

BIN ZHOU
Principal

Cambridge, MA

+1.617.864.7900

Bin.Zhou@brattle.com

Dr. Bin Zhou is a member of The Brattle Group's Finance Practice. He has about fifteen years of consulting experience in financial institutions (banks, hedge funds, and insurance companies), utilities / energy, and pharmaceutical industries. He specializes in the application of finance, accounting, and taxation to a variety of consulting and litigation settings.

Dr. Zhou is a valuation specialist with extensive experience in complex valuation assignments involving unique risk characteristics, varying operational and financial leverage, and special tax treatments to the investment/financing cash flows. He applied and developed innovative techniques (including real options) to valuation of electricity generation, utility companies, financial institutions, drugs at different stage of the life cycle, and special corporate forms (government agencies, employee stock ownership plans, master limited partnerships, and other pass-through entities).

In addition, Dr. Zhou has served as a consulting expert in several high-profile securities and bankruptcy litigation matters, and supported academic experts in various stages of the litigation. His work has been primarily focused on the economic analysis of structured finance transactions, economic substance tests of complex tax transactions, and transfer pricing. His recent experience also includes performing valuation and solvency analyses for a couple of failed leveraged buyout companies, analyzing the economic impact of a potential tax break on U.S. multinational companies' dividend repatriation taxes, and providing economics justification for an unsettled tax position on credit derivatives in the bankruptcy of a U.S. financial institution. He also co-authored several economic impact analyses of legislative and regulatory policies on reinsurance, money market mutual funds and dividend repatriation taxes.

Dr. Zhou received a Ph.D. in International Economics and Finance from Brandeis University in 1998. He also holds an MA in Economics from Washington State University, and a BA in Economics from Fudan University of China. Dr. Zhou is a member of American Finance Association, and Society for Financial Studies.

AREAS OF EXPERTISE

- Tax Disputes and Controversies
- Securities and Bankruptcy Litigation
- Risk Analysis and Valuation
- Contract Disputes and Damages

EXPERIENCE

Tax Disputes and Controversies

- In *Broadwood Investment Fund et al. v. U.S.A.* (tax dispute involving distressed assets/debt), Dr. Zhou assisted a Brattle and two external experts analyzing the reasonable profitability of the taxpayers' investment in non-performing loan portfolios. The case was dismissed on summary judgment right before the trial.
- Dr. Zhou assisted Ambac in its tax dispute with the IRS regarding the taxpayer's \$700 million tax refund during the recent financial crisis. The dispute involves the appropriate taxation of credit derivatives, currently an unsettled area in tax policies and regulation.
- Dr. Zhou worked on a tax dispute on behalf of AstraZeneca against U.K.'s Revenue and Customs. He supported Prof. Stewart Myers from MIT's Sloan School of Management to analyze whether the licensing agreements for several drugs between the U.K. parent and its Puerto Rican subsidiary were arm's length.
- Dr. Zhou worked on a tax dispute with the IRS on behalf of Wells Fargo with respect to several of the bank's leasing transactions. He prepared evidence and analyses on the character, time pattern, and degree of risk borne by the buyer (lessor), the extent of defeasance, the choice of risk- and tax-adjusted discount rates for the municipal agencies (lessees), and the probability of their exercise of purchase option at the end of the lease.
- In a tax dispute between ExxonMobil and the Australian tax authority, Dr. Zhou leads the project team to estimate the fair value of certain petroleum products at taxing points upstream of the sales.
- Dr. Zhou assisted counsel for GlaxoSmithKline in its tax litigation against the I.R.S. involving valuation of intellectual property rights. He assisted in the development of a life-cycle model of a successful drug.
- In a dispute concerning the interest deduction claimed by HSBC Bank, Dr. Zhou analyzed whether the US branches of the UK bank maintained adequate capital and whether the borrowing and lending transactions between the affiliated parties were arm's-length.
- In several litigation matters between the IRS and U.S. companies (AEP, Dow Chemical, and Xel Energy) regarding the interest deduction of policy loans against the corporate-owned life insurance policy, Dr. Zhou consulted client counsel on the corporate finance issues of the insurance policies.

Securities and Bankruptcy Litigation

- For a 10b(5) securities class action against MBIA, Dr. Zhou provided consulting support to the company's mediation and settlement discussions with the plaintiffs. He reviewed the company's mandatory and voluntary disclosures during the 2007/2008 financial crisis regarding its exposure to subprime collateralized debt obligation, estimated the but-for stock price under alternative disclosures, and calculated the potential damages to shareholders.
- In a criminal sentencing case against a bank executive who was found guilty of material misrepresentation, Dr. Zhou led the project team to analyze the bank's valuation analysis and accounting records for certain complex mortgage-related derivatives, and reviewed a third-party's analyses that led to the bank's financial restatements. He also evaluated the loss causation and estimated the damages caused by the executive's misconduct.
- In anticipation of a fraudulent conveyance action involving a large leveraged buyout transaction during the financial crisis, Dr. Zhou led the project team to review several valuation and solvency analyses performed at the time of the transaction.
- In several suits against Ernst & Young brought by Refco's litigation trustee, Dr. Zhou advised counsel E&Y against allegations of breach of fiduciary duty. He performed forensic analysis of the financial institution's tax returns and workpapers of the audited financial statements. He also analyzed whether the alleged breach of fiduciary duty could have caused the brokerage's demise. The case was recently dismissed.
- In a shareholder class action lawsuit against Scottish Re where plaintiffs sued the company over its failure to book and disclose a valuation allowance for deferred tax assets, Dr. Zhou analyzed several of the company's statutory reserve securitization transactions, which allegedly should have caused the company to recognize the valuation allowance earlier. He assisted counsel for the company to identify factual evidence to refute the connection between the securitization transactions and the decision to book the valuation allowance. The case is settled.
- In a number of litigations against Bank of America in Parmalat's bankruptcy, Dr. Zhou advised counsel for Bank of America regarding a number of structured finance transactions it arranged for Parmalat's Latin American subsidiaries. He supported an outside academic expert to provide a coherent framework to examine a multinational enterprise's management of its financing strategy in the emerging markets. Against this framework, he analyzed various features of the financing and their overall impact on Parmalat's indebtedness.
- On behalf of Deutsche Bank, between 2003 and 2007 Dr. Zhou was extensively involved in a number of Enron-related securities and bankruptcy litigations. He supervised the project team to analyze Enron's off-balance-sheet debt, its sources and use of cash flows, and the related disclosure. He reviewed the transaction documents and journal entries for over a

BIN ZHOU

hundred special-purpose vehicle transactions, and led the project team to analyze the transactions' impact on Enron's key financial ratios and their impact on Enron's creditworthiness. He also supported testifying experts on economic and accounting issues of certain structured finance and tax transactions.

- For Global Crossing's Board of Director, Dr. Zhou reviewed the business purposes of certain fiber optic capacity lease transactions, conducted forensic analysis of the associated accounting records, and reviewed SEC disclosure regarding its pro forma accounting. He also examined the market reaction to the company's various disclosures.
- In a major U.S. utility bankruptcy, the utility sued the state public utility commission for regulatory taking. Dr. Zhou led the project team to review the reasonableness of the utility's financial policies (dividend, debt, cash holding, etc.) prior to the bankruptcy. He also analyzed regulatory treatment of the utility's stranded cost and normal operating cost recovery. The case was settled in the utility's favor.
- In a bankruptcy proceeding, Dr. Zhou supported an academic expert to analyze whether a corporate subsidiary had been effectively under the strategic and operational control of its parent, to such an extent that it was appropriate to "pierce the corporate veil."

Risk Analysis and Valuation

- For a large oil pipeline project in Canada, Dr. Zhou led a project team to analyze the risks and returns of the investment under various scenarios, evaluated the distribution of project's internal rate of returns, and advised the company on regulatory filings before the National Energy Board.
- Dr. Zhou analyzed economic reasonableness of Chicago Clean Energy's cost of equity and capital costs, and presented results to Illinois Commerce Commission.
- For an online gaming company during its settlement negotiation with the Department of Justice, Dr. Zhou reviewed a third-party analysis of the gaming company's ability to pay fines.
- In a recent merger & acquisition litigation, Dr. Zhou analyzed the transaction premium for a proposed merger of two large U.S. utilities companies.
- Dr. Zhou recently valued a privately-owned C-Corp. that owns, among others, general partnership (GP) interest of a publicly traded energy master limited partnership (MLP), and equity interest in a gas storage joint venture.

BIN ZHOU

- For an electricity user consortium in New England considering electricity contract renewal v. generation asset purchase, Dr. Zhou presented market evidence on energy and capacity price forecasts, funding costs, and operational efficiency. He analyzed differences in cash flows under multiple market scenarios to inform considerations of risk.
- For an offshore wind developer proposing to build a 350 MW project off the coast of New Jersey, Dr. Zhou developed a detailed financial model of project funding, operation, and cash distributions to various types of investors (including production tax credit, and the FLIP tax structure), and the pro forma financial statements were used in an application to the state of New Jersey for project grants.
- Dr. Zhou provided due diligence support on regulatory and valuation matters to an Asian sovereign wealth fund in its investment in OnCor energy. On regulatory issues, he analyzed tax treatment of an LLC organization form, allowed rates of return, and investment recovery mechanism. On valuation issues, he reviewed the utility's pro forma financial statements and prepared valuation summaries under various market conditions and regulatory policy changes.
- For Peoples Gas in Chicago, Dr. Zhou reviewed its risk management strategies, recommended hedging policies based on volatility forecasts estimated from NYMEX gas options, and developed proto-type hedging simulation models and performance monitoring metrics.
- For CenterPoint Energy's stranded cost recovery proceeding, Dr. Zhou analyzed whether the market valuation of Texas Genco, CenterPoint's majority-owned subsidiary at the time, reflected the fair value of the generation assets, and whether the company's conservative corporate finance policy and ownership structure at the time enhanced the enterprise value.
- Dr. Zhou worked on several cost of capital cases for both regulated and unregulated businesses. For a major U.S. utility company, Dr. Zhou developed a methodology for estimating cost of capital for different types of electricity generation plants, based on their respective fuel inputs, geographic locations, and operating leverage.
- In various projects, Dr. Zhou developed financial models (discounted cash flow models and real option pricing models) to estimate the value of a project, investment hurdle rate, and asset retirement and replacement decisions. The industries include utilities, energy, and telecommunication.
- In various projects, Dr. Zhou developed valuation frameworks to value tax-favored investment vehicles. They include partnerships, S-Corp., municipalities, MLPs, and life insurance products.

Contract Disputes and Damages

- On behalf of Trans Canada over the interpretation of a long-term power purchase contract clause governing whether “high impact low probability” risks were compensated through a risk premium in the contract price, Dr. Zhou examined the regulatory history in Alberta leading to the contractual arrangements, and assisted another Brattle Principal to interpret the contractual language. The arbitration panel ruled in favor of Trans Canada.
- In a hedge fund redemption and valuation dispute in late 2008 between an investor and the fund management, Dr. Zhou analyzed the fund management’s internal net asset valuation (NAV) calculation, valuation discounts under FAS 157, and monthly performance reporting to the investors. The assets under management included thousands of illiquid structured finance products and real estate assets.
- Dr. Zhou is currently assisting Prof. Stewart Myers from MIT Sloan School on an international arbitration matter regarding damages from the government’s expropriation of ExxonMobil oil assets in Venezuela.
- In a hedge fund dispute between an equity investor and the fund management, Dr. Zhou analyzed the fund’s investment in various structured finance products, financial leverage via repo transactions, portfolio risk management, compliance with the investment guideline, and performance reporting. He assisted counsel for the investor to amend the complaint.
- In a dispute over damages from a prematurely terminated long-term power tolling contract, Dr. Zhou assisted the testifying experts to present evidence on why calculating the present value of those damages required the use of two distinct discount rates: one (a low rate) for the revenues lost under the low-risk terminated contract and another, much higher rate, for the valuation of the replacement revenues in the risky, short-term wholesale power markets. Our position was adopted by the arbitration panel.
- For a major U.S. cable TV company, Dr. Zhou analyzed two complex corporate transactions each worth hundred millions of dollar. Both transactions consist of revenue contribution and subsequent transfer of corporate ownership between two affiliated entities (each with a separate tracking stock on the market) at the time. Dr. Zhou investigated the fairness of the terms and conditions of overall transactions.
- Dr. Zhou worked on several Winstar cases, breach-of-contract lawsuits against the U.S. government arising from the savings and loan crisis in the late 1980s. He built pro forma financial models and analyzed thrift financial data, operations, funding, and capital adequacy standards. He supported two experts estimating damages under reliance, restitution, lost profits / expectancy, and mitigation theories.

Miscellaneous

- On behalf of a mutual fund family, Dr. Zhou estimated the economic cost of SEC's proposed regulations of the money market fund industry (floating NAV, capital requirement, and redemption holdback).
- For a U.S. telecom company, Dr. Zhou analyzed the economic impact of a tax-favored dividend repatriation policy on the U.S. economy.
- For a major investor of U.S. wind farms and wind turbine manufacturer, Dr. Zhou and a team of Brattle consultants analyzed the economic impact of the extension of U.S. production tax credit program.
- In an intellectual property infringement case, Dr. Zhou supported a Brattle testifying expert to estimate lost profit damages. He analyzed intra-company financial data for the infringed to estimate the marginal cost and transfer pricing of intermediate products.
- Dr. Zhou co-authored a white paper on behalf of a coalition for competitive insurance rates analyzing the impact on the U.S. property and casualty insurance market of a tax on offshore affiliate reinsurance.
- For a Denmark company with operation in Venezuela, Dr. Zhou reviewed and recommended improvement to the local unit's foreign exchange hedging strategy.
- For a major US telecom company, Dr. Zhou supported two MIT Sloan School professors advising the telecom company about its market penetration strategy in emerging markets and business alliance strategy with local business groups.

PUBLICATIONS AND PRESENTATIONS

"Reducing Rate Shocks," joint with A. Lawrence Kolbe and Philip Q Hanser, *Fortnightly Magazine*, June 2013

"Infrastructure and Rate Structure: Lessening the Shock," joint with Larry Kolbe and Phil Hanser, 2012 NASUCA Annual Meeting (Baltimore, MD), November 2012.

"Control Premiums / Minority Discounts --- Recent Cases and Economic Evidence" at The Knowledge Congress webcast series "Business Valuation Trends Explored in 2012 LIVE Webcast." October 2012.

EUCI Workshops on Utility Financial Accounting, co-taught by Bente Villadsen and Bin Zhou, October 2012 (Denver), May 2012 (Atlanta), and February 2012 (Chicago) (one and half days each).

BIN ZHOU

“Economic Considerations in Litigation Against the Credit Rating Agencies,” by Bin Zhou and Pavitra Kumar, The Brattle Group, Inc., April 2012.

“State Regulatory Hurdles to Utility Environmental Compliance,” by Phil Hanser, Metin Celebi, and Bin Zhou, *The Electricity Journal*, April 2012.

“U.S. Tax Implications of Wind Power Business,” presented at U.S.-China Wind Summit 2011, December 2011.

“U.S. Renewable Energy and Transmission Regulation and Investment Opportunities,” Judy Chang and Bin Zhou, presented to State Grid Corporation of China (Beijing), September 2011.

“Cost of New Entry Estimates for Combustion Turbine and Combined-Cycle Plants in PJM,” (with Kathleen Spees, Samuel A. Newell, Robert Carlton, and Johannes P. Pfeigenberger and others), 2011.

“Defining Market Manipulation in a Post-REMIT World,” Brattle Discussion Paper, (with Shaun Ledgerwood, Dan Harris, and Pinar Bagci), 2011.

“Risk-Adjusted Damages Calculation in Breach of Contract Disputes: A Case Study,” *Journal of Business Valuation and Economic Loss Analysis*, (with Frank C. Graves, Melvin Brosterman, and Quinlan Murphy), 2010.

“The Impact on the U.S. Insurance Market of H.R. 3424 on Offshore Affiliate Reinsurance: An Updated Economic Analysis,” (with Michael I. Cragg and J. David Cummins), *The Brattle Group, Inc.*, July 8, 2010.

Litigation Facing the Private Equity Industry *2009 No. 1* (Finance).

“The Impact on the U.S. Insurance Market of a Tax on Offshore Affiliate Reinsurance: An Economic Analysis,” (with Michael I. Cragg and J. David Cummins), *The Brattle Group, Inc.*, May 1, 2009.

Brattle Prizes Newsletter Issue II: Corporate Governance, 2004

Brattle Prizes Newsletter Issue I: Capital Structure, 2003

“Economics of Supervisory Goodwill,” (with Stewart C. Myers) *Presented at MIT Sloan School of Management, The Brattle Group, Inc.*, March 17, 2003.

“Cost of Capital Estimation for Unregulated Generation: Methodology and Estimates,” *The Brattle Group, Inc.*, May 22-23, 2001.

“New Advances in Capital Budgeting for Generation Assets: Survey and Interpretation,” *Electricity Power and Research Institute Fall Seminar*, November 14, 2000.