MICHAEL T. CLIFF, PH.D.
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Dr. Cliff is a financial economist with expertise in a range of topics, including asset valuation, mergers and acquisitions (M&A), tax shelters, stock analysts' recommendations, IPOs, real estate investment trusts (REITs), derivatives, and hedge funds. He has extensive experience with large financial datasets, sophisticated econometric models, and simulations. In his consulting engagements, Dr. Cliff has addressed damages modeling, class certification, business and asset valuation, analysis of complex financial structures, analysis of solvency and debt covenants, evaluation of investment strategies, and assessment of due diligence practices. In these assignments, he has managed large case teams, designed and performed analyses supporting export reports, critiqued opposing expert reports, and assisted with preparation for depositions and trial. Dr. Cliff has also served as an expert on cases involving valuation, damages, and liquidity discounts. Prior to joining Analysis Group, Dr. Cliff was a finance professor for nine years at Purdue University and Virginia Tech, where he taught a variety of courses at the undergraduate, M.B.A., and Ph.D. levels. His academic research has been published in leading journals such as the *Journal of Finance*, the *Journal of Business*, and *Financial Management*.

EDUCATION

2000	Ph.D., business administration (finance), University of North Carolina at Chapel Hill
1993	B.S., finance, Virginia Tech

PROFESSIONAL EXPERIENCE

2009–present	Analysis Group, Inc. *Managing Principal* *Vice President* *Manager*
2003–2009	Virginia Tech *Director, Ph.D. program in finance (2006–2009)* *Assistant Professor of Finance* *Visiting Professor*
2000–2003	Purdue University *Assistant Professor of Finance*
1996–2000	University of North Carolina at Chapel Hill *Graduate Assistant*

1993–1996 First Annapolis Consulting
Senior Research Analyst
Research Analyst

EXPERT REPORTS AND TESTIMONY

- ***Stefano Farsura and SF Capital Partners LLC v. QC Terme US Corp.***
  United States District Court, Southern District of New York
  Valuation of a minority stake in a privately held spa company.
  Expert Report: October 23, 2023

- ***Paul Davis v. Larry Port, Raymond Wechsler, and Cerberus Capital Management, L.P.***
  Supreme Court of the State of New York, County of New York
  Rebuttal report assessing the fair value of Scottish Re ordinary stock in recognition of the liquidation preference of convertible preferred stock.
  Expert Report: September 15, 2023
  Deposition: October 2, 2023

- ***Sudrania Fund Services Corp. v. NAV Consulting, Inc.***
  United States Patent and Trademark Office, Trademark Trial and Appeal Board
  Discussed common understanding of "NAV" in the context of the investment management industry for a trademark dispute.
  Expert Report: August 2, 2023

- ***John Barnett v. United States of America***
  United States District Court, Western District of Virginia
  Rebuttal damages report assessing costs of future medical care and lost income in a dispute over medical care that allegedly resulted in a permanent disability.
  Expert Report: March 3, 2023

- ***In the Matter of 58.com***
  Grand Court of the Cayman Islands, Financial Services Division
  Opined as to the categories of information relevant to assessing fair value in an appraisal and the need for a deal process expert during the initial stages of the litigation.
  Affidavits: June 16, July 1, and July 14, 2021

- ***Discover Growth Fund LLC v. CleanSpark, Inc.***
  Judicial Arbitration and Mediation Services, Inc.
  Analyzed damages associated with a failure to deliver shares owed pursuant to convertible debt financing and a right of first refusal.
  Expert Report: December 1, 2020

- ***Seaport Global Securities LLC v. SB Group Holdco, LLC, et al.***
  Supreme Court of the State of New York, County of New York
  Rebuttal of counter-claimants' damages report regarding a dispute over the sale of stock in a company that was not publicly traded.
  Expert Report: October 15, 2019
  Deposition: November 15, 2019

- ***William West v. Access Control Related Enterprises, LLC, et al.***
  Superior Court of the State of Delaware
  Evaluated damages to William West related to his termination from Access Control Related Enterprises (ACRE). Elements of damage include the value of ACRE common equity and lost compensation.
  Expert Report: July 30, 2019

- ***Colleen Graham v. Credit Suisse First Boston Next Fund, Inc., et al.***
  Judicial Arbitration and Mediation Services, Inc.
  Rebuttal testimony regarding the valuation of Signac, LLC, a joint venture between Credit Suisse and Palantir Technologies that provided trader oversight software solutions.
  Testimony at Arbitration Hearing: March 12, 2018

- ***Martin Tankleff v. The County of Suffolk, et al.***
  United States District Court, Eastern District of New York
  Calculated damages from lost wages and lost inheritance resulting from false imprisonment.
  Expert Report: August 15, 2017

- ***Taxpayer v. United States of America***
  United States District Court, Middle District of Florida
  Examined the fair value of a block of restricted shares in a publicly traded company that were donated by the Taxpayer.
  Expert Report: December 1, 2016
  Deposition: January 17, 2017

- ***Lexington Logistics LLC v. Schoeller ARCA Systems, Inc., et al.***
  American Arbitration Association
  Rebuttal of plaintiffs' damages report related to dispute over contract for purchase of plastic shipping pallets. Analyzed three damages theories: 1) liquidated damages; 2) lost profits; and 3) lost equity value.
  Expert Report: December 17, 2012
  Testimony at Arbitration Hearing: August 29, 2013

SELECTED CONSULTING ASSIGNMENTS

Investments and Securities

- ***In re: Dell Technologies Inc. Class V Stockholders Litigation***
  Delaware Court of Chancery
  Evaluated fairness of 2018 transaction that exchanged Dell's tracking stock related to VMware with a mix of cash and Dell common stock.

- ***In the Matter of the Otto Bremer Trust***
  State of Minnesota District Court
  Assessed whether Bremer Bank could double its dividend and maintain adequate capital.

- ***Barai, et al. v. CVR Refining, LP, et al.***
  Delaware Court of Chancery
  Summarized analysts' views of valuation consequences of a call right that was activated by an exchange offer and assessed whether the general partner's decision to offer no recommendation on tendering into the exchange offer was reasonable.

- ***Bandera Master Fund LP, et al. v. Boardwalk Pipeline Partners, LP, et al.***
  Delaware Court of Chancery
  Evaluated loss causation and assessed damages to limited partners of Boardwalk Pipeline following the buyout of their public units through the general partner's exercise of a call right.

- ***Investor Class and Employee Class v. Public company***
  US District Court, District of Columbia
  Rebutted plaintiffs' damages model related to three distinct categories of alleged misstatements under Rule 10b-5. Evaluated damages under Section 11 claims brought by participants in defendants' employee stock purchase plan.

- ***Financial intermediary v. Property developer***
  US District Court, Northern District of Texas, Dallas Division
  Assessed damages arising from a real estate financing transaction that did not close, including the cost of hedging interest rate risk.

- ***Sonera Holding B.V. v. Çukurova Holding A.S.***
  International Court of Arbitration, Geneva
  Calculated damages arising from a breach of contract dispute in which Çukurova had agreed to sell its shares of Turkcell Holding, a joint venture, to Sonera. The sale would have provided Sonera with a controlling stake in Turkcell.

- ***Federal Housing Finance Agency v. Goldman Sachs***
  US District Court, Southern District of New York
  Evaluated claims that appraisals supporting loans pooled in mortgage-backed securities (MBS) were inflated and failed to comply with industry standards.

- ***Federal Home Loan Bank of Seattle v. Deutsche Bank and Goldman Sachs***
  Superior Court of Washington for King County
  Evaluated claims that appraisals supporting loans pooled in MBS were inflated and failed to comply with industry standards.

- ***Federal Home Loan Bank of San Francisco v. J.P. Morgan Securities***
  Superior Court of the State of California, City and County of San Francisco
  Evaluated claims that appraisals supporting loans pooled in MBS were inflated and failed to comply with industry standards.

- ***Veleron Holding B.V. v. Morgan Stanley, et al.***
  US District Court, Southern District of New York
  Rebutted claims of insider trading and market manipulation associated with short selling that Morgan Stanley conducted in order to hedge its risk on a credit default swap.

- ***Private shell company v. Acquisition target***
  Judicial Arbitration and Mediation Services, Inc., Boston
  Assessed whether a "roll-up" IPO failed due to a US Securities and Exchange Commission (SEC) inquiry related to improper invoicing practices on the eve of the IPO.

- ***Carlo Vichi v. Koninklijke Philips Electronics, et al.***
  Delaware Court of Chancery
  Evaluated whether the interest rate on a €200 million loan to a joint venture (JV) was consistent with an implicit guarantee by the JV parents, and examined the due diligence practices of the lender. Rebutted the claim that the JV's projections were flawed due to its alleged participation in a cartel.

- ***Financial Industry Regulatory Authority (FINRA) v. Broker-Dealer and Principal***
  FINRA Office of Hearing Officers
  Analyzed the risk and return characteristics of unlisted REITs, and evaluated the policies related to the pricing, distribution, liquidity, and share redemption for a particular family of REITs promoted by the respondents.

- ***Trustee for bankrupt public corporation v. Officers and directors***
  US Bankruptcy Court, Eastern District of Virginia, Richmond Division
  Analyzed the role of auction-rate securities portfolio held by a 1031 Exchange subsidiary in bankruptcy of the parent company. (Mediation support)

- ***SEC v. Public company***
  US District Court, District of Idaho, Southern Division
  Analyzed reliance and materiality in a Rule 10b-5 case related to alleged misstatements and manipulative trading.

- ***Pharma company A v. Pharma company B, et al.***
  US District Court, District of New Jersey
  Examined the extent to which fees and increased interest rates for amendment to the plaintiff's debt facilities were due to relaxed financial covenants as opposed to other considerations. Adjustments to financial covenants stemmed from the defendants' "at-risk" launch of a drug infringing on the plaintiff's patents.

- ***Class action v. Public corporation***
  US District Court, Central District of California
  Analyzed the materiality of option-granting practices, assessed statistical evidence of backdating, and calculated damages.

- ***Mortgagors v. Mortgage lender and reinsurance subsidiary***
  US District Court, Eastern District of Pennsylvania
  Evaluated the profitability and risk transfer of a captive reinsurance program.

- ***Presnow Limited, et al. v. Ashbridge Investment Management, LLC, et al.***
  US District Court, Southern District of New York
  Evaluated due diligence practices of a "family office" in connection with its recommendation of a hedge fund to clients.

- ***Fund of hedge funds v. Hedge fund manager***
  Supreme Court of the State of New York, County of New York
  Evaluated the performance of an MBS hedge fund during the 2007 subprime mortgage crisis.

- ***Individual investor v. Hedge fund manager***
  American Arbitration Association
  Assessed the investment performance of a hedge fund with a stated strategy of investing in a small number of stocks.

- ***Various Native American tribes v. United States of America***
  US Court of Federal Claims
  Designed damages model in dispute over the performance of a fixed-income portfolio. Conducted research and analysis to demonstrate that the trustee's selected portfolio was prudent given investors' objectives and statutory constraints on the trust.

- ***Individual investor v. Hedge fund and manager***
  American Arbitration Association
  Evaluated an MBS hedge fund manager's decision to deny an investor's request for a lock-up waiver during the subprime mortgage crisis in 2007.

- ***Beneficiaries of family trust v. Financial institution***
  State of Illinois, Circuit Court of Cook County
  Conducted a simulation analysis to demonstrate that trust funds were not prudently invested. Calculated damages resulting from a poorly diversified portfolio.

- ***Investment management firm***
  Assisted with the implementation of a trading strategy based on analyst recommendations.

M&A

- ***Venator Materials PLC v. Tronox Limited***
  Delaware Superior Court
  Assessed potential damages in connection with a "hell or high-water" provision in a transaction that failed to get FTC approval.

- ***Simon Property Group, Inc. v. Taubman Centers, Inc.***
  Michigan Circuit Court
  Evaluated whether 1) the COVID-19 pandemic had a disproportionate and durationally significant effect on Taubman relative to industry peers, triggering the material adverse event (MAE) clause in the merger agreement with Simon, or 2) Taubman failed to operate in the "ordinary course of business" in response to the pandemic. Calculated damages to Taubman caused by Simon's termination of the merger agreement.

- ***DecoPac Holdings Inc., et al. v. KCAKE Acquisition, Inc., et al.***
  Delaware Court of Chancery
  Evaluated the effect of the COVID-19 pandemic on DecoPac, a supplier of ingredients for custom-made cakes that was the target in a pending acquisition, in the context of a material adverse event (MAE) clause in the merger agreement.

- ***Third Point LLC v. Sotheby's, et al.***
  Delaware Court of Chancery
  Conducted research on the prevalence of two-tiered poison pills and evaluated economic arguments related to the impact of investor activism on shareholder value.

- ***Casino Guichard-Perrachon, et al. v. Companhia Brasileira de Destribuicao, et al.***
  International Chamber of Commerce Arbitration
  Evaluated potential damages to Companhia Brasileira de Destribuicao (CBD) resulting from Casino's rejection of a proposed merger. Analyzed the extent to which stock price movements were driven by anticipated synergy gains as opposed to other factors such as trading by Casino, improved voting rights, and market-wide movements over an appropriate window of time.

- ***Catalent Pharma Solutions, Inc. v. Sharp Corporation, et al.***
  US District Court, Southern District of New York
  Calculated damages resulting from Sharp's violation of a confidentiality agreement during the M&A sales process.

- ***Martin Marietta Materials, Inc. v. Vulcan Materials Company***
  Delaware Court of Chancery
  Examined the prevalence of "standstill" provisions in M&A confidentiality agreements to aid the interpretation of whether Martin Marietta's $5.7 billion hostile bid for Vulcan was an inappropriate use of confidential information.

Valuation

- ***Individual v. Law firm***
  Massachusetts Superior Court
  Valued a hedge fund management company in a dispute stemming from a legal malpractice claim.

- ***BCIM Strategic Value Master Fund, LP v. HFF, Inc.***
  Delaware Court of Chancery
  Valued HFF, a real estate capital markets company, in an appraisal action following its acquisition by JLL, a strategic acquirer, in a stock and cash deal.

- ***Public Investors v. Directors of Public Corporation and Affiliated Investor***
  Delaware Court of Chancery
  Conducted a valuation of a manufacturing company in the context of the entire fairness standard regarding a transaction in which affiliates of a PE-firm owned the target and allegedly controlled the public company making the acquisition.

- ***Charles Almond, et al. v. Glenhill Advisors LLC, et al.***
  Delaware Court of Chancery
  Evaluated whether two financings from affiliated entities were fair to outside shareholders of Design Within Reach.

- ***In re: Appraisal of Jarden Corporation***
  Delaware Court of Chancery
  Valued Jarden, a consumer products company, in an appraisal action following its acquisition by Newell Brands, a strategic acquirer. Evaluated estimates of synergies, which were a significant factor behind the merger.

- ***In re: Appraisal of Solera Holdings, Inc.***
  Delaware Court of Chancery
  Valued Solera in an appraisal action following a leveraged buyout by Vista.

- ***In re: Appraisal of PetSmart, Inc.***
  Delaware Court of Chancery
  Valued PetSmart in an appraisal action following a leveraged buyout by BC Partners.

- ***In re: Appraisal of Dell Inc.***
  Delaware Court of Chancery
  Valued Dell in an appraisal action following its going-private transaction.

- ***Investor v. Company***
  US District Court, Southern District of New York
  Valued a compound warrant using binomial model and Monte Carlo simulation. The warrant featured a standard call option, a binary put option, and a short call option.

- ***Executive v. Auditor***
  International Institute for Conflict Prevention & Resolution
  Valued a portfolio of executive stock options using binomial and Black-Scholes models.

- ***Huff Fund Investment, et al. v. CKx, Inc.***
  Delaware Court of Chancery
  Valued CKx, whose assets included the rights to *American Idol*, in connection with an appraisal action following its acquisition by Apollo.

Tax Matters

- ***Family trust v. United States of America***
  US Court of Federal Claims
  Evaluate the economic aspects of a tax shelter that sought to avoided embedded capital gains taxes on a family corporation's portfolio of highly appreciated assets by structuring it as a stock sale rather than an asset sale. Analyze the solvency of the purported buyer in the transaction.

- ***Large multi-national corporation v. Commissioner of Internal Revenue***
  US Tax Court
  Evaluate the finance principles underlying the profit-level indicators the IRS relied on in contesting the transfer prices a corporate taxpayer used in connection with intellectual property (IP).

- ***Large multi-national corporation v. United States of America***
  US District Court, District of Connecticut
  Assessed economic substance of a series of intra-company transactions associated with the "unstacking" of a collection of insurance and reinsurance companies.

- ***Tax shelter participants v. Law firm***
  Supreme Court of the State of New York, County of New York
  Assessed mitigation strategies and damages resulting from an alleged error in drafting deal documents related to a tax shelter transaction under Internal Revenue Code Section 1042.

- ***Trustee for ESOP v. Financial intermediary***
  US District Court, Eastern District of Pennsylvania
  Evaluated the reasonableness of fees charged by a financial intermediary in connection with a tax arbitrage transaction that it arranged under Internal Revenue Code Section 133.

- ***United States of America v. Estate of individual taxpayer***
  US Bankruptcy Court, Middle District of Florida, Tampa Division
  Analyzed the solvency of a corporation in a fraudulent conveyance case.

- ***Corporate taxpayers v. Commissioner of Internal Revenue***
  US Tax Court
  Valued portfolios of distressed consumer receivables in a series of related tax shelters.

- ***Investor v. Investment advisor and affiliates***
  American Arbitration Association
  Prepared a rebuttal damages report related to the defendants' failure to properly structure a tax-advantaged investment transaction.

- ***Corporate taxpayer v. United States of America***
  US Bankruptcy Court, Middle District of Florida, Tampa Division
  Analyzed the appropriate discount for a portfolio of home mortgages in a tax dispute over the recognition of revenue.

General

- ***South Carolina Electric & Gas Company (SCE&G) v. South Carolina Public Service Commission, et al.***
  US District Court, District of South Carolina
  Public Service Commission of South Carolina
  Evaluated the likely impact of South Carolina Laws Acts 285 and 287 on SCE&G and its customers. These Acts sought to retroactively disallow previously approved rates in connection with SCE&G's construction of a new nuclear power plant.

- ***Trucking company A v. Trucking company B***
  Confidential Mediation
  Evaluated damages claims by company A, and counter-claims by company B, related to company B's purchase of a trucking company subsidiary from company A.

- ***Class of mortgage borrowers v. Large bank***
  US District Court, District of Massachusetts
  Rebuttal of the plaintiffs' class certification related to alleged breach of contract for mortgages subject to modification under the Home Affordable Modification Program (HAMP) and related in-house programs.

- ***Dayton Power and Light Company (DP&L)***
  Public Utilities Commission of Ohio
  Evaluated the impact on DP&L's financial condition should PUCO reject the Service Stability Rider in the proposed rate structure.

- ***GlaxoSmithKline LLC. v. Shire US Inc.***
  Pennsylvania Court of Common Pleas, Philadelphia County
  Analyzed whether the defendant undertook commercially reasonable efforts to co-promote a drug with the plaintiff.

- ***Minority shareholder v. Private corporation and executives***
  State of Alabama, Circuit Court of Madison County
  Evaluated executive compensation at privately held software firm.

- **Consulting firm**
  Evaluated a model used to value a portfolio of credit card receivables.

Intellectual Property

- ***Source Search Technologies, LLC v. Kayak Software Corporation***
  US District Court, District of New Jersey
  Calculated reasonable royalty damages associated with the defendant's infringement of patent related to travel searches.

- ***Complex Systems, Inc. v. ABN AMRO Bank N.V.***
  US District Court, Southern District of New York
  Analyzed the disgorgement of profits related to a violation of copyright for trade finance software.

- ***Timothy Robinson and Whorl, LLC v. Cohen Mohr, Perkins Coie, et al.***
  Commonwealth of Virginia, Circuit Court of Fairfax County
  Assessed damages related to an alleged improper structuring of an asset purchase agreement in which the seller claims the notes it received were to be secured by a lien on the IP it sold. Valued the intellectual property portfolio.

- ***MoonScoop SAS v. American Greetings Corporation***
  US District Court, Northern District of Ohio, Eastern Division
  Quantified damages resulting from the defendant's failure to complete the sale of Strawberry Shortcake and Care Bears properties to plaintiff.

PUBLICATIONS AND PRESENTATIONS

Peer-Reviewed Journal Publications

"Hedge Funds: The Good, the Bad, and the Lucky," with Yong Chen and Haibei Zhao, *Journal of Financial and Quantitative Analysis* 52(3):1081-1109 (2017)

"An Econometric Investigation of the Determinants of U.S. Supreme Court Decisions," with John Summers, John and Michael Newman, *Tennessee Law Review* 83(4):1-62 (2016)

"Do Affiliated Analysts Mean What They Say?" *Financial Management* 36(4):1-25 (2007)

"How Do IPO Issuers Pay for Analyst Coverage?" with David Denis, *Journal of Investment Management* 4(2):48-60 (2006)

"Investor Sentiment and Asset Valuation," with Gregory Brown, *Journal of Business* 78(2):405-440 (2005)

"Do IPO Firms Purchase Analyst Coverage with Underpricing?" with David Denis, *Journal of Finance* 59(6):2871-2901 (2004)

"Investor Sentiment and the Near-Term Stock Market," with Gregory Brown, *Journal of Empirical Finance* 11(1):1-27 (2004)

Other Publications

"Data Pinpoints Expert Valuation Differences in Delaware Appraisals," *Law360*, October 10, 2019.

Presentations to Law Firms and Participation in CLE Classes

2018	Washington DC	Mock Deposition
2017	Palo Alto, CA	Economic Issues in Delaware M&A Litigation
2014	New York	Current Topics in M&A Litigation
2013	New York	Current Topics in M&A Litigation
2012	New York	Mock Deposition

Academic Presentations

Arizona State University, Batten Young Scholars Conference (William and Mary), Federal Reserve Board of Governors, Financial Management Association, Financial Research Association, New York University EVI Conference (coauthor), Northern Finance Association (coauthor), Paris Conference on Hedge Fund Research, Pennsylvania State University, Purdue University, University of California, Davis / Financial Management Conference (Napa), University of Arizona, University of Arkansas, University of Miami, University of Pittsburgh, University of North Carolina, University of Virginia, UNC-Duke Behavioral Finance Conference, Utah Winter Finance Conference (coauthor), Virginia Tech, Western Finance Association