JOHN M. BROWNING Vice President

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Mr. Browning is an economist who specializes in applying microeconomic, statistical, and survey techniques to intellectual property (IP) disputes and antitrust issues. His recent case work has involved analyses of marketplace and survey data to assess the price, quantity, and profit impacts of various features of smartphones, tablets, and PCs. In antitrust matters, Mr. Browning has supported experts in analyzing proposed mergers, and in evaluating whether certain activities undertaken by firms and trade associations are anticompetitive. In IP matters, he has calculated damages in patent and copyright cases and evaluated the claimed fair, reasonable, and non-discriminatory (FRAND) licensing terms for patents that have been asserted as essential to industry standards. His experience spans a wide range of industries, including telecommunications, smartphones, software, media, networking hardware, real estate, and automotive parts. Mr. Browning recently worked closely with several experts on behalf of Qualcomm against Apple, including one matter that culminated in a jury awarding the full amount of damages sought. Prior to joining Analysis Group, Mr. Browning taught microeconomics courses at The University of Chicago.

EDUCATION

2000	Ph.D. candidate (ABD), economics, The University of Chicago
1997	M.A., economics, The University of Chicago
1995	B.A., economics (first class honours), McGill University

PROFESSIONAL EXPERIENCE

Analysis Group, Inc.
Vice President
Manager
Associate
The University of Chicago Booth School of Business
Teaching Assistant in Microeconomic Analysis and Competitive Strategy
Research Assistant
Department of Economics, The University of Chicago Lecturer and Teaching Assistant in Microeconomic Analysis

1996–1997 Northwestern University/The University of Chicago Joint Center for Poverty Research *Research Assistant*

SELECTED CONSULTING ACTIVITIES

Litigation Support Consulting

Intellectual Property

- Led a team in support of an expert who conducted a conjoint survey to assess the value of battery life in smartphones on behalf of Qualcomm in a patent dispute with Apple. A San Diego, CA jury awarded the full amount of damages sought by Qualcomm.
- Supported economic, marketing, and strategy experts who provided damages testimony on behalf of Samsung Electronics in a patent dispute with Apple. After finding infringement, a San Jose, CA jury determined that Samsung should pay \$119.6 million in damages, far short of the \$2.2 billion sought by Apple.
- Analyzed the likely impact of an exclusion order on innovation and US competitiveness in 5G wireless technologies as part of a public interest assessment in a US International Trade Commission (USITC) Section 337 proceeding involving Qualcomm and Apple.
- Assessed whether the terms offered for a patent license for Blu-Ray technology by a patent pool satisfied a FRAND commitment.
- Analyzed lost profits, unjust enrichment, and injunction issues in a copyright case involving networking hardware.
- Used regression analysis to estimate the extent to which increases in processor speed increased the value of smartphones and tablets for consumers, in support of a claim of reasonable royalties in a patent infringement matter.
- Led a case team in support of a marketing expert who provided testimony rebutting a survey purporting to show the value that smartphone consumers place on incremental improvements in camera functionality.
- In a patent infringement matter related to smartphone and tablet apps, supported a marketing expert who provided testimony on behalf of Google assessing conjoint and usage surveys provided by opposing expert.
- Managed work in several matters involving disputes over the commercial success of patented technologies as part of patent invalidity cases involving pharmaceutical drugs.
- Supported a marketing expert who developed surveys and evaluated an opposing expert's surveys in a matter related to features of content stores.
- As part of the public interest assessment in multiple USITC Section 337 proceedings, assessed whether a non-practicing entity's offers to license standard-essential patents satisfied FRAND terms and evaluated whether economic circumstances pointed to the likelihood of hold-up and/or reverse hold-up.

- Supported a marketing expert who provided testimony on behalf of Samsung Electronics in a
 patent dispute with Apple. Citing this testimony, a federal judge in California denied Apple's
 motion to obtain a permanent injunction against several smartphones and tablets marketed by
 Samsung Electronics because Apple had failed to establish a causal nexus between Apple's
 patents and the demand for Samsung's products.
- In multiple cases, calculated economic damages caused by patent infringement related to vacuum cleaner and refrigerator technologies.
- Assessed reasonable royalty damages in a matter involving the patent infringement of a nanotechnology patent used in cancer drugs owned by Elan.
- Examined reasonable royalty damages stemming from the infringement of patents involving automotive engine technologies.
- Estimated lost profit and reasonable royalty damages, drafted expert testimony, and assisted counsel with deposition and trial preparation for a patent infringement case involving coronary stent technology.

Antitrust

- In the *Apple v. Qualcomm* antitrust case, led a team supporting an economics expert engaged to testify on the value to Apple of incorporating mobile wireless connectivity in its iPhones, iPads, and Apple watches to address claims by Apple that the terms of Qualcomm's license agreement were non-FRAND. Supported another expert who evaluated the economic benefits of the contested features of Qualcomm's contracts.
- Supported an expert in the US Department of Justice (DOJ) Antitrust Division's successful suit against the merging of radioactive waste disposal companies EnergySolutions and Waste Control Specialists. Assisted the expert in developing analyses related to studying market definition and determining the impact of the proposed merger on concentration and consumer welfare.
- Performed economic analyses on behalf of Microsoft Corporation in several consumer litigations; supported analyses of the economics of platform industries and the resulting implications for market structure and firm profitability.
- Performed various statistical analyses in support of an expert opinion relating to defining the relevant market and assessing consumer harm in the real estate brokerage industry. Analyses included an econometric study linking increased brokerage fees to the presence of alleged antitrust violations.
- Assessed whether certain terms in a satellite television distribution contract were anticompetitive.
- Examined the relevant market and analyzed the existence of monopoly power in support of an expert opinion concerning rival utility firms.

Marketing, Breach of Contract, and False Advertising

- In a class certification matter, analyzed the profitability of Google AdWords online advertising as part of an assessment of the reliability of measures of alleged harm to individual advertisers as a result of having text ads of a class of plaintiffs placed on certain types of web pages.
- In relation to the alleged breach of a distribution contract, determined whether a defendant used best efforts to market and distribute consumer products. Analyses included using scanner data to estimate elasticity of end users' demand to assess whether appropriate pricing strategies were followed.
- Led a team that designed and implemented multiple consumer surveys and analyzed damages in a matter involving the impact of allegedly false advertisements in the automobile parts marketplace.
- In a breach of contract matter, worked with a prominent marketing expert to assess the reasonableness of pursuing line extensions of a diet brand.
- Examined the assertion that a class of users of certain inkjet printers suffered harm related to allegedly exaggerated claims of ink efficiency.
- Assessed the impact of allegedly false advertising on competition between rival lawn and garden firms.

Finance and Tax

- In a tax evasion matter, studied whether a real estate lender accounted for its portfolio of nonprime loans in accordance with US generally accepted accounting principles (GAAP), and whether the interest rates the lender charged on its loans were warranted by the risk profiles of the borrowers and loans.
- Econometrically modeled the impact on a leading technology company's share price of the alleged backdating of employee stock options by the CEO, with particular emphasis on whether declines in share price at times of earnings restatements related to the magnitude of the restatements.
- Analyzed the economic implications of a US tax rule, conducted an industry analysis, and critiqued an opposing expert's damages methodology in support of expert testimony for a tax evasion case.

General Litigation and Damages

- Calculated lost profits associated with a law firm's negligence in handling a patent related to commercial nut-cracking machines.
- Examined economic damages stemming from alleged breaches of supplier agreements covering coronary stents.

 Assessed expert testimony in an arbitration hearing involving the alleged breach of a purchase agreement in the medical products industry.

Other Consulting Activities

- Analyzed regulatory oversight of telecommunications in a particular state, and evaluated the effects of that oversight on output, innovation, prices, and investment in that sector.
- Performed an economic analysis of the Federal Communications Commission's (FCC's) rules limiting the subscribership of multichannel video programming distributors (MVPDs).
- Examined the economics of the bundling of cable television programming.
- Assisted in a theoretical and empirical analysis of the impact of local loop unbundling (LLU) on telecom investment.
- Performed a valuation of a packaging-related patent.

ARTICLES AND PUBLICATIONS

"Licensing in the Presence of Technology Standards," with C. Mulhern, *Licensing Journal* (August 2009)

PRESENTATIONS

"Economics of False Patent Marking," with A. Roth and J. Jarosz, BNA Webinar and Audioconferences, Recent Developments in the Law and Economics of False Patent Marking, July 2010

"Licensing in the Presence of Technological Standards," with C. Mulhern and L. Greenfield, Licensing Executives Society 2008 Annual Meeting, October 2008

"IP Damages, Injunctions and Recent Damages Decisions," with R. Vigil, Wisconsin Intellectual Property Law Association program, February 2008

"Economic Analysis in Patent Litigation: The Law and Economics of Recent Patent Damages Rulings," with J. Jarosz, presentation at Morgan, Lewis & Bockius, September 2007

"The Economics of Mandatory Prescriptions," presentation at The University of Chicago Department of Economics, December 2000