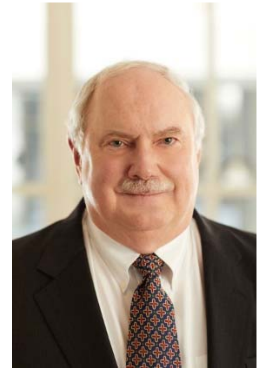
February 2019

G. WILLIAM SCHWERT



Simon School of Business
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CURRENT POSITION:

Distinguished University Professor of Finance and Statistics, University of Rochester, 1998-present. (Gleason Professor of Finance and Statistics, 1986-98, Professor, 1984-86; Associate Professor, 1979-84; Assistant Professor 1976-79).

Research Associate, National Bureau of Economic Research, Asset Pricing Group, 1988-present.

Senior Research Associate, Rochester Center for Economic Research, Department of Economics, University of Rochester, 1984-present.

EDUCATION:

Ph.D., University of Chicago, (Economics, Finance, Econometrics), 1975.

M.B.A., University of Chicago, 1973.

A.B. with Honors (Economics), Trinity College (Hartford, Connecticut), 1971.

TEACHING EXPERIENCE:

University of Rochester, Simon School, 1976-present. Graduate courses in capital markets, corporate finance, corporate control, regression, econometrics, time series analysis, forecasting, and industrial organization.

University of Chicago, Graduate School of Business, Assistant Professor, 1975-1976. Graduate courses in capital markets, time series analysis, and econometrics.

RESEARCH GRANTS:

"Shifting Risk Premia," July 1982-June 1983, Batterymarch Financial Management.

"The Dynamic Behavior of Prices," June 1980-May 1982, National Science Foundation (SES 80-06413).

"The Dynamic Behavior of Prices," June 1978-May 1980, National Science Foundation (SOC 78-04278).

HONORS:

American Finance Association, Fellow, 2019.

Marquis Who's Who Lifetime Achievement Award, 2017

Who's Who in the World (2000-2009) [Marquis].

Who's Who in America (1999-present) [Marquis].

Who's Who in Finance and Business (1989-2009) [Marquis].

Who's Who in the East (1991-present) [Marquis].

Who's Who in American Education (1992-2008) [Marquis].

Who's Who in Economics (2002-present) [Edward Elgar].

ISIHighlyCited.com (2002-present) [Thomson ISI].

Readers' Choice Award (selected by the readers of *European Financial Management*), 2011.

Financial Management Association, Fellow, 2009.

Graham and Dodd Plaque from the Association for Investment Management and Research for the best paper published in the *Financial Analysts Journal* in 1990.

Smith-Breeden Distinguished Paper Prize, *Journal of Finance*, 1990.

The Annual Guide to Public Policy Experts, edited by Robert Huberty and Barbara D. Hohbach, The Heritage Foundation, Washington, D.C. (1991-present).

University Mentor 1982-83, University of Rochester award for scholarship and teaching.

Center for Research in Security Prices Distinguished Research Scholar and visiting Associate Professor of Finance, University of Chicago, 1982.

Beta Gamma Sigma, 1975.

Walgreen Fellowship, 1973-74.

Earhart Fellowship, 1973-75.

Pi Gamma Mu, 1971.

Ferguson prize for best thesis in economics at Trinity, 1971.

PUBLICATIONS:

"Stock Volatility during the Recent Financial Crisis" *European Financial Management*, 17 (2011) 789-805 [previously NBER Working Paper No. W16976]. **Winner of Readers' Choice Award.**

"The Variability of IPO Initial Returns" with Michelle Lowry and Micah Officer, *Journal of Finance*, 65 (April 2010) 425-465 [previously Simon School Working Paper No. FR 06-06; NBER Working Paper No. W12295].

"Is the IPO Pricing Process Efficient?" with Michelle Lowry, *Journal of Financial Economics*, 71 (January 2004) 3-26 [previously available as "Biases in the IPO Pricing Process"; Simon School Working Paper No. FR 01-02; NBER Working Paper No. W8586].

PUBLICATIONS (continued):

"Anomalies and Market Efficiency," Chapter 15 in *Handbook of the Economics of Finance*, eds. George Constantinides, Milton Harris, and René Stulz, North-Holland (2003) 937-972 [previously Simon School Working Paper No. FR 02-13; NBER Working Paper No. W9277].

"IPO Market Cycles: Bubbles or Sequential Learning?" with Michelle Lowry, *Journal of Finance*, 57 (June 2002) 1171-1200 [previously Simon School Working Paper No. FR 00-21; NBER Working Paper No. W7935].

"Stock Volatility in the New Millennium: How Wacky Is Nasdaq?" *Journal of Monetary Economics*, 49 (January 2002) 3-26 [previously NBER Working Paper No. W8436].

"Hostility in Takeovers: In the Eyes of the Beholder?" *Journal of Finance*, 55 (December 2000) 2599-2640 [previously NBER Working Paper No. W7085].

"Stock Market Volatility: Ten Years After the Crash," *Brookings-Wharton Papers on Financial Services*, 1 (1998) 65-114 [previously NBER Working Paper No. W6381].

"Markup Pricing in Mergers and Acquisitions," *Journal of Financial Economics*, 41 (June 1996) 153-192. Summarized in *The C.F.A. Digest*, 25 (Winter 1995) 83-84. [previously Simon School Working Paper No. FR 94-01; NBER Working Paper No. W4863].

"Poison or Placebo? Evidence on the Deterrent Effect of Modern Antitakeover Measures," with Robert Comment, *Journal of Financial Economics*, 39 (September 1995) 3-43. Reprinted in the *Proceedings of the Seminar on the Analysis of Security Prices*, (November 1993). [previously Simon School Working Paper No. FR 93-04; NBER Working Paper No. W4316]. ***JFE* All Star Paper.**

"Securities Transaction Taxes: An Overview of Costs, Benefits and Unresolved Questions," with Paul J. Seguin, *Financial Analysts Journal*, 49 (September/October 1993) 27-35. Reprinted in *Securities Transaction Taxes: False Hopes and Unintended Consequences*, Suzanne Hammond, ed., (Chicago: Catalyst Institute, 1995), 1-26. [previously Simon School Working Paper No. FR 93-08].

"The *Journal of Financial Economics*: A Retrospective Evaluation, 1974-91," *Journal of Financial Economics*, 33 (June 1993) 369-424.

Empirical Research in Capital Markets, G. William Schwert and Clifford W. Smith, Jr., eds. (New York: McGraw-Hill, 1992).

"Heteroskedasticity in Stock Returns," *Journal of Finance*, 45 (September 1990) 1129-1155, with Paul J. Seguin [previously NBER Working Paper No. W2956].

"Stock Returns and Real Activity: A Century of Evidence," *Journal of Finance*, 45 (September 1990) 1237-1257 [previously NBER Working Paper No. W3296].

"Stock Market Volatility," *Financial Analysts Journal*, 46 (May-June 1990) 23-34. Reprinted in *Market Volatility and Investor Confidence*, New York Stock Exchange, (June 7, 1990) C1-C24. Summarized in *The C.F.A. Digest*, 21 (Winter 1991) 51-53. **Winner of the Graham and Dodd Plaque.** [previously Simon School Working Paper No. MERC 89-24].

PUBLICATIONS (continued):

"Alternative Models for Conditional Stock Volatility," *Journal of Econometrics*, 45 (July 1990) 267-290, with Adrian R. Pagan. ***Journal of Econometrics* All Star Paper.** [previously NBER Working Paper No. W2955].

"Indexes of United States Stock Prices from 1802 to 1987," *Journal of Business*, 63 (July 1990) 399-426. Correction: *Journal of Business*, 64 (July 1991) 442. Summarized in *The C.F.A. Digest*, 21 (Winter 1991) 3-5. [previously NBER Working Paper No. W2985].

"Stock Volatility and the Crash of '87," *Review of Financial Studies*, 3 (1990) 77-102. [previously Simon School Working Paper No. 88-06; NBER Working Paper No. W2954].

"Why Does Stock Market Volatility Change Over Time?" *Journal of Finance*, 44 (December 1989) 1115-1153 (**Smith-Breeden Distinguished Paper Award**). Reprinted in *Empirical Research in Capital Markets*, G. William Schwert and Clifford W. Smith, Jr., eds. (New York: McGraw-Hill, 1992). [previously Simon School Working Paper No. 87-11; NBER Working Paper No. W2798]. Reprinted in *Volatility*, Vol. I, eds. Torben G. Andersen, and Tim Bollerslev, (Cheltenham, UK: Edward Elgar, 2018).

"Business Cycles, Financial Crises and Stock Volatility," *Carnegie-Rochester Conference Series on Public Policy*, 31 (Autumn 1989) 83-125. Reprinted in the *Proceedings of the Seminar on the Analysis of Security Prices*, Vol. 33 No. 2 (November 1988) 207-243. Excerpted in the *Simon Research Review*, 1 (Fall 1989) 1-8. Reprinted in *Stock Market Crashes and Speculative Manias*, Eugene White, ed., (Cheltenham, UK: Edward Elgar, 1996). [previously Simon School Working Paper No. 88-02; NBER Working Paper No. W2957].

"Tests for Unit Roots: A Monte Carlo Investigation," *Journal of Business and Economic Statistics*, 7 (April 1989) 147-159. **Reprinted in the Twentieth Anniversary Commemorative issue of the *Journal of Business and Economic Statistics*, 20 (January 2002) 5-17.** [previously NBER Working Paper No. T73].

"Expected Stock Returns and Volatility," *Journal of Financial Economics*, 19 (September 1987) 3-29, with Kenneth R. French and Robert F. Stambaugh. Reprinted in the *Proceedings of the Seminar on the Analysis of Security Prices*, Vol. 31 No. 1 (May 1986) 119-148, in *Frontiers of Finance: The Batterymarch Fellowship Papers*, Deborah H. Miller and Stewart C. Myers, eds. (New York: Basil Blackwell, 1990) 190-215, and in *ARCH: Selected Readings*, Robert F. Engle, ed., (Oxford: Oxford University Press, 1995) 61-86. ***JFE* All Star Paper.** [previously Simon School Working Paper No. MERC 85-10]. Reprinted in *Volatility*, Vol. I, eds. Torben G. Andersen, and Tim Bollerslev, (Cheltenham, UK: Edward Elgar, 2018).

"Effects of Model Specification on Tests for Unit Roots in Macroeconomic Data," *Journal of Monetary Economics*, 20 (July 1987) 73-103. [previously Simon School Working Paper No. 87-01].

"Information Aggregation, Inflation, and the Pricing of Indexed Bonds," *Journal of Political Economy*, 93 (February 1985) 92-114, with Gur Huberman.

"Size and Stock Returns, and Other Empirical Regularities," *Journal of Financial Economics*, 12 (May 1983) 3-12. Reprinted in *Empirical Research in Capital Markets*, G. William Schwert and Clifford W. Smith, Jr., eds. (New York: McGraw-Hill, 1992).

PUBLICATIONS (continued):

"Effects of Nominal Contracting on Stock Returns," *Journal of Political Economy*, 91 (February 1983) 70-96, with Kenneth R. French and Richard S. Ruback. Reprinted in *Proceedings of the Seminar on the Analysis of Security Prices*, Vol. 26, No. 2 (November 1981) 1-36. [previously Simon School Working Paper No. MERC 81-07].

"Differencing as a Test of Specification," *International Economic Review*, 23 (October 1982) 535-552, with Charles I. Plosser and Halbert White. Reprinted in *Advances in Econometric Theory: The Selected Works of Halbert White*, (Cheltenham, UK: Edward Elgar, 1996).

"Tests for Predictive Relationships Between Time Series Variables: A Monte Carlo Investigation," *Journal of the American Statistical Association*, 77 (March 1982) 11-18, with Charles R. Nelson. [previously Simon School Working Paper No. 79-05].

"Using Financial Data To Measure Effects of Regulation," *Journal of Law and Economics*, 24 (April 1981) 121-158. Excerpted in *Economics of Corporation Law and Securities Regulation*, Richard Posner and Kenneth Scott, eds. (New York, Little, Brown, 1980) 185-191.

"The Adjustment of Stock Prices to Information About Inflation," *Journal of Finance*, 36 (March 1981) 15-29.

"Tests of Causality: The Message in the Innovations," *Carnegie-Rochester Conference Series on Public Policy* (Supplement to *Journal of Monetary Economics*), 10 (Spring 1979) 55-96. Reprinted in *Theory, Policy, Institutions: Papers from the Carnegie-Rochester Conferences on Public Policy*, Karl Brunner and Allan Meltzer, eds. (Amsterdam: North-Holland, 1983) 215-256. [previously Simon School Working Paper No. 78-07].

"Inflation, Interest, and Relative Prices," *Journal of Business*, 52 (April 1979) 183-209, with Eugene F. Fama. [previously Simon School Working Paper No. 78-10].

"Money, Income and Sunspots: Measuring Economic Relationships and the Effects of Differencing," *Journal of Monetary Economics*, 4 (November 1978) 637-660, with Charles I. Plosser.

"Asset Returns and Inflation," *Journal of Financial Economics*, 5 (November 1977) 115-146, with Eugene F. Fama. Reprinted in *Empirical Research in Capital Markets*, G. William Schwert and Clifford W. Smith, Jr., eds. (New York: McGraw-Hill, 1992). ***JFE* All Star Paper.** [previously Simon School Working Paper No. 77-16].

"Estimation of a Noninvertible Moving Average Process: The Case of Overdifferencing," *Journal of Econometrics*, 6 (September 1977) 199-224, with Charles I. Plosser. [previously Simon School Working Paper No. 77-09].

"On Testing the Hypothesis that the Real Rate of Interest is Constant," *The American Economic Review*, 67 (June 1977) 478-486, with Charles R. Nelson.

"Public Regulation of National Securities Exchanges: A Test of the Capture Hypothesis," *The Bell Journal of Economics*, 8 (Spring 1977) 128-150. Summarized in *The C.F.A. Digest*, 8 (Winter 1978) 59-60. [previously Simon School Working Paper No. 77-04].

PUBLICATIONS (continued):

"Human Capital and Capital Market Equilibrium," *Journal of Financial Economics*, 4 (January 1977) 95-125, with Eugene F. Fama. French version: "Capital Humain et Equilibre des Marches de Capitaux," in *Institutions et Marches Financiers*, F. Aftalian, et al., eds. (Centre d'Etudes et de Recherche de l'ESSEC, 1977). [previously Simon School Working Paper No. 77-20].

"Stock Exchange Seats as Capital Assets," *Journal of Financial Economics*, 4 (January 1977) 51-78.

"Estimating Distributed Lag Models from Cross Section Data: The Case of Hospital Admissions and Discharges," *Journal of the American Statistical Association*, 69 (September 1974) 627-633, with Charles R. Nelson.

SHORTER ARTICLES AND NOTES

"Gene Fama's impact: A quantitative analysis," with René M. Stulz, The Fama portfolio, ed. John H. Cochrane and Tobias J. Moskowitz, Chicago: University of Chicago Press, 2017, 30-49.

"Fama, Eugene F. (1939–)," *The New Palgrave Dictionary of Economics*. Online Edition. Eds. Steven N. Durlauf and Lawrence E. Blume. Palgrave Macmillan, 2015. The New Palgrave Dictionary of Economics Online. Palgrave Macmillan. 26 June 2015 <http://www.dictionaryofeconomics.com/article?id=pde2015_F000333> doi:10.1057/9780230226203.3942.

"Discussion of 'A Clinical Exploration of Value Creation and Destruction in Acquisitions: Organization Design, Incentives, and Internal Capital Markets,' by Kaplan, Wruck, and Mitchell," NBER Conference Volume on Mergers & Productivity, University of Chicago Press, 2000, 227-233.

"Symposium on Market Microstructure: Focus on Nasdaq," *Journal of Financial Economics*, 45 (July 1997) 3-8.

"Comment on 'Tests of CAPM on an International Portfolio of Bonds and Stocks,' by Charles M. Engel," *The Internationalization of Equity Markets*, NBER Conference Volume, Jeffrey A. Frankel, ed. (Chicago: University of Chicago Press, 1994), 173-175.

"Review of *The Great Myths of 1929 and the Lessons to be Learned* by Harold Bierman," *Journal of Finance*, 47 (March 1992) 410-413.

"Stock Market Crash of October 1987," *New Palgrave Dictionary of Money and Finance*, P. Newman, M. Milgate and J. Eatwell, eds. (New York: Stockton Press, 1992) Vol. 3, 577-582.

"Testing for Unit Roots," *New Palgrave Dictionary of Money and Finance*, P. Newman, M. Milgate and J. Eatwell, eds. (New York: Stockton Press, 1992) Vol. 3, 653-654.

"Review of *Market Volatility* by Robert Shiller: Much Ado About . . . Very Little," *Journal of Portfolio Management*, 17 (Summer 1991) 74-78.

"Testing for Covariance Stationarity in Stock Market Data," *Economics Letters*, 33 (1990) 165-170, with Adrian R. Pagan.

"Margin Regulation and Stock Volatility," *Journal of Financial Services Research*, 3 (December 1989) 153-164.

"Business Cycles, Financial Crises and Stock Volatility: Reply to Shiller," *Carnegie-Rochester Conference Series on Public Policy*, 31 (Autumn 1989) 133-138.

"The Time Series Behavior of Real Interest Rates: A Comment," *Carnegie-Rochester Conference Series on Public Policy*, 24 (Spring 1986) 275-288.

"A Discussion of CEO Deaths and the Reaction of Stock Prices," *Journal of Accounting and Economics*, 7 (April 1985) 175-178.

"The Market for Corporate Control," panel discussion published in the *Midland Corporate Finance Journal*, Summer 1983, pp. 21-47; reprinted in *Six Roundtable Discussions with Joel Stern*, Donald H. Chew, Jr., ed. (New York: Quorum Books, 1986) 101-143.

"Potential GNP: Its Measurement and Significance -- A Dissenting Opinion," *Carnegie-Rochester Conference Series on Public Policy* (supplement to *Journal of Monetary Economics*), 10 (Spring 1979) 179-186, with Charles I. Plosser.

UNPUBLISHED RESEARCH:

"Short Sales, Damages and Class Certification in 10b-5 Actions," with Robert C. Apfel, John E. Parsons, and Geoffrey S. Stewart; [Simon School Working Paper No. FR 01-19; NBER Working Paper No. W8618.]

ORAL PRESENTATIONS:

"Gene Fama's impact: A quantitative analysis," University of Chicago Conference Honoring Gene Fama's 50 Years of Service, Chicago, IL, October 2014.

"Eugene F. Fama: Quantification of His Research Impact," University of Chicago Dinner Celebrating Nobel Prize Winners, Chicago, IL, December, 2013.

"Tutorial: Time-series Econometrics," Financial Management Association, Atlanta, GA, October 2012.

"Stock Volatility During the Recent Financial Crisis," European Financial Management Association, Keynote Address, Aarhus, Denmark, June 2010.

"Stock Market Volatility: Past, Present, and Future," Simon Alumni Council, October 2008; University of Rochester Alumni Meeting, New York, January 2009; Financial Management Association, Keynote Address, Reno, NV, October 2009.

"The Variability of IPO Initial Returns," UNC-Duke Corporate Finance Conference, September 2001; Pennsylvania State University, October 2006; Entrepreneurship, Venture Capital and Initial Public Offerings Conference, Harvard Business School, December 2006; Stern School, NYU, April 2008.

"Stock Volatility in the New Millennium: How Wacky Is Nasdaq?" Carnegie-Rochester Conference on Public Policy, University of Rochester, April 2001.

"IPO Market Cycles: Bubbles or Sequential Learning?" University of Rochester, Brown Bag Lunch, February 2000; University of Rochester, Finance Seminar, May 2000; Australasian consortium of Universities videoconference, November 2000; MIT, Finance Seminar, February 2001.

RECENT ORAL PRESENTATIONS:

"Stock Market Volatility: Ten Years After the Crash," Brookings-Wharton Conference on Financial Institutions, Washington, DC, October 1997.

"Hostility in Takeovers: In the Eyes of the Beholder?" Columbia University Finance Seminar, March 1997; Harvard Conference on Financial Decisions and Control, July 1997; NBER Summer Institute, August 1997; New York University, November 1997; Emory University, November 1997; Yale University, March 1999; University of Rochester, April 1999.

"Markup Pricing in the Market for Corporate Control?," American Finance Association meetings, Boston, MA, January 1994; Harvard Conference on Financial Decisions and Control, July 1994; V.P.I. Finance Workshop, September 1994; Michigan Finance & Accounting Conference, October 1994; University of Rochester, October 1994; Ohio State Finance Workshop, November 1994; University of Chicago, June 1995.

"Poison or Placebo? Evidence on the Deterrent Effect of Modern Antitakeover Measures," Graduate School of Business, New York University, March 1993; University of Rochester, April 1993; NBER Summer Institute, August 1993; University of Michigan, September 1993; University of Southern California, October 1993, University of Chicago, October 1993, and CRSP Seminar on the Analysis of Security Prices, University of Chicago, November 1993.

"Stock Market Volatility," Q Group Conference, Tucson Arizona, October 1990; Rochester-Bradley Center Shadow SEC Conference, Washington, D.C., November 1990; Center for Economic Policy Studies Symposium, Princeton University, November 1990; International Financial Studies Research Center Conference, Massachusetts Institute of Technology, May 1991.

DOCTORAL DISSERTATIONS SUPERVISED:

Maxim Sokolov, "A Deeper Look at the Implied Volatility Spread as a Predictor of Stock Returns," proposed June 2018.

Robert Arscott, "LIBOR Floors in Leveraged Loans," Co-chair of Committee, May 2018 (Assistant Professor of Finance, Whitman School of Business, Syracuse University).

Amanda Badger, "Changes in the Market's Ability to Anticipate Future Earnings over Time and Earnings Quality," January 2018 (Assistant Professor of Accounting, Leavey School of Business, Santa Clara University).

Jacquelyn Gillette, "The Information Content of Debt Analyst Reports for Firms in Financial Distress," June 2016 (Assistant Professor of Accounting, Sloan School, Massachusetts Institute of Technology).

Hongtao Li, "Financing Asset Growth: A Closer Look at the Investment Factor," June 2016 (Visiting Assistant Professor of Finance, Tulane University).

Justin Vitanza, "Informed Trading in Options Markets and Its Information Value," Co-chair of Committee, June 2015, (Financial Economist, Federal Deposit Insurance Corporation).

Mihail Velikov, "FOMC Announcements and Predictable Returns," May 2015, (Quantitative Supervision & Research group, Federal Reserve Bank of Richmond).

Candace Jens, "Investment Around U.S. Gubernatorial Elections," April 2013, (Assistant Professor of Finance, Tulane University).

DOCTORAL DISSERTATIONS SUPERVISED:

Matthew Gustafson, "Four Essays on Capital Market Competition and Security Offering Methods and a Natural Experiment on How Wealth Shocks Affect Retirement," April 2013, (Assistant Professor of Finance, Smeal Business School, Pennsylvania State University).

Evan Dudley, "Essays on Capital Structure and Investment," October 2008, (Assistant Professor of Finance, Queens University).

Alexander Barinov, "Idiosyncratic Volatility, Growth Options, and the Cross-Section of Returns," Chair of Committee, June 2008 (Assistant Professor of Finance, University of California Riverside).

Gennaro Bernile, "The Rhetoric of M&A Deals: Analysis of Insiders' Forecasts during the Merger Wave of the 1990s," August 2006, (Assistant Professor of Finance, Singapore Management University).

Ivy Xiying Zhang, "Economic Consequences of Sarbanes-Oxley Act of 2002," December 2005, (Associate Professor of Accounting, Carl L. Nelson Professorship in Accounting Carlson School of Management, University of Minnesota).

Lance Young, "Empirical Investigations of Rational and Behavioral Explanations for Capital Market Anomalies," August 2005, (Senior Lecturer in Finance and Business Economics, University of Washington).

Tzachi Zach, "Inside the Accrual Anomaly," December 2003, (Associate Professor of Accounting, Fisher College of Business, The Ohio State University).

Richmond D. Mathews, "Corporate Control, Cooperation, and Entry Deterrence in Direct Equity Sales," August 2003, (Associate Professor of Finance, Robert H. Smith School of Business, University of Maryland).

Micah Officer, "Contractual Features of Merger Agreements," November 2001, Chair of Committee (Professor of Finance, College of Business Administration, Loyola Marymount University).

Andreas Gintschel, "Quote Revisions in Related Assets," August 2001 (Executive Director, JP Morgan, Frankfurt, Germany).

Jonathon Lewellen, "On the Predictability of Stock Returns," April 2000 (Carl E. and Catherine M. Heidt Professor of Finance, Amos Tuck School of Business Administration, Dartmouth College).

Michelle B. Lowry, "Intertemporal Variation in IPO Volume," December 1999, Chair of Committee (TD Bank Endowed Professor of Finance, LeBow College of Business, Drexel University).

Jarrad V. T. Harford, "Corporate Cash Reserves and Acquisitions," February 1998, Chair of Committee (Marion B. Ingersoll Professor of Finance, Business School, University of Washington).

Jang-Ku Kang, "Bond Mutual Fund Performance Evaluation: The Numeraire Portfolio Approach," April 1997, (Professor of Finance, Graduate School of Management, Korea Advanced Institute of Science & Technology).

DOCTORAL DISSERTATIONS SUPERVISED:

Mark R. Huson, "Bid-Ask Spreads, Measured Returns, and Inferences in Financial Research," September 1995, Chair of Committee (Professor of Finance, Pocklington Professor of Private Enterprise & Jarislowsky Fellow, University of Alberta).

Philip Kearns, "Volatility and the Pricing of Interest Rate Derivative Securities," June 1993, Chair of Committee (Managing Director, Head of Fixed Income, DE Shaw & Co).

Shing-Yang Hu, "Market Risk and Asset Returns," July 1992 (Professor, National Taiwan University).

Joy Begley, "The Determinants of Debt Covenant Use: An Empirical Investigation," December 1990 (Ronald L. Cliff Professor in Accounting, University of British Columbia).

Paul J. Seguin, "Consequences of Exchange Listing and Transactions Reporting: An Empirical Investigation of National Market System Reporting," May 1990, Chair of Committee (Analytic Focus LLC).

Douglas J. Skinner, "Options Markets, Stock Return Volatility and the Information Content of Earnings Releases," July 1989 (Eric J. Gleacher Distinguished Service Professor of Accounting, Booth School of Business, University of Chicago).

Susan E. Liberty, "Economic Determinants of Accounting Choice: A Study of Commercial Bank Accounting Practices," November 1988.

Vinod Singhal, "Risk Considerations in Operations Management," March 1988 (Dunn Family Professor of Operations Management, Scheller College of Business, Georgia Tech University).

Dean Crawford, "Factors that Influence the Form of Payment in Mergers," December 1987 (Professor of Accounting, SUNY Oswego).

Karen Wruck, "Management Financing Decisions and Firm Value: An Examination of Private Sales of Common Stock," September 1987, Chair of Committee (Dean's Distinguished Professor, Professor of Finance, Fisher College of Business, Ohio State University).

William Blozan, "Retail Deals as Competition: Reducing Consumer Search Costs," September 1986, Co-Chair of Committee (CEO, Breeze Easy, Inc.).

H. Nejat Seyhun, "Analysis of Market Response to Insider Trading Information," April 1984, Chair of Committee (Jerome B. and Eilene M. York Professor of Business Administration, Graduate School of Business, University of Michigan).

Kenneth R. French, "The Pricing of Futures and Forward Contracts," July 1982, Chair of Committee (Roth Family Distinguished Professor of Finance, Amos Tuck School of Business Administration, Dartmouth College).

Thomas Lys, "Selection of Accounting Procedures and Implications of Changes in Generally Accepted Accounting Principles: A Case Study Using Oil and Gas Accounting," May 1982 (Eric L. Kohler Chair in Accounting, Professor of Accounting Information & Management, Kellogg School of Management, Northwestern University).

DOCTORAL DISSERTATIONS SUPERVISED:

Björn Espen Eckbo, "Examining the Anti-Competitive Significance of Large Horizontal Mergers," July 1981 (Tuck Centennial Professor of Finance, Amos Tuck School of Business Administration, Dartmouth College).

Richard Ruback, "The Effects of Discretionary Price Control Decisions on Equity Values," July 1980 (Willard Prescott Smith Professor of Corporate Finance, Graduate School of Business Administration, Harvard University).

Peter Dodd, "The Market for Corporate Control and Stockholder Wealth," June 1980, Chair of Committee (former Chief Financial Officer, North American Energy Partners; former Global Head of Corporate Finance Advisory, ABN-AMRO; former Dean, Australian Graduate School of Management).

Wayne H. Mikkelson, "Convertible Debt and Warrant Financing: A Study of the Agency Cost Motivation and Wealth Effects of Calls of Convertible Securities," April 1980 (Cameron Distinguished Chair in Finance Emeritus, Lundquist College of Business, University of Oregon).

Richard Leftwich, "Private Determination of Accounting Methods in Corporate Bond Indentures," April 1980 (Fuji Bank and Heller Professor of Finance & Accounting, Booth School of Business, University of Chicago).

Robert W. Holthausen, "Theory and Evidence on the Effect of Bond Covenants and Management Compensation Contracts on the Choice of Accounting Techniques: The Case of the Depreciation Switch-Back," April 1980 (Ernst and Young Professor and Nomura Securities Professor of Accounting & Finance, Wharton School, University of Pennsylvania).

Robert Kellogg, "An Empirical Study of Rule 10b-5 Buyers' Suits Based Upon Accounting Disclosures," November 1979.

OTHER PROFESSIONAL ACTIVITIES:

Journal of Financial Economics, Managing Editor, 1995-present; (Advisory Editor, 1986-89; Editor, 1979-86 and 1989-95; Associate Editor, 1977-78) – ranked second among 96 journals in "Business Finance" and sixth out of 347 journals in "Economics" based on Impact Factor in *Journal Citation Reports, 2016*. Ranked fourth out of 3,236 social science journals based on the "normalized eigenfactor" method (which weights citations in the past five years from influential journals more heavily and removes journal self-citations). Ranked first in Google Scholar among Business Finance Journals based on the "h5" index (largest number h such that h articles published in 2012-2016 have at least h citations each).

Journal of Finance, Associate Editor, 1983-2000.

Journal of Monetary Economics, Associate Editor, 1984-95; Advisory Editor, 1995-2008.

Journal of Accounting and Economics, Associate Editor, 1978-87.

Abstracts of Working Papers in Economics, Associate Editor, 1987-present.

Journal of Financial Abstracts, Associate Editor, 1994-98; Editor, Series C, Capital Markets, 1998-present; Co-editor, Series B, Banking and Financial Institutions, 1998-present.

Advisory Board, *Chase Financial Quarterly*, 1981-82; *Midland Corporate Finance Journal*, 1982-87; *Journal of Applied Corporate Finance*, 1988-present.

Other Professional Activities:

Referee for:

The American Economic Review, Journal of Political Economy, The Bell Journal of Economics, The Rand Journal of Economics, Journal of Law and Economics, Journal of Business, Journal of Financial and Quantitative Analysis, International Economic Review, Quarterly Journal of Economics, Journal of Money, Credit and Banking, Economica, Journal of Macroeconomics, Journal of International Money and Finance, Canadian Journal of Economics, Oxford Economic Papers, Econometrica, Journal of the American Statistical Association, Journal of Econometrics, Journal of Business and Economic Statistics, Stochastic Processes and Their Applications, Operations Research, Management Science, American Statistician, National Science Foundation, Canadian National Science Foundation

Director, American Finance Association, 1987-89.

Committee to Select the Winner of the Fischer Black Prize, American Finance Association, 2004-05, and 2012-13.

Chair, Business and Economics Section, American Statistical Association, 1990 (Chair-elect, 1989).

Commissioner, Shadow Securities and Exchange Commission, 1995-1997.

Academic Advisory Board, Modern Portfolio Theory Associates, Inc., 1980-85.

American Economic Association Committee to Review Financial Accounting Standards Board Statement No. 33 (on Inflation Accounting), 1983-85.

Member of NBER Working Group on "The Relation between the Structure of Security Markets and Real Economic Activity," 1985-89.

Advisory Committee of Economists to the Inter-University Consortium for Political and Social Research, 1990-present.

Simon School Committees:

Committee on Promotion & Tenure, Simon School, 1983-86, 1990-present (Chair, 1994-2015).
Remote Education Advisory Committee, Chair, 1999-2003.
Wide World Web Advisory Committee, 1995-97.
Policy Committee, 1986-94.
DBA Committee, Simon School, 1993.
Ph.D. Committee, Simon School, 1977-90, (Chair, 1986-90).
Dean's Advisory Council, Simon School, 1983-86.
Committee on Executive Programs, Simon School, 1982-83.
Committee on Educational Policy, Simon School, 1980-81.
Coordinator of Finance Group, Simon School, 1980-81.

University of Rochester Committees:

Search Committee for Vice President for Investments, 2000.
Search Committee for Chief Information Officer (Chair), 1998-99.
Administrative Cost Review Task Force (Chair), 1994-95.
Faculty Senate, 1992-95.
Budget Committee, 1990-97 (Co-Chair, 1991-97).

OTHER PROFESSIONAL ACTIVITIES: (continued)

Search Committee for Simon School Dean, 1982-83, 1990-91, and 1993.
Committee on Honorary Degrees, 1990-92.
Council on Graduate Studies, 1980-82 and 1986-90.
Ad hoc Committee on External Relations, 1987-88.
Committee to Evaluate Simon School Dean, 1987.
Committee to Select Graduate Dean's Fellowships, 1985.

SOCIETAL AFFILIATIONS:

American Economics Association, 1973-present.
American Finance Association, 1975-present (life member).
Econometric Society, 1973-95.
American Statistical Association, 1973-95.
Financial Management Association, 1989-present.
Society for Financial Studies, 1989-present.

SELECTED CONSULTING ACTIVITIES:
(INCLUDING ALL TRIAL AND DEPOSTION TESTIMONY IN THE LAST FOUR YEARS)

Residential Funding Co., 2018. Expert rebuttal report and testimony related to expert report of Ethan Cohen-Cole concerning claims of servicing deficiencies in various RMBS securitizations by Home Loan Center, Decision One Mortgage, HSBC Finance, and EquiFirst Corp. *(No. 13-cv-3451 (SRN/HB), No. 14-cv-01737 (SRN/HB), No. 14-cv-01716 (SRN/HB), and No. 15-cv-01569 (PAM/HB) (US District Court, Minnesota)).*

Residential Funding Co., 2018. Expert rebuttal report related to expert report of Andrew Metrick concerning materiality of and loss causation related to false statements and omissions in various RMBS securitizations by EquiFirst Corp. *(No. 15-cv-1569 (PAM/HB) (US District Court, Minnesota)).*

Residential Funding Co., 2018. Expert rebuttal report related to expert report of Timothy J. Riddiough concerning materiality of and loss causation related to false statements and omissions in various RMBS securitizations by M&I Bank, FSB. *(No. 13-cv-3523 (PAM/HB) (US District Court, Minnesota)).*

Lehman Brothers Holdings, Inc., *et al.*, Debtors, 2017. Expert rebuttal sampling report and testimony related to expert reports of James Aronoff, Charles H. Grice, and Daniel I. Castro, Jr. *(Chapter 11, No. 08-13555 (US Bankruptcy Court, Southern District of New York)).*

FDIC, 2017. Expert rebuttal report and testimony related to expert reports of William N. Goetzmann, Walter Torous, and Ethan Cohen-Cole concerning materiality of and loss causation related to false statements and omissions in various RMBS securitizations by Credit Suisse, HSBC, and RBS. *(No. 03-CV-2012-901035 and No. 03-CV-2012-901036 (US Circuit Court, Montgomery AL)).*

Massachusetts Mutual Life Insurance Co., 2016. Expert rebuttal report and testimony related to expert reports of William N. Goetzmann and Ethan Cohen-Cole concerning materiality of and loss causation related to false statements and omissions in various RMBS securitizations by Credit Suisse. *(No. 11 Civ. 30047-MGM and No. 11 Civ. 30048-MGM (US District Court, MA)).*

FHFA, 2015-2016. Expert report and testimony concerning materiality of false statements and omissions in various RMBS securitizations by Royal Bank of Scotland. Also, rebuttal report related to expert reports of Jerry A. Hausman, Walter Torous, and Ethan Cohen-Cole. *(No. 3:11 Civ. 6383 (AWT) (US District Court, CT)).*

HSBC Bank, 2015. Expert report on damages suffered by Ace Securities Home Equity Loan Trust. *(No. 650327/2013 (NY Supreme Court)).*

FHFA, 2014-2015. Expert report and testimony concerning materiality of false statements and omissions in various RMBS securitizations by Nomura. Also, rebuttal report related to expert report of Kerry D. Vandell. *(No. 11 Civ. 6201 (DLC) (US District Court, SD NY)).*

FHFA, 2014. Expert report and testimony concerning materiality of false statements and omissions in various RMBS securitizations by HSBC. Also, rebuttal report related to expert report of Walter Torous. *(No. 11 Civ. 6189 (DLC) (US District Court, SD NY)).*

SELECTED CONSULTING ACTIVITIES:
(INCLUDING ALL TRIAL AND DEPOSTION TESTIMONY IN THE LAST FOUR YEARS)

FHFA, 2014. Expert report and testimony concerning materiality of false statements and omissions in various RMBS securitizations by Goldman Sachs. Also, rebuttal report related to expert report of Christopher James. *(No. 11 Civ. 6198 (DLC) (US District Court, SD NY)).*

FHFA, 2014. Expert report concerning materiality of false statements and omissions in various RMBS securitizations by Credit Suisse, RBS, Barclays, Ally, and Goldman Sachs. Also, rebuttal report related to expert report of Christopher James. *(No. 11 Civ. 7010 (DLC) (US District Court, SD NY)).*

FHFA, 2014. Expert report concerning materiality of false statements and omissions in various RMBS securitizations by Merrill Lynch. *(No. 11 Civ. 6202 (DLC) (US District Court, SD NY)).*

Bank of America, 2013. Expert testimony rebutting expert reports of Prof. Stulz, Mr. Porten, and Prof. Shivdasani concerning disclosure of information by Bank of America and Merrill Lynch prior to their merger. (Bank of America Corp. Securities, Derivative, and Employment Retirement Income Security Act (ERISA) Litigation: Thomas P. DiNapoli, Comptroller of the State of New York, as Administrative Head of the New York State and Local Retirement Systems and as Sole Trustee of the New York State Common Retirement Fund, et al. v. Bank of America Corp., et al., No. 10-CV-5563 (PKC); Steve R. Graber, individually and as assignee of claims of the SRG 2008 Trust v. Bank of America Corp., et al., No. 11-CV-7070 (PKC); and Schwab S&P 500 Index Fund, et al. v. Bank of America Corp., et al., No. 11-CV-7779 (PKC) Stichting Pensioenfonds ABP, et al. v. Bank of America Corp. et al., Civil Action No. 10-CV-2284 (PKC) (US District Court, SD NY)).

Bank of New York Mellon, 2013. Expert testimony concerning statistical analysis of damages to various RMBS Trusts. *(No. 651786/2011 (Supreme Court of the State of New York, New York County NY)).*

Chase Manhattan Bank, 2012-2013. Expert testimony concerning calculation of damages to the Wehle Trusts. *(Wehle Trusts v. JP Morgan Chase Bank, N.A., No. 2006-1463 (Surrogate's Court, Monroe County NY)).*

Henry Nicholas, 2010-2011. Expert testimony concerning option backdating complaint filed in Broadcom Corp. derivative litigation. *(In RE Broadcom Corp. Derivative Litigation, No. C-06-3252R(CWx) (US District Court, CD, CA)).*

Mayer, Brown, Rowe & Maw LLP, 2010. Analysis of damages claims made by experts for Thomas H. Lee entities related to Refco bankruptcy. *(Thomas H. Lee Equity Fund V, L.P., etal. v. Mayer, Brown, Rowe & Maw LLP etal., No. . 07 Civ. 6767 (JSR) (US District Court, SD, NY)).*

HSBC Bank, 2010. Expert testimony concerning calculation of damages to various Knox family trusts. *(Knox Trusts v. HSBC Bank, No.DO-0659 (Surrogate's Court, Erie County NY)).*

Chase Manhattan Bank, 2007-2009. Expert testimony concerning calculation of damages to the Blanche Hunter Trust. *(Hunter Trust v. Chase Manhattan Bank, No.1973-30A (Surrogate's Court, Westchester County NY)).*

SELECTED CONSULTING ACTIVITIES (continued):

Henry Nicholas, 2009. Analysis of option backdating complaint filed by Department of Justice related to Broadcom Corp.

Bank of New York, 2007. Expert report concerning plaintiffs' expert's damages analysis of alleged money laundering by clients of Bank of New York within Russia.

Caremark, 2007. Expert testimony concerning deal protection provisions in Caremark-CVS merger agreement. *(Express Scripts et al. v. Caremark, CVS, et al., Case No. CA 2663-N (Court of Chancery, New Castle County, Delaware)).*

Altria, 2007. Analysis of effects of potential spin-off.

Bluegreen Corp., 2006. Analysis of poison pill and 13-D filings in relation to purchases of Bluegreen stock by David Siegel. *(Bluegreen v. David A. Siegel, et al., Case No. 06-80718-CIV-HURLEY/HOPKINS (US District Court, West Palm Beach, Florida)).*

CSFB, 2004-2007. Expert testimony concerning plaintiffs' expert's damages analysis relating to CSFB in the Enron case. *(ENRON Corporation Securities Litigation: Newby et al. v. ENRON et al., Civil Action No. H-01-3624 (US District Court, Houston, Texas)).*

Bear Wagner, 2006. Analysis of specialist trading patterns related to SEC investigation.

Citigroup, 2004. Prepared report concerning effects of analysts' reports on WorldCom stock prices. *(The Retirement Systems of Alabama et al. v. J.P. Morgan Chase & Co. et al., Case No. CV 2002-1947-P (Circuit Court of Montgomery County, Alabama)).*

Chase Manhattan Bank, 2003-2004. Expert testimony concerning calculation of damages to the DuMont Trust. *(DuMont Trust v. Chase Manhattan Bank, No.1956 TT 00443 (Surrogate's Court, Monroe County NY)).*

PriceWaterhouseCoopers LLP (Canada), 2003-2004. Prepared report concerning damages to Safety-Kleen due to alleged misstatements of Laidlaw Inc. financial statements. *(Safety-Kleen et al. v. PriceWaterhouseCoopers LLP and PriceWaterhouseCoopers LLP (Canada)., Case No. 01-CP-40-4213 (Court of Common Pleas for the 5th Circuit, Richland County, South Carolina)).*

Altreya Consulting LLC, 2002. Prepared report, "Statistical Evidence on the Unusually Large Number of Temporary Assistance Cases in Monroe County and Implications for Reorganization of the Monroe County Department of Social Services."

U. S. Department of Justice, Commercial Litigation Division, 2001-2006. Expert testimony about the damages suffered by Charter FSB following the passage of FIRREA in 1989 *(Charter v. United States, U.S. Court of Claims, CA 95-513C)*

U. S. Department of Justice, Commercial Litigation Division, 1999-2001. Expert testimony about the availability of capital to thrift institutions following the passage of FIRREA in 1989 (Coast v. United States, U.S. Court of Claims, CA 92-466C)

SELECTED CONSULTING ACTIVITIES (continued):

Corning, 2000. Analysis of the effects of disclosures of litigation risk on the stock prices of silicone breast implant manufacturers.

Chase Manhattan Bank, 2000. Affidavit concerning calculation of damages to the Creighton Trust. *(Creighton Trust v. Chase Manhattan Bank, No. 30-1973 (Surrogate's Court, Westchester County NY)).*

Micrion Corp., 1998-99. Expert testimony concerning the effects of alleged misinformation concerning a purchase order on the price of Micrion stock. *(Geffon, Jaslow, et al. v. Micrion Corp, et al., No. CA-96-11596-REK (MA 1996)).*

Computer Learning Centers, Inc., 1998-99. Analysis of the effects of short-selling on the calculation of damages in securities class action litigation. *(Gaensh, L.L.C. et al. v. Computer Learning Centers, Inc., et al., No. CA-98-859-A (ED VA 1998)).*

U. S. Department of Justice, Antitrust Division, 1997-98. Analysis of unsolicited bond ratings.

General Scanning Inc., 1998. Expert testimony about the damages suffered by View when GSI acquired View Engineering Systems *(Robotic Vision Systems, Inc. v. General Scanning Inc., No. CV-96-3884(JG) (ED NY 1998)).*

Forensic Economics, 1998-present. Consulted on several litigation situations.

Jeffrey Gilbert, 1998. Expert report about the use of the CAPM to determine discount rates in discounted cash flow valuation models *(Jeffrey Gilbert v. MPM Enterprises, No. 14416 (Chancery Court, DE 1998)).*

Gordon Family, 1997. Analysis of capital market conditions around the time of the acquisition of Gordon by Zale *(Jewel Recovery, L.P., V. Aron S. Gordon, et al., No. 3:94-CV-1052X (ND Tx 1997)).*

U. S. Department of Justice, Commercial Litigation Division, 1996-97. Expert testimony about the availability of capital to thrift institutions following the passage of FIRREA in 1989 *(Glendale v. United States, U.S. Court of Claims, CA 90-772).*

Eastman Kodak, 1996. Analysis of the uses of real options analysis to evaluate research and development expenditures.

Xerox, 1996. Evaluation of benchmarking analysis for information technology expenditures.

U. S. Department of Justice, Antitrust Division, 1995-96. Analysis of trading behavior of NASDAQ stocks related to allegations of collusion by market-makers to widen bid-ask spreads.

Wilmer, Cutler & Pickering, 1995. Analysis of the effects of regulation and litigation risk on the value of tobacco companies' stocks. *(Philip Morris v. ABC, No. 760CL94X00816-00, Richmond, VA).*

Wharton, Aldhizer & Weaver, 1994. Expert report about the effects of antitakeover devices on the market for corporate control. *(WLR Foods v. Tyson Foods, No.94-0012(H) (WD Va 1994)).*

SELECTED CONSULTING ACTIVITIES (continued):

Nixon, Hargrave, Devans & Doyle, 1994. Analysis of the failure of First Executive Life Insurance Company *(Maureen Rose v. Xerox et al. No.5:92 CV 208)*.

Kirkland & Ellis, 1994. Analysis of damages from the acquisition of Fischbach. *(Glosser, as Trustee, for PEC v. Victor Posner, et. al., 89 Civ. 3789).*

Mayer, Brown & Platt, 1993-94. Expert testimony on the effects of pre-bid run-ups on the premiums paid in successful mergers and tender offers. (*Nestlé Holdings, Inc. v. Commissioner of the Internal Revenue Service, No. 21562-90*).

Cravath, Swaine & Moore, 1993. Consulted on the effects of a securities analyst's report on the behavior of the stock prices of ICN Pharmaceuticals, Viratek and SPI Pharmaceuticals.

Catalyst Institute (formerly MIDAMERICA INSTITUTE), 1993. Report summarizing theory and evidence on the effects of security transaction taxes on asset prices, trading volume, market liquidity and tax revenues (with Paul J. Seguin).

Miller, Shakman, Hamilton, Kurtzon & Schlifke, 1993. Expert testimony on the valuation of Motels of America Mortgage Notes (*Xerox Financial, et al. v. Salomon Brothers*).

Phillips, Lytle, Hitchcock, Blaine & Huber, 1993. Valuation analysis of the Protective Closures Corporation, Inc. (*D. Cunnick et al. v. Marine Midland Bank*).

Morris & Morris, 1992-94. Analysis of manipulation of the Treasury note market from April - August, 1991 (*Salomon Brothers, et al. class action litigation*).

CDC Investment Management Group, 1992. Consultation on various aspects of quantitative money management.

Cahill, Gordon & Reindel, 1991. Analysis of financial disclosure related to Formica LBO (*Glazer v. Formica and Langone*).

Cahill, Gordon & Reindel, 1991. Analysis of financial disclosure related to Allegheny International (*Irwin Jacobs/Spear Leeds v. Dillon Read*).

Cahill, Gordon & Reindel, 1991. Analysis of the value of warrants associated with leveraged LBO's (*IRS v. Drexel, Burnham & Lambert*).

Cahill, Gordon & Reindel, 1991. Analysis of the economic characteristics of the high yield bond market (*Columbia S&L v. Michael Milken et al*.).

Jones, Day, Reavis & Pogue, 1990-92. Expert testimony on the effects of leaks of inside information on the cost of the Maxus (Diamond Shamrock) and Natomas merger (*Maxus v. Kidder, Peabody, Martin Siegel and Ivan Boesky, No. 87-15583-M (298 D. Tex. 1987).*

Rochester Telephone Corporation, 1990. Analysis of the risk and opportunity cost of capital for its major subsidiaries.