EDWARD I. ALTMAN

Max L. Heine Professor of Finance
Director, Credit & Debt Markets Program

NYU Salomon Center
Leonard N. Stern School of Business
New York University

Mailing Address:

New York University	Tel: (212) 998-0709
Salomon Center	Fax: (212) 995-4220
44 West 4th Street, Suite 9-61	Email: ealtman@stern.nyu.edu
New York, NY 10012	Web: http://www.stern.nyu.edu/~ealtman

Personal

Born: June 5, 1941 in New York City
Married with one child
Citizenship, U.S.A.

Education

B. A. Economics, City College of New York, 1963
MBA, Business Finance, University of California, Los Angeles, 1965
Ph.D. Finance, University of California, Los Angeles, 1967

Academic Affiliations

Teaching Fellow and Instructor, University of California, Los Angeles, 1964-1967
Assistant Professor of Finance, Graduate School of Business Administration, New York University, 1967-1970
Visiting Professor of Finance, Hautes Etudes Commerciales, Jouy-en-Josas, France, 1971-1972 and Spring1985
Associate Professor of Finance, Graduate School of Business Administration, New York University, 1970-1976
Visiting Professor of Finance, Universite de Paris-Dauphine, Paris, France, Fall 1976
Visiting Professor of Finance, Pontificia Universidade Catolica do Rio de Janeiro, Brazil, Spring-Summer 1977
Professor of Finance, Stern School of Business, New York University, 1977-Present
Visiting Professor of Finance, Australian Graduate School of Management, University of New South Wales, 1981-1982
Visiting Professor of Finance, Luigi Bocconi University, Milan, Italy, Spring 1985, 1990
Visiting Scholar, CEMFI, Madrid, 2002

Visiting Professor, Macquarie University, Faculty of Economics, Accounting and Finance, Sydney 2006.
Visiting Professor, Faculty of Finance, Partenope University, Naples, Italy 2006.

Professional Associations

American Economic Association
American Finance Association
European Finance Association
Financial Management Association
Western Finance Association
Financial Analysts Federation
Financial Economists Roundtable
Turnaround Management Association
International Insolvency Institute

Honors and Awards

Omicron Delta Epsilon-**National Economics Honorary Society**, 1962
Beta Gamma Sigma-**National Business Administration Honorary Society**, 1965
Regents Fellow-**University of California, Los Angeles**, 1966-1967
Executive Council-**European Finance Association**, 1978-1980
Special Teaching Award, **New York University**, 1980, 2001, 2003
Northeast Regional Director, **Financial Management Association**, 1982-1984
Who's Who in America, Who's Who in Finance & Industry in the East, 1978-Present
Laureate 1984-Awarded by **HEC Foundation**
Graham & Dodd Scroll-Awarded by the **Financial Analysts Federation** for Financial Writing, 1985
Max L. Heine Professorship-**Stern School of Business**, New York University, 1988
Profesor Honorario-**Universidad de Buenos Aires**, November 1996
Hall of Fame - **Fixed Income Analysts Society** (FIASI) – 2001
President – **Financial Management Association** – 2002-2003
Chairman of the Academic Advisory Council to the **Turnaround Management Association**, 2000-Present
FMA Fellow – 2004
Distinguished Scholar, **Southern Finance Association**, 2004
Voted amongst the 100 Most Influential persons in Finance 2005 by **Treasury & Risk Management** Magazine
R.J. Chambers Memorial Lecture Award, Accounting Foundation **University of Sydney** (2006)

Research Grants

Chambre Syndicale des Agents de Change, 1971-1972 (Bourse de Paris)
Federal Home Loan Bank Board, 1974-1975
Salomon Brothers Center for the Study of Financial Institutions, 1976, 1983, 1987
Arthur Andersen & Company, 1978-1979 and 1986-1987
National Science Foundation, 1980-1982 (SES 79-24828)
Life Insurance Company of New York Association, 1986
Research Foundation of the Institute of Chartered Financial Analysts, 1988, 1990
Association for Investment Management Research, 1989-1990
Standard & Poor's Corporation, 1992, 1998

Arthur Andersen, 1993
Institute for International Political Economy, 2000
International Swaps & Derivatives Association (ISDA), 2001
Loan Syndication & Trading Association (LSTA), 2002
European Union, 2004
Moody's Research Foundation, 2004, 2006

Publications: Books

Corporate Bankruptcy in America (Heath-Lexington, Lexington, MA, 1971)
Translated into Japanese by Fumio Nambu (Bungado Ginko Kenkyo Sha, Ltd., 1976)

Financial Crises: Institutions and Markets in a Fragile Environment, Wiley-Interscience, 1977 (co-editor with A. Sametz)

Applications of Classification Procedures in Business, Banking and Finance, JAI Press, Greenwich, CT, 1981 (co-author)

Financial Handbook, 5th Edition, (Editor), John Wiley & Sons, 1981

Corporate Financial Distress and Bankruptcy, John Wiley & Sons, 1983; revised second edition, 1993

Recent Advances in Corporate Finance, Dow-Jones Irwin, Homewood, IL, 1985 (co-editor with M. Subrahmanyam)

Handbook of Corporate Finance, (Editor) John Wiley & Sons, 1986

Investing in Junk Bonds: Inside the High Yield Bond Market, John Wiley & Sons, 1987 (with Scott Nammacher), translated into Japanese by Toyo Kaizai Shimbun, 1988, reprinted by Beard Books

Handbook of Financial Markets & Institutions, 6th ed., (Editor) John Wiley & Sons, 1987

The Prediction of Corporate Bankruptcy, Foundations of Accounting Series, Garland Publishing, 1988

Default Risk, Mortality Rates, and the Performance of Corporate Bonds, Research Foundation of the Institute of Chartered Financial Analysts, Charlottesville, VA, 1989

The High Yield Debt Market: Investment Performance and Economic Impact, Dow-Jones Irwin, Homewood, IL, 1990 (Editor), reprinted by Beard Books

Distressed Securities, Analyzing & Evaluating Market Potential and Investment Risk, Probus Publishing Company, Chicago, IL, 1991, reprinted by Beard Books

Corporate Bond Rating Drift: An Examination of Credit Quality Changes Over Time, Association for Investment Management Research, Charlottesville, VA, 1991 (with D. L. Kao).

Bankruptcy and Distressed Restructurings, Business One-Irwin, Homewood, IL, 1992 (Editor)

Corporate Financial Distress and Bankruptcy, 2nd Edition, John Wiley & Sons, New York, 1993

The Financial Dynamics of the Insurance Industry, Irwin, Chicago, IL, 1994 (co-editor with I. Vanderhoof)

The Strategic Dynamics of the Insurance Industry, Irwin, Chicago, IL, 1996 (co-editor with Irwin Vanderhoof)

Managing Credit Risk: The Next Great Financial Challenge, John Wiley & Sons, New York (with Jack Caouette and P. Narayanan), 1998

The Fair Value of Insurance Liabilities, Kluwer Publishing, Amsterdam, 1998 (co-editor with Irwin Vanderhoof)

The Fair Value of the Insurance Business, Kluwer Publishers, 2000, (co-editor with Irwin Vanderhoof)

Bankruptcy, Credit Risk and High Yield 'Junk' Bonds: A Compendium of writings, Blackwell Publishing, Oxford, England and Malden, Massachusetts, 2002

Recovery Risk, Risk Books, 2005 (co-edited with A. Resti and A. Sironi)

Corporate Financial Distress and Bankruptcy, 3rd edition, John Wiley & Sons, 2005 (with Edith Hotchkiss)

Publications: Articles

"Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy," **Journal of Finance**, September 1968. Reprinted in **Readings in Managerial Finance**, E. Brigham, editor (New York, Holt Rinehart and Winston, 1971); **Finances Modernes Theorie et Pratique**, F. Girault and R. Zisswiller, editors (Paris, Dunod, 1973) and Issues in Finance, E. Brigham and R. Johnson, editors (Dryden Press, 1975, 1979). Abstracted in the **CFA Digest**, Fall 1971, Vol. I, No. 2.

"Bankrupt Firms' Equity Securities as an Investment Alternative," **Financial Analysts Journal**, July/August 1969.

"Corporate Bankruptcy Potential, Stockholder Returns and Share Valuation, **Journal of Finance**, December 1969. Reprinted in **Financial Management Classics**, C. Aby and D. Vaughn, editors, Goodyear Publishing Company, 1979.

"An Analysis of Common Stock Price Volatility Measures and Patterns," (co-author with Robert Schwartz) **Journal of Financial and Quantitative Analysis**, January 1970. Abstracted in the **CFA Digest**, Fall 1971, Vol. I.

"Reply to Ratio Analysis and the Prediction of Firm Failures: Comment," by C. Johnson, **Journal of Finance**, December 1970.

"Corporate Bankruptcy Prediction and Its Implications for Commercial Loan Evaluation," **Journal of Commercial Bank Lending**, December 1970.

"Railroad Bankruptcy Propensity," presented at the **American Finance Association Meetings**, Detroit, MI, December 28, 1970 and published in the **Journal of Finance**, May 1971. Abstracted in the CFA Digest, Summer 1972, Vol. 2, No. 2.

"The Fluctuations of Stock Market Prices," **Applications of Management Science in Banking and Finance**, edited by S. Eilon and T. Fowkes, (co-author with R. Schwartz, contributor with others) London, Gower Press, 1972.

"Reply to Corporate Bankruptcy Potential, Stockholder Returns & Share Valuation: Comment," by M. Hanna, **Journal of Finance**, June 1972.

"Le Modele de Marche aide-t-il a la Prevision des Cours Quelques Etudes Empiriques," **Analyse Financiere**, No. 9 2eme Trimestre, 1972 (co-author with B. Jacquillat and M. Levasseur).

"Predicting Railroad Bankruptcies in America," **Bell Journal of Economics & Management Science**, Spring 1973, abstracted in the **CFA Digest**, 1975.

"La Rentabilite et le Risque des Secteurs Industriels a la Bourse de Paris," **Analyse Financiere**, No. 13, 2eme Trimestre, 1973 (co-author with B. Jacquillat and M. Levasseur).

"Volatility Behavior of Industrial Stock Prices," **Journal of Finance**, September 1973 (co-author with Robert Schwartz).

"Financial and Statistical Analysis for Commercial Loan Evaluations: A French Experience," presented at the **Western Finance Association Mee**tings, August 1973, and published in the **Journal of Financial & Quantitative Analysis**, March 1974 (co-author with M. Schlosser and P. Vernimmen).

"Diagnostic Financier: Validite des Information Contables," **Banque**, July-August 1974 (co-author with Michel Schlosser and Pierre Vernimmen).

"La Stabilite du Coefficient Beta," **Analyse Financiere**, 1er Trimestre, 1974 (co-author with Bertrand Jacquillat and Michel Levasseur).

"Evaluation of a Company as a Going Concern," **Journal of Accountancy**, December 1974 (co-author with Thomas McGough). Reprinted in **Selected Papers**, 1974, Haskins & Sells, NYC, 1975; **Revision og Regnskabsvaesen** (Danish translation); **Corporate Survival in a Depressed Economy**, Practicing Law Institute, NYC, 1975, **Readings in Quantitative Analysis**, 1977.

"Comparative Analysis of Risk Measures: France and the United States," **Journal of Finance**, December 1974 (co-author with B. Jacquillat & M. Levasseur), abstracted in the **CFA Digest**, Vol. 5, No. 2, Spring 1975.

"International Exchange Programs for Business Students: An Emerging Trend," AACSB Bulletin, October 1975 and **Higher Education Exchange**, (U.K.), No. 4, Autumn 1975.

"Statistical Bond Rating Classification Using Financial & Accounting Data," **Proceeding of the Ross Institute of Accounting, First Annual Conference on Topical Research in Accounting**, New York University, NYC, 1976 (co-author with S. Katz).

"Capitalization of Leases and the Predictability of Financial Ratios: A Comment," **The Accounting Review**, April 1976.

"A Financial Early Warning system for Over-the-Counter-Broker-Dealers," **Journal of Finance**, September 1976.

"Information Effects & Stock Market Response to Firm Deterioration," (co-author with Menachem Brenner) **NYU Salomon Center Working Paper**, #77, Summer 1976, delivered at Western Finance Association Meetings, June 1976.

"Bankruptcy Identification: Virtue or Necessity," **Journal of Portfolio Management**, Spring 1977.

"The Z-Score Bankruptcy Model: Past, Present and Future," **Financial Crises**, edited by Edward Altman and Arnold Sametz, Wiley-Interscience, 1977. A Revised Version published in **Revista Brasileria de Mercado de Capitais**, No. 3, 1977, (IBMEC) Brasil.

"ZETA Analysis, A New Model for Bankruptcy Classification," **Journal of Banking and Finance**, June 1977 (co-author with R. Haldeman and P. Narayanan) reprinted in **Readings in Short-Term Financial Management**, K. Smith and G. Gallagher, editors, West Publishing, 1988; **Financial Statement Analysis**, R. Ball and S. Kothari, editors, McGraw-Hill, 1993.

"Predicting Performance in the Savings and Loan Association Industry**," Journal of Monetary Economics**, October 1977.

"The Cost of Lending Errors for Commercial Banks: Some Conceptual and Empirical Issues," **Journal of Commercial Bank Lending**, October 1977, Brazilian Version published in **Rumos do Desenvolvimiento**, November-December 1977, Associacao Brasileria des Bandos do Desenvolvimento.

"Financial Applications of Discriminant Analysis: A Clarification," **Journal of Financial and Quantitative Analysis**, March 1978 (co-author with R. Eisenbeis).

"Examining Moyer's Re-examination of Forecasting Financial Failure," **Financial Management**, Winter 1978.

"Internationalizing **MBA Programs**: A Survey and Analysis of Student Exchange Programs at U.S Business Schools," MBA Magazine, March-April 1979 (co-author with Janet Marks).

"Previsao de Problemas Financieros em Empresas," **Revista de Administracao de Empresas**, Sao Paulo, Brasil, April 1979 (co-author with Luis Ribeiro Dias).

"Computerized Bond Rating Replication: Worthwhile or Futile," **Basis Point**, Equitable Life Assurance Co., Fall 1979 and **Journal of Bank Research**, Winter 1982.

"Assessing Potential Financial Problems for Firms in Brazil," **Journal of International Business Studies**, Fall 1979 (co-author with T. Baidya and L. M. Ribeiro Dias).

"Les Groupments Pour L'Emission D'emprunts Obligataires," **Banque**, June 1980 (co-author with P. Tubiana).

"Commercial Bank Lending: Process, Credit Scoring and Lending Error Costs," Competitive Paper Prize Winner, Western Finance Association, 1980, and published in **Journal of Financial and Quantitative Analysis**, November 1980.

"Business Failure Classification in Canada," **Journal of Business Administration**, Fall 1980 (co-author with M. Lavallee).

"Statistical Classification Models Applied to Common Stock Analysis," **Journal of Business Research**, Vol. 9, pp. 123-149, 1981.

"Information Effects and Stock Market Response to Signs of Firm Deterioration," **JFQA**, March 1981 (co-author with M. Brenner).

"The Multi-Firm Debt Issue: A Fund Raising Financial Instrument," **Financial Management**, Summer 1981 (co-author with P. Tubiana).

"Managing a Return to Financial Health," **Journal of Business Strategy**, Summer 1981 (co-author with J. LaFleur).

"An Economic and Statistical Analysis of the Failing Company Doctrine," **NYU Working Paper**, Fall 1981 (co-author with L. Goodman).

"Aggregate Influences on Business Failure Rates in the U.S.: A Distributed Lag Analysis," **Revue of the French Finance Association**, December 1981.

"International Success of Business Failure Prediction Models," **Occasional Paper #5, NYU-Salomon Center**, 1982.

"Bankruptcy and Reorganization," Section in the **Financial Handbook**, 5th edition, E. Altman, editor, John Wiley & Sons, 1983 and 6th edition, 1987.

"Multidimensional Graphics and Bankruptcy Prediction: A Correction," **Journal of Accounting Research**, Spring 1983.

"Accounting Implications of Failure Prediction Models," **Journal of Accounting, Auditing & Finance**, Fall 1982.

"Discussant Comments on White and Clark & Weinstein's Bankruptcy Papers," **Journal of Finance**, May 1983 (from AFA Meeting, December 1982).

"Why Businesses Fail," **Journal of Business Strategy**, Spring 1983.

"Exploring the Road to Bankruptcy," **Journal of Business Strategy**, Fall 1983.

"A Comparison of Value Line's Financial Strength System with the Zeta Bankruptcy Classification Model," **Financial Analysts Journal**, November-December 1983 (co-author with J. Spivack); reprinted in **Financial Statement Analysis**, McGraw-Hill, R. Ball and S. Kothari, editors.

"Identifying Corporate Distress in Australia: An Industry Relative Analysis," **Journal of Banking& Finance**, June 1984 (co-author with H. Y. Izan, Special Issue on Company and Country Risk Assessment).

"Business Failure Prediction Models: An International Survey," **Journal of Banking & Finance**, June 1984.

"A Further Empirical Investigation of the Bankruptcy Cost Question," **Journal of Finance**, September 1984.

Comment on "Cash Flow – Its Not the Bottom Line," **Harvard Business Review**, September-October 1984.

"Airline Bankruptcies Propensities: A Zeta Analysis," Proceedings at the 25th Annual Meeting of the Transportation Research Forum, 1984, **TRF**, Washington, D.C. and Harmony Press, 1984 (co-author with Richard D. Gritta).

"Managing the Commercial Lending Process," in **Handbook for Banking Strategy**, edited by R. Aspinwall and R. Eisenbeis, John Wiley, 1984.

"Introducing Recursive Partitioning Analysis for Financial Analysis: The Case of Financial Distress," **Journal of Finance**, March 1995 (co-author with H. Frydman and D. L. Kao).

"The Default Rate Experience on High Yield Debt," **Financial Analysts Journal**, July-August 1985 (co-author with S. Nammacher), reprinted from paper of the same name, **Morgan Stanley & Company, Inc**., March 1985.

"I Modelli di Previsione Delle Insolvenze: Le Loro Applicazioni Alla Gestione D'Impresa," **Finanza Marketing e Produzione, Annu III**, No. 4, December 1985 (with J. LaFleur).

"Anatomy and Portfolio Strategies in the High Yield Debt Market," in **Modern Finance and Industrial Economics**, T. Copeland, editor, Basil Blackwell, 1986 (with S. Nammacher).

"Bankruptcy and Reorganization," section in **Handbook of Corporate Finance**, John Wiley, 1986.

"The High Yield Debt Market," section in **Handbook of Financial Markets and Institutions**, John Wiley, 1987.

"The Anatomy of the High Yield Debt Market," **Financial Analysts Journal**, July-August 1987.

"The Truth About the Junk Bond Market**," Investment Management Review**, November-December 1987.

"Do High Yield Securities Yield High Risk?" **Outlook**, FHLBB, 1988.

"Analyzing Risks and Returns in the High Yield Bond Market," **Financial Markets and Portfolio Management**, Zurich, Switzerland, March 1988.

"The High Yield Junk Bond Market," Chapter in **Investment Banking Handbook**, P. Williamson, editor, John Wiley & Sons, 1988.

Statement on "High Yield Bonds: Nature of the Market and Effect on Federally Insured Institutions," **U.S. General Accounting Office**, Washington, D.C., May 1988.

"Investment Performance of High Yield Junk Bonds," **Journal of Corporate Growth**, November 1988.

"Should We Regulate Junk Bonds?" from the Board, **Financial Analysts Journal**, January-February 1989.

"Mortality Rates on Bonds for Insurance Company Determination of Loss Reserves," **Record of the Society of Actuaries Journal**, Chicago, IL, Fall 1989.

“Investment Quality Measures Review,” **Society of Actuaries**, Vol. 14, 49, Fall 1989.

“Analyzing Risks and Returns of U.S. High Yield Bonds from a Japanese Investor’s Perspective,” **Japan and the World Economy** (with Y. Minowa) April 1989.

“Measuring Corporate Bond Mortality and Performance,” **Journal of Finance**, September 1989; abridged in **Financial Markets and Portfolio Management**, Zurich, March 1990, reprinted in **The Debt Market**, edited by S. Ross and F. Modigliani, Blackwell, 2001.

“Risk and Return Experience in the Corporate Convertible Debt Market,” **Financial Analysts Journal,** July/August 1989.

“Setting the Record Straight on Junk Bonds: A Review of the Research on Default Rates and Returns,” **Journal of Applied Corporate Finance**, Vol. 3, No. 2, Summer 1990.

“1989 Has Changed the Hierarchy of Fixed Income Securities Performance**,” Financial Analysts Journal**, May/June 1990 and Essays for Arnold Sametz (Festschrift), NYU Salomon Center, Fall 1990 and Business One Irwin, 1991.

“Investing in Distressed Securities,” **Investing**, Fall 1990, **Bonds Eye**, February 1991, and **Workouts and Turnarounds**, edited by DiNapoli, et. al., Business One Irwin, Homewood, IL, 1991.

“Defaults and Returns on High Yield Bonds Through the First Half of 1991,” **Financial Analysts Journal**, November-December 1991.

“Highly Leveraged Restructurings: A Valid Role for Europe,” **The Journal of International Securities Markets**, Winter 1991 (with Roy Smith).

“Firm Valuation and Corporate Leveraged Restructuring,” in **Bankruptcy and Distressed Restructurings**, E. Altman, editor, Business One Irwin, 1992 (with Roy Smith).

“Rating Drift of High Yield Bonds,” **Journal of Fixed Income**, March 1992 (with D.L.Kao).

“The Implications of Corporate Bond Rating Drift,” **Financial Analysts Journal**, May/June 1992 (with D. L. Kao).

“Revisiting the High Yield Debt Market,” **Financial Management**, Summer 1992.

“New Dimensions in Bankruptcy-Reorganization,” in **Bankruptcy and Distressed Restructurings**, E. Altman, editor, Business One Irwin, 1992.

“Mark-to-Market and Present Value Disclosure: An Opportunity or Costly Annoyance,” **Financial Analysts Journal**, March/April 1993.

"Evaluating the Chapter 11 Bankruptcy-Reorganization Process," **Columbia Business Law** Review, vol. 1993, No. 1.

"Defaulted Bonds: Supply, Demand and Investment Performance," **Financial Analysts Journal**, May/June 1993.

"Valuation, Loss Reserves and Pricing of Commercial Loans," **Journal of Commercial Bank Lending**, August 1993, reprinted and revised in **Journal of Lending & Credit Risk Management**, June 1997.

"Do Seniority Provisions Protect Bondholders' Investments?" **Journal of Portfolio Management**, (co-author with A. Eberhart), Summer 1994; reprinted in **High Yield Bonds: Market Structure, Portfolio Management and Credit Models**, T. Barnhill and W. Maxwell, editors, McGraw-Hill, 1999.

"Corporate Distress Diagnosis: Comparisons Using Linear Discriminant, Analysis and Neural Networks," **Journal of Banking & Finance**, 18.3, May 1994; reprinted in Trippi & Turban, **Neural Networks in Finance and Investing**, 2/E, 1996.

"Losses to Bankrupt Firms' Bondholders," in **The Financial Dynamics of the Insurance Industry**, E. Altman and I. Vanderhoof, editor, Irwin, 1994, (Ch. 7).

"Defaults and Returns on High Yield Bonds," in **The Financial Dynamics of the Insurance Industry**, E. Altman and I. Vanderhoof, editors, Irwin, 1994 (Ch. 21).

"Corporate Credit Scoring Models: Approaches and Tests for Successful Implementation," **Journal of Commercial Bank Lending**, May 1995 (with Robert Haldeman).

"Emerging Market Corporate Bonds – A Scoring System," **Salomon Brothers Emerging Market Bond Research**, May 15, 1995 (with John Hartzell and Matthew Peck), Reprinted in **The Future of Emerging Market Flows**, edited by E. Altman, R. Levich And J. P. Mei, Kluwer Publishing, 1997.

"Financial Distress and Restructuring Models," **Financial Management**, Summer 1995 (with Yehning Chen and J. Fred Weston).

"Credit Scoring Models and the Valuation of Fixed Income Securities and Commercial Loans," in **Credit Analysis of Non-Traditional Debt Securities, AIMR**, Charlottesville, June 1995.

"A Yield Premium Model for the High Yield Debt Market," **Financial Analysts Journal**, September/October 1995 (with Joseph Bencivenga), also in E. Altman and I. Vanderhoof, The Financial Dynamics of the Insurance Industry II, Irwin Publishing Company, 1996.

"Failure Prediction Evidence from Korea," **Journal of International Financial Management and Accounting**, Winter 1995 (with D. W. Kim and Y. H. Eom).

"Distressed and Defaulted Debt Securities: Market Dynamics and Market Performance," **Financial Markets and Portfolio Management**, Fall 1995.

"Almost Everything You Wanted to Know About Recoveries on Defaulted Bonds," **Financial Analysts Journal**, November/December 1996 (with V. Kishore), reprinted in **High Yield Bonds: Market Structure Portfolio Management and Credit Models**, T. Barnhill and W. Maxwell, editors, McGraw-Hill, 1999.

"Business Failure Classification Models: An International Survey," in **International Accounting and Finance Handbook**, second edition, Frederick D.S. Choi, editor, John Wiley & Sons, 1997 (with P. Narayanan).

"An International Survey of Business Failure Classification Models," **Financial Markets, Institutions and Instruments**, vol. 6, No. 2, 1997 (with P. Narayanan).

"Credit Risk Measurement: Development Over the Last 20 Years," **Journal of Banking & Finance**, vol. 21, No. 10, 1997 (with Anthony Saunders).

"Credit Risk Measurement and Management: The Ironic Challenge in the Next Decade," **Financial Analysts Journal**, January/February 1998 (with Jack Caouette and Paul Narayanan), reprinted in G. Gaeta, editor, The Certainty of Credit Risk, John Wiley & Sons, New York, 2002.

"Default and Returns on High Yield Bonds," in **Handbook of Corporate Debt Instruments**, edited by F. Fabozzi Associates, New Hope, PA, 1998.

"The Importance and Subtlety of Credit Risk Migration," **Journal of Banking & Finance**, 22, 1998.

"Including Defaulted Bonds in the Capital Market Asset Spectrum," **Journal of Fixed Income**, December 1998 (with F. Reilly and D. Wright).

"Market Dynamics and Investment Performance Distressed Securities," in **Workouts and Turnarounds II: Global Restructuring for the Next Century**, edited by R. Cushman, D. Napoli and S. Sigoloff, Business One Irwin, Homewood, IL, 1999.

"The Equity Performance of Firms Emerging from Chapter 11," **Journal of Finance**, October 1999 (with A. Eberhart and R. Aggarwal).

"Default Rates in the Syndicated Bank Loan Market: A Mortality Analysis," **Journal of Banking & Finance**, December 1999 (with Heather Suggitt).

"The BIS Proposal on Capital Adequacy and Ratings: A Commentary," **Journal of Lending & Credit Risk Management**, February 2000.

"Defaults and Returns in the High Yield Bond Market and Forecast for 2000-2002," **Journal of Business Economics**, April 2000.

"Revisiting the High Yield Bond Market: Mature But Never Dull**," Journal of Applied Corporate Finance**, Spring 2000.

"An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings," **Journal of Banking & Finance**, Vol, 25, No.1, 2001 (with Anthony Saunders).

"The Role of Credit Ratings in Bank Capital," in R. Levich, C. Reinhart and G. Majnoni, **Ratings, Rating Agencies and the Global Financial System**, Kluwer Publishing, 2002 (with Anthony Saunders).

"Managing Credit Risk: The Challenge in the New Millennium," **Economic Notes**, Fall, 2002.

"Defaults and Returns on High Yield Bonds: Analysis Through 2001," **Journal of Applied Finance**, vol. 12, No. 1, Spring/Summer, 2002.

"Credit Ratings and the BIS Capital Adequacy Reform Agenda," **Journal of Banking & Finance**, vol. 25, No. 5, May 2002, (with Anthony Saunders & S. T. Bharath).

"Revisiting Credit Scoring Models in a Basel 2 Environment," in **Credit Ratings, Methodologies, Rationale and Default Risk**, M. Ong, editor, Risk Books, London, Fall 2002.

"Measuring Default Risk in the U.S. High Yield Bond Market," in G. Gaeta, editor, **The Certainty of Credit Risk**, John Wiley, New York, 2002, (with B. Karlin).

"Credit Risk Measurement and Management: The Ironic Challenge in the Next Decade," in **Frontiers in Credit Risk**, G. Gaeta, John Wiley & Sons, 2003.

"Market Size and Investment Performance of Defaulted Bonds and Bank Loans," **Economic Notes**, 2003 (with J. Pompeii).

"Defaults and Returns in the High Yield Market," **Journal of Portfolio Management**, Spring 2004.

"Default Recovery Rates in Credit Risk Modeling: A Review of the Literature and Empirical Evidence," **Economic Notes**, Summer 2004 and **The Journal of Finance Literature**, inaugural issue, 2005.

"How Rating Agencies Achieve Stability," **Journal of Banking & Finance**, 28, 2004, (with H. Rijken).

"The Impact of Rating Agencies' Through-the-cycle Methodology on Rating Dynamics," **Economic Notes**, February 2005 (with H. Rijken).

"An Integrated Pricing Model for Defaultable Loans and Bonds," **European Journal of Operations Research**, Winter/Spring 2005 (with M. Onorato).

"The Link Between Default and Recovery Rates: Theory, Empirical Evidence and Implications," **Journal of Business**, November 2005 (with B. Brady, A. Resti and A Sironi). **Working Paper Series** #S-03-4, NYU Stern School of Business, and **ISDA** website, 2002.

"An Emerging Market Credit Scoring System for Corporate Bonds," **Emerging Market Review**, 6, December 2005.

"A Point-in-Time Perspective on Through-the-Cycle Ratings," **Financial Analysts Journal**, January-February 2006 (with H. Rijken).

"Effects of the New Basel Capital Accord on Bank Capital Requirements for SMEs," **Journal of Financial Services Research**, January 2006 (with G. Sabato).

"Credit Risk, Corporate Defaults, and the Link Between Default and Recovery Rates," **CFA Institute Conference** Proceedings Quarterly, September 2006.

"Default Recovery Rates Defy Forecasts in High-Yield, Distressed Debt Markets," **Journal of Corporate Renewal**, October 2006.

"Estimating Default Probabilities of Corporate Bonds Over Various Investment Horizons," **CFA Institute**, Volume 23, No. 1, March 2006.

"The Market in Defaulted Bonds and Bank Loans," **Journal of Portfolio Management**, 32, #4, Winter 2006.

"Defaults and Returns in the High-Yield Bond Market," **JARAF**, Vol. 1, No. 1, 2007 (with Brent Pasternack).

"Modeling Credit Risk for SMEs: Evidence from the U.S. Market," **ABACUS**, September 2007.

Publications: Monographs

The Success of Business Failure Prediction Models: An International Survey, Occasional Paper #5, Salomon Center, NYU, 1982.

Off Balance Sheet Activities of Banks: Managing the Risk/Reward Trade -Offs, Policy Viewpoints, Robert Morris Associates, Philadelphia, PA, 1983 (co-author with E. Goldberg and E. Furash).

Default Rate Experience on High Yield Debt, Morgan Stanley & Co., Inc., March 1985 (with Scott Nammacher).

High Yield Debt Anatomy, Morgan Stanley & Co., Inc., September 1985 (with Scott Nammacher).

Portfolio Analysis of the High Yield Debt Market, Morgan Stanley & Co., Inc., October 1985 (with Scott Nammacher).

The Anatomy of the High Yield Debt Market, 1985 Update, Morgan Stanley & Co., Inc. June 1986 (with Scott Nammacher) and 1986 Update, April 1987.

"Mortality Risk and Return Analysis of High Yield Bonds," **High Yield Bond Analysis and Risk Assessment, The Institute of Chartered Financial Analysts (AIMR),** Charlottesville, VA, 1990.

"Investing in Distressed Securities: The Anatomy of Defaulted Debt and Equities," Foothill Group, Inc., Los Angeles, CA, April 1990 and **Institutional Investor**, Global Finance Forum, June 1990.

Corporate Bond Rating Drift: An Examination of Credit Quality Rating Change Over Time, Research Foundation of CFA (AIMR), Charlottesville, VA, 1991 (with D. L. Kao).

"Analyzing and Explaining Default Recovery Rates," **International Swaps & Derivatives Association**, January 2002 (with A. Resti and A Sironi).

Editorial Boards – Academic

Founding Editor, **Journal of Banking & Finance** (Elsevier Publishing Co.), 1976-2007 (co-editor with David Cummins, Loretta Mester, Anthony Saunders and Giorgio Szego)

Board of Editors, **Investment Management Review** (now **Investing**), 1987

Editores Adjuntos, Revista Mexicana de Economía y Finanzas (**REMEF**), 2004-Present

Board of Editors, **Financial Analysts** Journal, 1988-1998

Board of Editors, **Journal of Credit Risk**, 2004-Present

Proceedings Editor, **Journal of Finance** (American Finance Association), 1968-1976

Editorial Board, **Advances in Working Capital Management**, edited by Yong H. Kim, JAI Press, 1985.

Special Editor, Issues of **Journal of Banking & Finance**, on **Company & Country Risk Analysis**, Vol. 8, No. 2, June 1984 and Spring 1989, Credit Risk, Vol. 22, No. 10, Winter 1998 and **Credit Ratings and the Proposed New BIS Guidelines on Capital Adequacy for Bank Credit Assets**, Vol. 25, No. 1, January 2001.

Editorial Board, **Journal of Bond Trading & Measurement**, since 2001, **Journal of Restructuring Finance**, since 2003.

Academic Ad-Hoc Referee for **American Economic Review, Journal of Finance, Western Economic Review, Journal of Financial & Quantitative Analysis, Financial Analysts Journal, Financial Management, Decision Sciences, JASA, JAAF, JIBS, and the National Science Foundations (U.S. and Canada), JFE, Management Science.**

Editorial Activities – Professional

Consulting Editor, **John Wiley, Frontiers in Banking & Finance Series**, 1982-present.
Consulting Editor, **Contemporary Studies in Economics & Finance** (JAI Press), 1975-1988, (with I. Walter).

Director, Advisor and Advisory Boards (Non-Academic, Non-Charitable)

Board of Directors – **Franklin Mutual Advisers (Franklin Mutual Series Fund)**, Since 1987
Board of Directors – **Automated Trading Desk (ATD)** - Since 2000
Advisor, **Salomon Brothers/Citigroup**, since 1994
Advisor, **Scientific Committee, Centrale dei Bilanci** (Italy), since 1986
International Advisor, **SERASA, S.A. (Brasil),** since 1998
Investment Advisory Board – **SCM Communications CBO1 Fund,** 1999-2003
Investment Advisory Board-**Stanfield Capital** - 2001
Investment Advisory Board-**NIB Capital, Netherlands,** 2001-2002
Investment Advisory Board-**Concordia Capital, since 2002**
Advisory Board, **Miller-Mathis**, since 2004
Advisor, **Investcorp**, since 2004
Investment Advisory Committee, **NY State Common Retirement Fund**, since 2004
Senior Advisory Board, **Droege & Company**, since 2005
Advisor, **iFlex Solutions**, since 2006

Administrative Activities

Academic Director, Fixed Income and Credit Markets Program, **New York University Salomon Center**, 1990-Present, Vice Director, 1993-2003.

Chairman of the **MBA Program**, New York University, Graduate School of Business Administration (1977-1989).

Co-Creator and Coordinator – **International Management Program** (New York University – Hautes Etudes Commerciale – London Business School), 1973-1976. Chairman of Steering Committee of **PIM** (1973-2001). Consortium of numerous international business schools.

Creator and Director: **Management Advisory Project,** New York University, (1978-1983). Faculty Management Board, 1984-1996.

Academic Coordinator, "NYU-Singapore National Productivity Board," **Senior Financial Executive Program**, 1982-1986 and **Singapore Institute of Management**, 1987-2004 and Institut Bank-Bank Malaysia, 1990 and 1992.

Academic Advisor: Open Enrollment and Custom Programs, NYU Stern Executive Development Programs, 2003.

Academic Director, "**Frontiers in Finance**" Executive Programs, NYU Salomon Center, since 2004.

Miscellaneous – Professional

Advisor to **Foundation National pour L'Enseignement de la Gestion des Enterprises**, Paris, France, 1970-1973
Advisor: **U.S. Congressional Commission on Bankruptcy Laws**, 1971-1973
Executive Council: **European Finance Association**, 1978-1980
Judge: Essay Contest, **Institute for Quantitative Research in Finance**, 1980, 1982, 1983, 1984
Director: **Financial Management Association**, 1982, 1983; President: 2002-2003
Advisory Panel: **SEC Commission on Financial Disclosure**, 1983
Advisory Board: **Chapter 11 Reporter**, 1984-1990
Advisory Board: **Center for Entrepreneurial Studies**, New York University, February 1984-1995
Advisor to **Centrale dei Bilanci**, Turin & Rome, Italy, & Member of Scientific & Technical Committee, 1985-Present
Judge: CEO of the Year Contest, **Financial World**, 1987, 1988
Advisory Board, **The MAC Group**, Eastern Region and Italian Practice, 1989-1995
Academic Advisory Board: **Hong Kong International Business School**, 1989-1992
Advisor: Mexican Workout Agency, **Valuacion y Ventas de Acciones**, Mexico City, 1996-1998
Advisor: Brazil, China, Taiwan and Spanish **Central Banks**
Advisory Board: (Academic Advisory Board Chairman) **Turnaround Management Association**, and Board Member, New York Chapter, since 1999; National Board of Directors - Since 2002
Advisor: Luigi Bocconi University's Center for Research (Milano), Croatian School of Business (Zagreb), since 2002
Senior Academic Advisor: **China Market Credit Management Association**, since 2002
Senior Advisor: **Credit Risk Management Institute**, Shanghai School of Finance & Economics, since 2002

Community Activities

President, Board of Directors: **Interschool Orchestras of New York**, 1992-2000
Chairman of the Board: **Interschool Orchestras of New York**, 1997-2003 (member since 1991)
Trustee: **American Museum of Financial History**, 1990-2002, Emeritus (since 2003)
Investment Advisory Board: **NY State Common Retirement Fund**

Foreign University Lecture and Programs

Argentina – Buenos Aires
Australia – AGSM, Western Australia, James Cook University, Brisbane, New South Wales, Melbourne, Kurin-Gai, UTS, National, Monash, Sydney, MacQuarie
Austria – Graz, Wien
Belgium - Antwerp
Brazil – Getulio Vargas, Sao Paulo, PUC-Rio, USP
Canada – Sherbook, McGill, York, Toronto, British Columbia
China – SHUFE, Shanghai, Tsinghua, Hunan
Denmark – Copenhagen School of Business
England – Manchester, City University, LBS
France – Bordeaux, Grenoble, HEC, CPA, INSEAD
Germany – Bochum, Frankfurt, Hohenheim, Kiel, Munich
Hong Kong – Hong Kong US&T, Chinese University, City University
India – Mumbai, Bangalore, Calcutta
Israel – Hebrew, Tel Aviv
Italy - Bergamo, Bari, Bocconi, Bologna, Cagliari, Firenze, Naples, Parma, Puglia, Rome, Siena, Trieste, Venice and Verona
Japan – Tokyo, Hitosubashi, Hakone, International University, Kobe, Keio
Malaysia – Universiti Putra
Mexico – Mexico City (ITAM), Monterrey (ITESM)
Netherlands – Free University, Erasmus
New Zealand – Auckland, Wellington
Poland – Warsaw School of Economics
Singapore – National University Singapore, Nanyang
South Africa – Cape Town
South Korea – Yonsei
Spain – ESTE (San Sebastian), Oviedo, CEMFI, A. Coruna, Valladolid, ESADE, Sevilla
Sweden – Stockholm School of Economics, Gothenborg
Switzerland – Zurich, St. Gallen
Taiwan – National Taiwan University
Thailand – Thammasat
Uruguay – National University
Venezuela – IESA

Executive Programs Developed and Taught

Beijing (Credit Risk); **Bangkok** (Credit Risk); **Frankfurt** (Credit Risk); **Munich** (Banking); **New York** University (Financial Crises, Risk Management, Credit Risk Management, Fixed Income Securities, Emerging Markets, High Yield, Distressed Debt); **Paris** (**HEC** & **CPA**) and **Fontainebleau** (INSEAD) – (Bank Risk Management and Corporate Restructuring); **Tel Aviv** (Banking); **Vienna** (Banking); **Tokyo** (Credit and Finance); **Western Australia** (Banking); **Singapore** (The Job of the CFO, Financial
Management and Financial Forecasting); **Hong Kong** (Financial Forecasting); **Amsterdam** (Emerging Markets and Financial Distress); **Rome**, **Milan**, and **Angera**, **Turin**, & **Verona** (Banking & Financial Distress, Credit Risk and Financial Management); **Seoul** (The Job of the CFO, Financial Distress); **Kuala Lumpur** (Credit Scoring); **Melbourne** (Accounting and Credit Risks); **Swiss Banking School**, **Zurich** (Credit Analysis); **Stockholm** and **Gothenborg** (Credit Analysis); **Auckland** and **Wellington** (Financial Distress & Credit Analysis); **Cape Town** (Turnaround Management); **Sao Paulo**, **Rio** (Credit Risk and Turnaround Management); **Sydney** (Corporate Distress, Credit Risk); **Buenos Aires** (Credit Risk Management); **Taipei** (Credit Risk); **Zurich** and **Geneva** (Credit Risk); **Warsaw** (Banking); **Mexico City** (ITAM-Credit Risk) and numerous financial institution in-house programs and seminar company conferences

Congressional and other Government Testimony

"Current Business Failure Epidemic," **House Subcommittee on Oversight of the Small Business Committee**, June 23, 1982.

"Credit Conditions and Economic Recovery: Corporate Liquidity and the Prospects for Business Investment," **House Subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance and Urban Affairs**, May 17, 1983.

"Potential Impact of High Yield Securities (Junk Bonds) on Credit Markets," **House Subcommittee on General Oversight and Investigations of the Committee on Banking, Finance and Urban Affairs**, September 19, 1985.

"Corporate Debt Default Experience and Prudent Financial Guaranty Insurance Policies," **Committee on Insurance, New York State Assembly**, October 1, 1986.

"Comments and Alternatives to Proposed Regulation No.130, Investments in High Yield-High Risk Obligations by Domestic Life Insurance Companies," **Insurance Department of New York State**, hearing on February 24, 1987.

Comments on an Inquiry into Present and Future Regulation of Life Insurance Company Investment Activities," **New York State Senate, Committee on Insurance**, March 17, 1987.

"Comments on Federally Insured Financial Institutions in High Yield Bonds," before a joint regulatory panel organized by the **General Accounting Office**, March 1, 1988

"Comments on Mergers and Acquisitions, LBO's and the Recent Increase in Corporate Debt," **U.S. House of Representatives Ways and Means Committee**, May 16, 1989

"Comments on Revisions to the U.S. Bankruptcy Code," **Special Congressional Commission on Bankruptcy Reform**, Washington, DC, 1996

"Comments on Basel II," U.S. **Senate Banking Committee**, June 16, 2003

"Review of the New Basel Accord," **United States Committee on Banking, Housing and Urban Affairs**, Washington, DC, June 18, 2003

Advisory Experience

Institution	Year	Project
*New Haven R.R. Bondholders	1968	Valuation Analysis in Bankruptcy
Cerro Corporation	1971	Merger Analysis
U.S. Commission on Bankruptcy Laws	1971-1973	Corporate Bankruptcy Analysis
General Public Utilities Corp.	1973	Utility Rate Analysis and Bond Analysis
National Association Of Security	1973	Early Warning Model for Dealers - Brokers-Dealers
Council on the Environment, NYU	1974	Railroad Subsidies in Bankruptcy
Chase Manhattan Bank	1974	Commercial Loan Evaluation Model
Federal Home Loan Bank Board	1974-1976	Early Warning Model for Savings & Loan Associations
JAI Press	1975-Present	Consulting Editor
Marine Midland Bank	1974	Business Finance Training
Equitable Life Assurance	1976	Business Finance Training
Wood, Struthers & Winthrop	1975-1978	Bankruptcy Screen (Donaldson, Lufkin & Jenrette) Model (ZETA) for Investment & Lending
*Schmidt's Beer	1978-1979	Legal-Economic Testimony
*Federal Trade Commission	1979, 1982	Failing Company Doctrine
Arthur Andersen & Co.	1978-Present	Audit Risk Analysis
ZETA Services Corp.	1979-1997	Financial Advisory
Chemical Bank	1980	Financial Seminar
John Wiley & Sons	1982-Present	Consulting Editor
Bank of America	1982-1983	Business Finance Seminar
National Productivity Board (Singapore)	1982-1987	Business Finance Seminars in Singapore
European American Bank	1982-1984	Corporate Finance Seminars
Bell System	1983	Bell Senior Management Program Seminars
Troostwijk & Troostwijk	1984	Banking Seminars
James D. Wolfensohn	1984	Client Solvency Analysis
IBM Corporation	1984-1986	Financial Analysis Seminars
Morgan Stanley	1984-1987	High Yield Bond Market Research and Financial Analysis Seminars
Irving Trust Co.	1985	Corporate Viability Seminar
Centrale dei Bilanci	Since 1985	Financial Data Analysis Banking School Instruction Advisor
Comex	1985-1987	Surveillance System Analysis Bond Index
Deutsche Bank	1985-1994	Financial Analysis Seminars
Swiss Bank Corporation	1986-1993	Financial Analysis Seminars
Salomon Brothers Inc	1986	Corporate Finance Seminar
European Asian Bank	1986-1987	Advanced Credit Analysis Seminar
Franklin Mutual Series Fund	Since 1986	Member of Board of Directors (Formerly Mutual Series Fund)
*Association of Financial	1986	Testimony on Default Rates & Guaranty Insurers Financial Guaranty Insurance
Citibank, N.A.	1987	High Yield Bond Seminar
Yamaichi Securities	1987-90	High Yield Bond Seminars and Corporate Finance
Securities Industry Association	1987	Testimony on High Yield Bonds
Equitable Life Assurance Co.	1987	Default Losses from Bonds
National Westminster Bank	1987-88	Corporate Finance Training
Bear Stearns & Company	1987	Corporate Restructuring Area
Deloitte, Haskings, Sells (Australia)	1987	Financial Risk Seminar
Merrill Lynch & Co.	1987-93	High Yield Bond Area Research Retainer
Credit Suisse Corporation	1987-90	Financial Analysis Seminar
*Sullivan & Cromwell	1987-88	Failing Company
	1993	Expert Witness Testimony
*Grais & Richards	1988	Valuation Analysis Advisory
*Russel H. Beatie, Jr.	1988	Legal and Financial Testimony
*D'ancona & Pflaum, Inc.	1988	Legal and Financial Testimony
Droege & Company	Since 2005	Senior Advisory Board

***Involves Expert Witness Testimony**
Bold Type Indicates Current (2006) affiliation

The MAC Group	1978-93	Associate & Member of Board of Advisors, Cambridge and Italy
*Cornerstone Research	1986-Present	Expert Testimony Affiliation
Yamaichi International	1989	Fixed Income Portfolio Management Advisory
Euromoney	1989-1990	Mergers & Acquisition Seminars
Quadrant Group	1989	Financial Advisory
Foothill Group, Inc.	1989-1990	Distress Securities Industry
	1992	Reports and Seminars
*Sagot, Jennings & Sigmond	1989-1990	Expert Testimony-Going Concern Valuation of Failed Company
*Gibson, Dunn & Crutcher	1991, 1998	High Yield Bond Market-Expert Witness Testimony
Institut Bank-Bank Malaysia	1990-1992	Financial Seminars for Executives in Malaysia
Bank Austria	1991	Executive Seminars
Standard & Poor's Corp.	1992-93, 98	Fixed Income Research
*Law & Economics Group	1992	Bankruptcy Testimony Consultation (Steel Industry)
*Prospect Street Investment, Bond	1992	Expert Affidavit on High Yield Market
*Fabricant, Yeskoo & Colangelo	1992	Expert Witness-Failing Firm Analysis
*Wilmer, Cutler & Pickering	1993	Expert Affidavit-Valuation of Securities
*Richards, Layton & Finger	1993	Expert Testimony-Firm Failure Prediction Analysis
Singapore Institute of Management	1988-2004	"Job of the CFO" Program
*Beatie, King & Abate	1993	Expert Testimony-Firm Failure Prediction
ANZ Bank	1993	Credit Risk Management Advisory
SouthPac Corporation	1993	Financial Restructuring Seminars
*Williams & Connolly	1994	Expert Testimony-Going Concern Valuation
Citigroup (formerly Salomon)	1994-Present	Global Corporate Bond Research, Consultation
*Roger & Wells	1995	Expert Testimony-Valuation of Securities
*Wachtell Lipton	1995	Valuation of High Yield Securitized Loans
Unibanco (Brazil)	1997-1998	Credit Scoring Systems
Valuacion y Ventas de Acciones (Mexico)	1996-1998	Loan Sales Programs
ICICI (India)	1997-2000	Credit Risk Management
*Gibson, Dunn & Crutcher	1998	Expert Testimony-High Yield Bonds
SERASA (Brazil)	Since 1998	Conference Chairman & Advisory
DistressDebt.Com	1999-2000	Chairman, Advisory Board
Shenkman/Sandler-CMO	1999-2003	Investment Advisory Board
Automated Trading Desk, Inc.	Since 2000	Member of Board of Directors
Anker Coal Corp.	2001-2002	Member of Board of Directors
Stanfield Capital	2001	Investment Advisory Board
NIB Capital (Netherlands)	2001, 2002	Investment Advisory Board
Concordia Advisors	Since 2002	Investment Advisory Board
Investcorp	Since 2004	Advisor
Miller-Mathis	Since 2004	Advisory Board
NY State Common Retirement Fund	2004-2006	Investment Advisory Committee

***Involves Expert Witness Testimony Preparation**
Bold Type indicates current (2007) affiliation