Ottawa (Canada), Paris Sciences-Po, Pennsylvania, Pennsylvania State, Princeton, Purdue, Quebec at Montréal, Queens (Canada), Rochester, Rutgers, Shanghai Institute of Foreign Trade (China), South Australia (Adelaide), Southern Methodist, Southern California, Stanford, Tasmania (Australia), Tennessee, Texas, Texas A&M, Tokyo, Toledo, Toronto, Toulouse (France), Tulane, Utah, Vanderbilt, Victoria (New Zealand), Vienna, Virginia Tech, Washington, Washington State, Wisconsin, Wyoming, Yale.

Lectures to Financial Organizations and Practitioner Audiences:

1. Institutional Investor Institute, Chief Investment Officers Roundtable, Boca Raton, Florida, November 1979.
2. Center for Research in Securities Prices, Chicago, Illinois, May 10, 1979.
3. Quantitative Discussion Group (Boston Financial Analysts), January 7, 1980.
4. Institute for Quantitative Research in Finance, Silverado (Napa Valley), April 29, 1980.
5. Institutional Investor Institute, Annual Pensions Conference, New York, January 9, 1981.
6. San Francisco Society of Security Analysts, San Francisco, February 17, 1981.
7. Financial Federation of Canada, Banff, Alberta, February 24-25, 1981.
8. Atlanta Society of Financial Analysts, Atlanta, June 24, 1981.
9. Financial Analysts Association, Wellington, New Zealand, August 20, 1982.
10. Investment Technology Forum, New York, April 21, 1983.
11. Investment Technology Forum and Security Analysts Society, Chicago, May 19, 1983.
12. Institute for Quantitative Research in Finance, Colorado Springs, October 11, 1983.

13. First Interstate Bancorp Seminar, December 7, 1983.
14. Wells Fargo Investment Advisors Client Conference, August 15, 1984.
15. Sponsored Lecture Tour to Francophone Africa on behalf of U.S. Information Agency. Lectures (in French) on
 - a) The International Monetary System
 - b) Foreign Investment Risk;
 To: Chamber of Commerce and Ministry of Finance, Malagasy Republic, Antananarivo, Madagascar, October 2-3, 1984; Ministry of Finance, Bujumbura, Burundi, October 9, 1984; Central bank of Rwanda, Kigali, Rwanda, October 11, 1984; Bank for African Development, Ministry of Finance, Lomé, Togo, October 17-18, 1984.
16. Tax Policy, Innovation, and Capital Formation, Conference on High Technology, Bari, Italy, December 11-12, 1984.
17. Empirical Evidence on Takeover Activity and Shareholder Wealth, Columbia Law School Conference on Takeovers and Contests for Corporate Control, New York, November 13-15, 1985.
18. London Pension Fund Seminar, Goldman, Sachs & Co., London, U.K., February 6, 1986.
19. Conference on Buy-and-Write Mutual Funds, Goldman, Sachs & Co., New York, February 10, 1986.
20. Mortgage-Backed Securities Seminar, Ameritech, Chicago, February 21, 1986.
21. The Academic Invasion of Wall Street, Financial Analyst Federation Bond Seminar, New York, March 12, 1986.
22. Mortgage-Backed Securities: Current Issues and Research Targets, at the Berkeley Program in Finance Conference on Current Issues in Fixed Income Management, Lake Tahoe, March 16-19, 1986.
23. Collateralized Mortgage Obligations, Seminar on the Analysis of Securities Prices, C.R.S.P., Chicago, May 8, 1986.
24. Applying the Arbitrage Pricing Theory, State of Wisconsin, Public Service Commission (attended by all regulated utilities in Wisconsin), May 9, 1986.
25. Hedging Economic Risks, California Public Employees Retirement System Conference on Portfolio Management, Santa Monica, August 1986.
26. Portfolio Insurance, Collins Associates Client Conference, Los Angeles, September 5, 1986.
27. Valuing Adjustable Rate Mortgages, Institute of International Research Conference on Investing and Trading in Mortgage-Backed Securities, Los Angeles, September 24-25, 1986.
28. Financial Theory in Practice, Conference Sponsored by Le Figaro and Politique Economique, Paris, October 9, 1986.
29. Future Prospects: CMOs and Other Developments in Mortgage-Backed Securities, Institutional Investor, Annual Fixed Income Conference, New York, October 30, 1986.
30. New Product Development and Considerations, The American Banker/Bond Buyer Conference on Investing in Mortgage-Backed Securities: Portfolio Strategies and Risk Management, New York, October 16, 1986; San Diego, November 17, 1986.

31. Mortgage-Backed Securities, Investment Technology Association, New York, November 20, 1986.
32. Floating Rate CMOs, Goldman, Sachs Conference for Fixed Income Investors, London, January 19, 1987.
33. Asset Allocation, Goldman, Sachs Conference for Portfolio Managers, Tokyo, February 2, 1987; Singapore, February 5, 1987; Hong Kong, February 6, 1987.
34. Mortgage Valuation Strategies, Investing and Trading in Mortgage- Backed Securities, Institute of International Research Conference, New York, February 24, 1987.
35. Mortgage Derivative Products, Mid-Winter Conference of S & L Executives, Park City, Utah, March 2, 1987.
36. Research on Wall Street, Financial Analysts Federation Annual Bond Conference, New York, March 12, 1987.
37. Mortgage-Backed Securities, Financial Analysts Federation, Philadelphia, May 11, 1987.
38. APT Factor Risk, Berkeley Program in Finance, Silverado, California, September 14, 1987.
39. Innovations in Asset-Backed Securities, Federal Reserve Bank of New York Annual Conference for Foreign Central Bankers, New York, October 16, 1987.
40. Capital Budgeting, International Institute of Research, San Diego, October 23, 1987.
41. The International Crash of October, 1987, Collins Associates Client Conference, Melbourne, Australia, April 18, 1988.
42. Canadian Mortgage Prepayments, Waterloo Conference on Mortgage- Backed Securities, Toronto, May 6, 1988.
43. The International Crash of October, 1987, UCLA Partners Program, Los Angeles, May 19, 1988.
44. The International Crash of October 1987, New Zealand Conference on the Crash and its Aftermath, Wellington, August 16, 1988.
45. Quantitative Risk Control, Boston Society of Security Analysts, October 7, 1988.
46. CMO Planned Amortization Classes, Capital Management Sciences 1988 Fixed Income Conference, La Quinta, CA, October 24, 1988.
47. Asset Securitization in the U.S. and Europe, Compagnie Bancaire, Paris, February 24, 1989.
48. Changing Risk Premia in the U.S. and Japan, Berkeley Program in Finance, April 4, 1989.
49. Stock Market Volatility, Columbia Conference on Markets and Regulation, May 12, 1989.
50. Global Risk Management, Conference on Globalization of Financial Markets, Kuwait, October 7, 1989.
51. Volatility and Regulation, Los Angeles Society of Security Analysts, March 28, 1990.
52. Industrial Structure and International Equities, International Management Institute, Palm Beach, February 22, 1993; International Management Institute, Phoenix, April 30, 1993.
53. Keynote Address, Financial Management Association, October 13, 1993.

54. Keynote Address, Pacific Capital Markets Finance Conference, Jakarta, Indonesia, July 7, 1994.
55. Style Investment Returns, University of Karlsruhe, Germany, July 7, 1995.
56. Keynote Address, Capital Markets Seminar, Securities and Exchange Board of India, Goa, August 26, 1995
57. Keynote Address, Northern Finance Association, Québec, September, 1996.
58. A Mean/Variance Analysis of Tracking Error, Institutional Investor Institute Annual Consultants' Roundtable, Atlanta, September, 1996.
59. What Every CFO Should Know About Research in Finance Over the Last 25 Years, European Institute for Advanced Study of Management 25th Jubilee Symposium, Brussels, October, 1996.
60. A Mean/Variance Analysis of Tracking Error, Institutional Investor Institute Chief Financial Officers' Conference, Washington, D.C., February, 1997.
61. Using Derivatives for Risk Reduction in Commercial Banks, Annual Conference, Asociación de Banqueros de México, Cancún, March, 1997.
62. Keynote Address, Asia/Pacific Finance Association Annual Meetings, Kuala Lumpur, Malaysia, July, 1997.
63. Keynote Address, Annual Conference on Financial Theory, National Sun-Yat Sen University, Kaohsiung, Taiwan, December, 1997.
64. Ce que chaque directeur financier devrait connaître des progrès scientifiques en finance : ce qui est connu et ce qui reste à découvrir, Lille, France, July, 1998.
65. Keynote Address, European Financial Management Association, Paris, June, 1999.
66. Keynote Address, International Finance Conference, Hamman-Sousse, Tunisia, March 2001.
67. Market Liquidity and Trading Activity, The Q-Group, Wesley Chapel, Florida, April 2001.
68. Facts about risk and return. The Fields Institute, Toronto, Ontario, Canada, September 24, 2001.
69. A Delegated Agent Asset Pricing Model, Association for Investment Management Research Conference, Pasadena, February 11, 2005
70. Keynote Address, Northern Finance Association, Vancouver, Canada, October 1, 2005.
71. Keynote Address, 6th International Finance Conference in Chile, Santiago, May 9, 2006.
72. Keynote Address, Indian School of Business Summer Research Conference in Finance, Hyderabad, August 13, 2006.
73. Keynote Address, Mossin Memorial Conference, Norwegian School of Economics and Business Administration, September 8, 2006.
74. Keynote Address, Australasian Finance Conference, University of New South Wales, Sydney, December 12, 2007.
75. "Rencontres des Économistes," Aix-en-Provence, France, August, 2008.
76. Remembering Mert, Conference in Honor of Merton Miller, Capetown, South Africa, August, 2008.
77. Keynote Address, Conference in Honor of Haim Levy, Jerusalem, August, 2009.
78. Keynote Address, European Finance Association, Bergen, Norway, August, 2009.

79. Keynote Address, Annual Conference of the International Association of Financial Engineers, New York, June, 2010.
80. Nomura Securities Client Conference, Tokyo, Japan, December 2010.
81. MPT Forum, Shonan Village Center Japan, December, 2010.
82. Keynote Address, Australasian Finance Conference, University of New South Wales, Sydney, December, 2011.
83. Keynote Address, European Center for Corporate Control Studies Conference, Nice, March 2012.
84. Keynote Address, Conference on Behavioral Finance, Adelaide, July 2012.
85. Keynote Address, Inquire UK Autumn Seminar, Bath, November 2012.
86. Keynote Address, Southwestern Finance Association Annual Meetings, Albuquerque, March 2013.
87. Keynote Address, Australasian Finance Conference, University of New South Wales, Sydney, December 2013.
88. Keynote Address, Asian Finance Association Annual Conference, Bali, Indonesia, June 2014.