Joseph I. Rosenberg, MBA, MA, MPA, CFA

Charterholder, Chartered Financial Analyst Institute
Member, National Association of Forensic Economists
Member, Collegium of Pecuniary Damages Experts
Member, American Academy of Economic and Financial Experts

9821 La Duke Drive Kensington MD 20895

TEL: (301) 802-0617

FAX: (301) 495-9821, w/ notice e-mail: <u>irosenberg123@gmail.com</u> website: <u>www.joe-rosenberg.com</u>

EDUCATION:

Master of Business Administration – Finance, Accounting, Statistics, University of Chicago, Chicago, IL, 1985

Master of Arts – Economics, Virginia Polytechnic Institute (Virginia Tech), Blacksburg, VA, 1980 Master of Public Administration, University of Massachusetts, Amherst, MA, 1974 Bachelor of Arts – Political Science, Northeastern University, Boston, MA, 1972

PROFESSIONAL DESIGNATION AWARDED AND CURRENT:

Charterholder, Chartered Financial Analyst Institute (CFA), 1999.

SUMMARY OF QUALIFICATIONS:

Senior finance and economics professional. Mr. Rosenberg has over 40 years of experience as financial analyst and economist. He currently offers his Forensic Economic Services for Expert Testimony and Litigation Support in cases of in personal injury (PI); wrongful death (WD); wrongful termination (WT); medical/professional malpractice; commercial damages/business interruption/lost profits; mortgage fraud; damaged credit; and FINRA arbitration hearings in many state and federal jurisdictions throughout the country. For PI, WD, and WT cases, this includes calculating the present value of damage awards for loss of earning capacity, loss of various employee benefits, loss of household services, and life care plan valuations as appropriate, for past and future time periods.

Mr. Rosenberg is a widely recognized expert in various topics. These include discount rate methodologies to calculate damage awards, methodologies applied to medical price inflation forecasting, and pension treatment under the collateral source rule. He has been published eight times in peer-reviewed journals on topics related to these important issues, three times in

the <u>Journal of Forensic Economics</u>, four times in <u>The Earnings Analyst</u>, and once in the <u>Journal of Legal Economics</u>. Mr. Rosenberg also has been invited to make a number of presentations to his peers and has been a chosen panel discussant at several forensic economics conferences in recent years.

In addition, he has been asked to be on several panels of economic experts at conferences addressing this topic, as well as being asked to write an article in the Expert Opinion of <u>The Forecast</u>, the newsletter of the National Association of Forensic Economics, on the "Current Interest Rate" method of discounting damage awards.

Mr. Rosenberg has been invited to make a number of presentations to his peers or has been a chosen panel discussant at forensic economics conferences in recent years:

- Allied Social Sciences Association Annual Conference/National Association of Forensic Economists program (ASSA/NAFE), in 2013, 2014, 2016, 2017, 2019, and 2021;
- Annual Conference of Collegium of Pecuniary Damages Experts (<u>CPDE</u>), in 2013, 2014, 2015, 2019, 2021, and 2023;
- Annual Conference of American Academy of Economic and Financial Experts (<u>AAEFE</u>), 2017 and 2020;
- Eastern Economics Association Annual Conference/ National Association of Forensic Economists program (EEA/NAFE), in 2011, 2012, and 2016.

(Details further below.)

Until 2021, Mr. Rosenberg also provided his services as a trained Mediator, utilizing Alternative Dispute Resolution (ADR) methods to help parties resolve various civil, commercial, estate, and family law disputes without litigation. As a Certified Divorce Financial Analyst (CDFA), he had served as a Financial Neutral, both as Mediator and as a member of a Collaborative Professionals team. Mr. Rosenberg still offers part-time financial and economic consulting services for individuals and couples, including budgeting and cash flow analysis, Social Security benefit analysis (e.g., when to start collecting), mortgage-related decisions (e.g., type of mortgage to obtain, rate/point tradeoff), and disability policy buyout decisions. However, Mr. Rosenberg also no longer provides any of the fiduciary services offered by financial advisors, and thus does not offer financial planning, investment advice, security analysis, portfolio analysis, or any similar advisory services as those expected of Registered Investment Advisors.

Over many years, Mr. Rosenberg demonstrated a strong track record in economic and financial analytic methods used in portfolio management and in designing financial data systems used to forecast income and to manage risk in the secondary mortgage market. He has applied expertise in managing projects to ensure the integrity and consistency of financial data obtained from disparate sources. He is skilled in applying financial analytical, accounting, and statistical methods for risk management, income forecasting, and internal and external reporting. Mr. Rosenberg holds an MBA from University of Chicago in finance, accounting and

statistics, an MA from Virginia Polytechnic Institute in Economics, and has held the Chartered Financial Analyst (CFA) designation since 1999.

EXPERIENCE:

INDEPENDENT CONSULTING WORK, 1997-Present

Forensic Economist, 2011 - Present:

Perform economic loss appraisals for damage awards in personal injury, wrongful death, wrongful termination, and commercial damages litigation. Mr. Rosenberg have delivered economic loss appraisals and testified for cases within the jurisdictions of many states as well as U.S. District courts. Economic appraisals include, as appropriate, calculating the present value of damage awards for loss of earnings and/or earning capacity, loss of employee benefits, and loss of household services; various commercial damages/lost profits claims including contract fraud and business interruption; professional malpractice claims, including medical, financial, legal professions; and wrongful termination claims involving whistleblower retaliation and/or discrimination on the basis of gender, race, religion, sexual orientation, and age. In addition, have assisted in life care plan expense forecasting and reduction to present value, as well as mortgage fraud litigation, including calculating the present value of differential interest expense over the loan life resulting from the fraudulent action and its damaged credit impact. He also has analyzed disability policy buyout options for clients who either are considering policy termination offers or wish to propose a buyout to their insurance carriers.

Mediator/Collaborative Dispute Resolution Team Member, 2013 – 2020:

Performed as mediator for individuals and businesses, offered services in the areas such as divorce/family law, commercial/business, estate/probate, personal injury, and employment. As court-assigned mediator, assisted Maryland Circuit Court and Probate (Orphan's) Court with Alternative Dispute Resolution (ADR). Successfully obtained out-of-court settlements involving various commercial, personal injury, real estate/condo association, family estates, and employment disputes. For family law/divorce cases, utilized expertise as Certified Divorce Financial Analyst (CDFA) to serve as a "Financial Neutral" both as mediator and collaborative dispute resolution team member. In this capacity, helped couples to distinguish between marital and non-marital property, document the current values of all assets and liabilities to be split, and developed creative options for marital property settlement and, if appropriate, spousal maintenance, consistent with "fair and equitable" criteria as required in Maryland. From 2017-2019, served as Co-President of Howard County Collaborative Professionals (HCCP).

Financial Consultant to Federal Government, 2010 and 2012:

- Federal Housing Finance Agency (via subcontractor to Grant Thornton), April June 2012. Provided subject matter expertise to assess reasonable ranges for fair valuation results and to explain modeling differences between Fannie Mae and Freddie Mac.
- Fannie Mae, Business Analysis & Decisions Division, April November, 2010. Provided expertise on financial data systems projects to improve model performance tracking and risk management.

Registered Investment Advisor, 2008 - 2012

Provided independent financial planning and investment advising services for individuals. Prepare financial plans as needed.

Chair and Member, Investment Committee, Jewish Social Services Agency of Greater Washington, 1997- Present (volunteer)

Chair committee that manages approximately \$50 million endowment and liquidity funds, plus provides analytical support to CFO for pension fund. Committee member since 1997; Committee Chair since 2008Q1.

FANNIE MAE, WASHINGTON, DC

1988-2008

Director – Financial Data Integrity, Capital Markets Strategy/Enterprise Data, 1997—2008

Developed and maintained analytical tools and systems to help manage company's retained portfolio. Analytical systems were used to extract, validate, and reconcile all data used in department's risk management models. Ran models to explain and quantify valuation changes from updated book-of-business. Lead major projects to improve corporate data infrastructure. Standardized definitions and values across all corporate data systems to ensure consistency among all asset, debt, and derivative records. Developed data validation routines using statistical analysis to identify and prioritize data anomalies for further investigation and resolution. Managed up to eight staff in addition to various numbers of contactors.

Director – Portfolio Management; Director – Pricing, 1988—1997

Forecasted portfolio performance over different interest rate environments, improving portfolio data systems in process. Provided attributions of forecast results, sources of change, and analysis of forecast sensitivity to rate changes. Assisted in market room transactions, pricing of negotiated deals, and improving pricing policy documentation. Managed staff of six plus contractors.

FREDDIE MAC, RESTON, VA 1988

1986—

Manager - Model Development and Pricing

Developed and maintained models used to price mortgages daily and to perform related risk-return analyses.

GAS RESEARCH INSTITUTE, CHICAGO, IL AND WASHINGTON, DC

<u>1981—1986</u>

Manager of Energy Economics

Designed and managed contract research projects. Conducted in-house studies on production, conversion, and utilization of natural gas among other energy sources. Results used to perform R&D program evaluations and assist in budget allocation decisions.

MITRE CORPORATION, MCLEAN, VA

1976-1981

Economist

Managed or contributed to numerous economic, technical, and regulatory consulting assignments related to energy and the environment. In addition, led or contributed to proposal preparation (both sole source and in response to RFPs) and related marketing initiatives.

HITTMAN ASSOCIATES, COLUMBIA MD

1975-1976

Economic Analyst

Managed or contributed on several economic technical and regulatory consulting assignments related to energy and the environment, as well as responding to RFPs and various marketing initiatives.

FEDERAL GOVERNMENT, WASHINGTON, DC

<u>1974</u>

Policy Analyst

Assisted policy makers in three U.S. government agencies: Federal Insurance Administration, Federal Energy Administration, and the President's Council on Environmental Policy.

FORENSIC ECONOMICS PUBLICATIONS:

 "CMS Health Care Price Projections and Issues for Economic Damages Experts, Updated for 2021-2030", <u>The Earnings Analyst</u>, Volume 18, 2022, pp 1-42, Co-Authored with Sean P. Keehan.

- "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State
 of Maryland, <u>Journal of Forensic Economics</u> 29(2), 2021, 207-228. Co-authored with
 Thomas Borzilleri.
- "Pension Treatment under the Collateral Source Rule", <u>Journal of Legal Economics</u> 26(1-2): pp. 151–220, November 2020.
- "CMS Health Care Price Projections and Issues for Economic Damages Experts", <u>The Earnings Analyst</u>, Volume 16, 2019, pp. 1-28. Co-Authored with Sean P. Keehan.
- "Discount Rates for Determining the Present Value of Different Types of Pecuniary
 Damages-2016", <u>The Earnings Analyst</u>, Volume 15, 2016, pp. 61-72. Co-authored with Rob
 Schlegel and Allyn Needham.
- "Current Interest Rates: Objective, Observable, and Investible", invited essay under
 "Expert Opinion" column pp 8-9, "The Forecast" (Newsletter of the National Association of Forensic Economists), Volume 30, Issue 3, August 2016.
- "Negative Net Discount Rates: When Are They Appropriate, And How to Ensure Consistency When Derived from Current Market Yields and Less-Current Earnings Growth Forecasts", <u>The Earnings Analyst</u>, Volume 13, 2013, pp. 35-62. Published in September, 2014.
- "Damage Awards Using Intermediate Term Government Bond Funds vs. US Treasuries Ladder: Tradeoffs in Theory and Practice", <u>Journal of Forensic Economics</u> 23(1) 2012, pp. 1-31. Co-authored with Rick R. Gaskins.
- "Discounting Damage Awards Using the Zero Coupon Treasury Curve: Satisfying Legal and Economic Theory While Matching Future Cash Flow Projections", <u>Journal of Forensic</u> <u>Economics</u> 21(2), 2010, pp. 173-194.

FORENSIC ECONOMICS PRESENTATIONS AND CONFERENCE PARTICIPATION

- Presented paper "CMS Health Care Price Projections and Issues for Damages Experts,
 Updated for 2021-2030" at Annual Conference of Collegium of Pecuniary Damages Experts
 (CPDE) on March 4, 2023.
- Presented paper "An Introduction to CMS Health Care Price Projections & Issues for
 Economic Damages Experts" at NAFE Session 3: Valuing Life Care Plans & Earnings Losses
 at Allied Social Sciences Association Annual Conference/National Association of Forensic
 Economists program (ASSA/NAFE), on January 4, 2021 (scheduled for Chicago, held virtual).
 Also presented updated version of same paper at Annual Conference of American Academy
 of Economic and Financial Experts (AAEFE) on April 22, 2021 (virtual) and at Annual

- Conference of Collegium of Pecuniary Damages Experts (CPDE) on September 24, 2021 in Las Vegas, NV.
- Presented paper "Background for Panel Discussion LCPs (Life Care Plans) and Medical Price Inflation Forecasting" and participated in panel of forensic economists at Annual Meeting of Collegium of Pecuniary Damages Experts (CPDE), April 24-25, 2019, Las Vegas, NV.
- Presented paper "Pension Treatment Under The Collateral Source Rule" at Allied Social Science Association/National Association of Forensic Economics, Session II, (ASSA/NAFE), Annual Conference, January 4-6, 2019, Atlanta, GA.
- Invited as participant on expert panel for "NAFE Session I: Practical Perspectives on Growth Rate and Discount Rate Methodologies", at Allied Social Sciences Association Annual conference/National Association of Forensic Economists program (ASSA/NAFE), on January 6, 2017,
- Presented paper "Valuation of Stock Options in Wrongful Termination Cases: A Review and Case Study of Age Discrimination" at Forensic Economics Session II, Eastern Economics Association Annual Conference/ National Association of Forensic Economists program (EEA/NAFE), February 26-27, 2016, Washington DC.
- Invited as discussant at annual conference of Allied Social Sciences Association Annual
 conference/National Association of Forensic Economists program (ASSA/NAFE), Session II,
 for paper "Worklife Expectancy with Relative Frequency, Localized Regression, and Logit
 Estimated Transition Probabilities", January 3-5, 2016, Las Vegas, NV.
- Presented paper "The Use and Application of Worklife Expectancy Tables", at Annual Meeting of Collegium of Pecuniary Damages Experts (<u>CPDE</u>), March 20-21, 2015, Las Vegas, NV.
- Presented paper (with Allyn Needham and Robert Schlegel), "Discount Rates for Different
 Types of Pecuniary Damages, 2015" (section of paper on Personal Damages), at Annual
 Meeting of Collegium of Pecuniary Damages Experts (CPDE), March 20-21, 2015, Las Vegas,
 NV.
- Presented paper (along with Dr. Ronald Rosenberg, co-author), "Combined Expertise of Vocational and Economic Experts: The Whole is Greater than the Sum of the Parts", at Bar Association of Baltimore City, April 28, 2014, Baltimore, MD.
- Presented paper, "Negative Net Discount Rates: When Are They Appropriate", at Annual Meeting of Collegium of Pecuniary Damages Experts (<u>CPDE</u>), March 21-22, 2014, Las Vegas, NV.

- Presented paper, "Cross Examining the Plaintiff's Economist: How Much Difference Can Economic Assumptions Make, and How Well Can the Economist Defend Them?" at Maryland Defense Counsel sponsored event, Baltimore, MD, February 26, 2014.
- Presented paper (along with R. Gaskins, co-author), "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Maryland", at Allied Social Sciences Association Annual conference/National Association of Forensic Economists program (ASSA/NAFE), on January 3-4, 2014.
- Presented paper "How your Economist's Choice of Discounting Method Will Affect the Size of Your Damage Award", at Maryland Association for Justice, September 20, 2013.
 [Delivered similar presentations at Bar Association of Montgomery County (Maryland), Personal Injury Section, March 29, 2013, and at the Baltimore City Bar Association, Continuing Legal Education, Milton Talkin Lecture Series, March 14, 2013].
- Invited as participant on panel of expert economists on topic of "Discounting Streams of Income and Costs to Present Value (risk, return, attempting to make 'whole')", at Annual Meeting of Collegium of Pecuniary Damages Experts (CPDE), Las Vegas, NV, March 22-23, 2013.
- Invited as participant on panel of expert economists at Allied Social Sciences Association Annual conference/National Association of Forensic Economists program (ASSA/NAFE), Session IV on "Discounting to Present Value: Historical Averages or Current Interest Rates", including subtopic of Wage Growth and Discounting Assumptions in Personal Injury/Wrongful Death Litigation, San Diego, CA, January 4-5, 2013.
- Invited as discussant at Eastern Economics Association Annual Conference/ National
 Association of Forensic Economists program (EEA/NAFE), Session III, Topics in Forensic
 Economics III (including discount rate and medical issues), Boston, MA, March 9-11, 2012.
- Presented paper "Damage Awards Using Intermediate Term Government Bond Funds vs.
 US Treasuries Ladder: Tradeoffs in Theory and Practice," Eastern Economics Association
 Annual Conference/ National Association of Forensic Economists program (EEA/NAFE),
 February 25-26, 2011, co-authored with Rick R. Gaskins.

OTHER FINANCE AND ECONOMICS PUBLICATIONS:

- "The Right Choice (Duration is an Essential Measure of Interest Rate Risk. Here's How Investors Can Choose Among the Multitude of Measures)", Secondary Mortgage Markets, Summer 1988, pp. 24-28.
- "Risk, Return, and Regulation Among Energy Industries," *Public Utilities Fortnightly*, August 7, 1986, pp. 31-38.

- "Historical Development of Tight Formation Gas," Gas Research institute, May 1985, coauthored with M. Haas.
- "Various Roles Among Producers of Natural Gas," Gas Research institute, January 1985.
- "The Economic Benefits of R&D on Gas Supply Technologies, Gas Research institute, January 1985, co-authored with D. Nesbitt and R. Marshalla.
- "Underground Coal Gasification: Its Potential for Long-Term Supply of SNG," Gas Research institute, February 1984, co-authored with V. Hill, K. Burnham, S. Barone, and A. Ashby.
- "The Economics of Tight Sands Gas Extraction," Gas Research institute, August 1983.
- "The Economics of Producing Substitute Natural Gas," Gas Research institute, June 1983.
- "Naval Petroleum Reserves: Assessment of Alternative Operating Strategies Beyond 1982,"
 The MITRE Corporation, sponsored by the U.S. Department of Energy, Office of Naval
 Petroleum Reserves, June 1981, co-authored with L. Gsellman and M. Mendis.
- "Energy from Biomass: An Economic Analysis of Selected Biomass Energy Issues," *The MITRE Corporation*, sponsored by the National Science Foundation, December 1980.
- "Capital-Labor Substitution in the Coal Mining Industry," Thesis Submitted to the Graduate Faculty of the Virginia Polytechnic Institute and State University, in partial fulfillment of the requirements for the degree Master of Arts in Economics, September 1980.
- "Manpower for the Coal Mining Industry: An Assessment of Adequacy Through the Year 2000," *The MITRE Corporation,* sponsored by the U.S. Department of Energy, March 1980, co-authored with M. Mendis and D. Medville.
- "The State of the U.S. Bituminous Coal Industry," *The MITRE Corporation,* sponsored by the U.S. Department of Energy, April 1979, co-authored with B. Stokes.
- "Comparative Economic Assessment of Ethanol from Biomass," *The MITRE Corporation*, sponsored by the U.S. Department of Energy, September 1980, co-authored with M. Mendis and D. Medville.
- "Roles and Responsibilities of Energy-Related Environmental Organizations," *The MITRE Corporation*, sponsored by the U.S. Department of Energy, August 1978, co-authored with B. Stokes and M. Leithi.
- "Federal, State and Local Regulatory Powers Affecting Energy Processing and Related Development in the Appalachian Region," Hittman Associates, sponsored by the Appalachian Regional Commission, February 1987, co-authored with W. Fox.

FORENSIC ECONOMICS TRAINING:

Forensic Mechanics 101: Hands on Practice, June 17-18, 2010, at American Rehabilitation Economics Association Conference 2010 Annual Meeting. Key sessions included:

- Forensic Vocational Rehabilitation Practice
- Laying a Reasonable Foundation for Forensic Vocational Opinion, Personal Injury Case Study
- Laying a Reasonable Foundation for Forensic Vocational Opinion, Wrongful Death Case Study
- Work Life Expectancy and Life Expectancy Determination
- Loss of Household Services and Consortium

 Ethical Practices in Forensic Vocational Rehabilitation & Economic Expert Opinion: With Case Examples

ALTERNATIVE DISPUTE RESOLUTION TRAINING:

- Refresher Mediation Training, Community Problem solving Program of Frederick county and the National Center for Mediation Education, September 22, 2018.
- 47 Things Mediator and Collaborative Professional Should Know, April 19, 2015, Maryland State Bar Association, Alternative Dispute Resolution Section Counsel
- Re-Certification Seminar for Civil Mediation, May 31, 2013, Bar Association of Frederick County, Frederick, MD
- Collaborative Law Training, Civil and Commercial Applications, May 9-11, 2013, CLE- Bar Association of Montgomery County, Rockville, MD
- Divorce Mediation Training Workshop, by Mediation Matters, March 15-19, 2012, Bethesda,
 MD
- Collaborative Divorce Team Training, by Collaborative Practice Training Institute, November 11-13, 2010, Roanoke, VA

PROFESSIONAL AFFILIATIONS:

- Chartered Financial Analyst Institute (CFA)
- National Association of Forensic Economics (<u>NAFE</u>)
- Collegium of Pecuniary Damages Experts (<u>CPDE</u>)
- American Academy of Economic and Financial Experts (AAEFE)

HONORS:

- Invited as participant for panel discussion at Collegium of Pecuniary Damages Experts (CPDE) Annual Conference, session on "Medical Inflation Forecasting: Discussion and Practice", March, 2023.
- Invited as participant on panel of experts at Allied Social Sciences Association Annual Conference/National Association of Forensic Economists program (ASSA/NAFE), session on Valuing Life Care Plans & Earnings Losses, January, 2021.
- Invited as participant on panel of experts at Allied Social Sciences Association Annual Conference/National Association of Forensic Economists program (ASSA/NAFE), session on Practical Perspectives on Growth Rate and Discount Rate Methodologies, January, 2017.
- Invited as participant on panel of experts at annual meeting of *Collegium of Pecuniary Damage Experts* (CPDE) on topic of "Discounting Streams of Income and Costs to Present Value (risk, return, attempting to make "whole")", March 2013.
- Invited as participant on panel of experts at *Allied Social Sciences Association Annual conference/National Association of Forensic Economists program (ASSA/NAFE)*, session on

Discounting to Present Value: Historical Averages or Current Interest Rates", including subtopic of Wage Growth and Discounting Assumptions in Personal Injury/Wrongful Death Litigation, January 2013.

- Chairman's Award, to team, for preparing systems for meeting new FASB derivatives standards, 2000 (at Fannie Mae).
- Finance's Finest Award, to team, for analyses of impacts from proposed new FASB derivatives standard, 1999 (at Fannie Mae).
- CIS Excellence Award, nominee, for Debt Walkforward/Reconciliation Routine, 1996 (at Fannie Mae).
- Awarded second prize in nationwide competition by *Public Utilities Fortnightly*, for research paper "Risk, Return, and Regulation Among Energy Industries", 1985. Presented at Fifth Annual Georgia Public Utilities Conference in Atlanta Georgia, September 1985 (at Gas Research Institute).
- Invited to present paper "The Economics of Producing Substitute Natural Gas," at 1983 International Gas Research Conference, London England, June 13-16, 1983.