LISA PINHEIRO
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Ms. Pinheiro has an extensive background in quantitative analysis and data science, which she has applied to various practice areas, including traditional and decentralized finance, intellectual property, biostatistics, and antitrust. In finance, she focuses on cases involving allegations of market price manipulation, misleading communications, excessive mutual fund fees, and mortgage-backed securities litigation. In particular, she has been retained by the US Department of Justice, regulatory agencies, banking institutions, and market exchanges to consult, advise, and testify on matters involving allegations of spoofing and price manipulation, as well as corresponding detection approaches. Her recent work also covers the valuation of large portfolios of cryptocurrency assets and the analysis of the market microstructure of digital assets. She has also applied survey analysis and statistical modeling to various intellectual property cases, including patent disputes among smartphone manufacturers, copyright tariff setting for musical works, and patent infringement in the pharmaceutical industry. She has extensive experience analyzing clinical trial, registry, and insurance claims data for both litigation and research purposes and has published manuscripts on pharmacoeconomic issues. In the antitrust field, she has acted as an expert and supported other experts in class certification and price-fixing matters involving a wide range of industries, including online search engines, computer chips, liquid-crystal display (LCD) panels, airline ticketing services, gaming, and grocery stores. Ms. Pinheiro has also authored expert reports and testified on questions relating to the modeling and calculation of royalties and damages.

Prior to joining Analysis Group, Ms. Pinheiro served as executive director of the finance group of CIRANO, where she conducted applied research projects in collaboration with private and public partners, including work on hedge funds, style analysis, credit and operational risk, and the development of integrated risk management tools for practical applications.

EDUCATION

2002   M.Fin., mathematical finance (*summa cum laude*), Princeton University

2001   Licence en Sciences Mathématiques (*magna cum laude*), Université Libre de Bruxelles
Specialization: Statistics, probability, and operations research
Research: Undergraduate thesis in applied statistics (sequential analysis)
Honors: Ruth and Joe Gani Prize in probability (best performance in probability); Prix Fleurice Mercier (best performance in the science faculty)

PROFESSIONAL EXPERIENCE

2005–Present   Analysis Group
Managing Principal (2017–Present)
Vice President (2009–2017)
Senior Economist (2007–2009)
Economist (2005–2007)

2002–2005   CIRANO
Finance Group Executive Director

1998–1999   Université Libre de Bruxelles
Teaching Assistant

1997   Bandag AG
Marketing Assistant

SELECTED CONSULTING EXPERIENCE

Finance

- Led and managed teams to analyze high-frequency intraday data and model the price impact of market price manipulation and spoofing strategies.
- Estimated shareholder dilution caused by activities such as insider trading or market timing.
- Applied finance theory to assess whether statements made by managers or corporations were in line with available information at the time. Evaluated the price impact of disclosures, news and/or reduced liquidity on transaction/stock prices – including in *United States v. Cioffi* and *Patrinvest v. SA Ageas.*
- Analyzed and modeled loan-level residential mortgage-backed securities (RMBS) data to calculate the impact of various loan-level characteristics on future cash flows and tranche valuation, in cases involving allegations of breach of fiduciary duty and misrepresentation.
- Developed simulations and analytics to illustrate the economics of 401(k) funds and their fee structure.

Intellectual Property

- Analyzed and supported an expert in reviewing and assessing conjoint analyses performed by opposing experts in support of the patent infringement damages estimates – including the *Apple v. Samsung* injunction ruling and trial, *ContentGuard Holdings Inc. v. Google Inc.*, and *SimpleAir v. Google*.
- Provided expert testimony on the appropriate rate base for the calculation of royalty rates for commercial radio tariffs and supported experts in determining appropriate tariffs.
- Analyzed online bidding data to value features associated with allegedly infringed-upon patents.

Antitrust

- Provided analytical and empirical analysis of auction pricing mechanisms underlying online search platform competition for advertising, as well as in the development of a framework to assess the effects of monopoly power on consumer surplus, output, and quality.
- Evaluated the impact of at-issue sales strategies on overall prices for consumers.
- Rebutted models used in damages calculations related to alleged anticompetitive boycotting activities, and analyzed the economic impact of price-fixing and bid-rigging activities.
- Examples include *Advanced Micro Devices, Inc. and AMD International Sales and Service, Ltd. v. Intel Corporation and Intel Kabushiki Kaisha* and *TFT-LCD Antitrust Litigation.*

Biostatistics & Pharmacoeconomics

- Assessed the validity of statistical analyses used to support claims in patent application by replicating the analyses used and performed analyses on clinical trial data to address allegations of flaws in studies.
- Evaluated whether published studies supported claims regarding relative product efficacy and safety.
- Evaluated the economic impact of common diseases such as psoriasis and atopic dermatitis from the employer-payer perspective.

Data Science

- Supported a data science expert in Twitter's widely publicized litigation filed against Elon Musk for attempting to terminate his $44 billion acquisition of Twitter. Led the team that analyzed the reasonableness of Twitter's processes and approaches to eliminating false and spam accounts and estimating the number of false and spam accounts that remained and rebutted the opposing expert's estimates of the volume of false and spam accounts using machine learning models.
- Used natural language processing methods for feature selection, feature analysis, and as a basis for predictive modeling, with various application in IP, finance, health care, and antitrust.
- Experienced with real-life applications of decision trees, deep neural networks, support vector machine, and ensemble algorithms.

SELECTED EXPERT CASE WORK AND TESTIMONY

- ***Ongoing confidential litigation***
  US District Court, Northern District of Illinois, Eastern Division
  Reports and deposition testimony analyzing the trading patterns and corresponding price impact of defendant's alleged market manipulation strategy.

- ***In the Matter of Cormark Securities Inc., William Jeffrey Kennedy, Marc Judah Bistricer and Saline Investments Ltd.***
  Ontario Capital Markets Tribunal
  Report on short selling, price impact, and financial incentives associated with a series of financial transactions.

- ***Confidential arbitration (2021)***
  Report analyzing and estimating competition dynamics and substitution patterns in the betting industry.

- ***United States v. Jitesh Thakkar*; Case No. 1:18-cr-00036 (2019)**
  US District Court, Northern District of Illinois
  Testimony on the extent and price impact of the trading activity performed using the defendant's trading software.

- ***United States of America v. Andre Flotron*; Case No. 3:17cr220 (2018)**
  US District Court, District of Connecticut
  Testimony on the trading patterns and statistics relating to defendant's alleged market manipulation strategy.

- ***Hospira Healthcare Corporation v. The Kennedy Institute of Rheumatology*; Court File No. T-396-13 (2016)**
  Federal Court of Canada
  Report and testimony relating to the digital transfer of study report data and replication of patent and study report tables.

- ***Commercial Radio Tariffs – SOCAN (2011–2013); Re:Sound (2012–2014); CSI (2012–2013); ArtistI (2012–2014); AVLA/SOPROQ (2012–2017)***
  Copyright Board of Canada
  Report and testimony on the appropriate rate base for the calculation of royalty rates.

- ***Gérald Léveillé c. Avantage Link Inc., Benoît Laliberté, et al. & Nutri-Mer c. Avantage Link Inc., Benoît Laliberté, et al.* (2011)**
  Superior Court of Québec
  Report on the evolution of high-tech IPO prices during the high-tech bubble, as well as a rebuttal of damages calculations related to allegations of insider trading and misleading press releases.

- ***Collective bargaining agreement (2008–2009)***
  Report on the economics and prospects of the naval industry, as part of a collective bargaining agreement negotiation.

- ***Goodyear Canada Inc. − Le Syndicat canadien des communications, de l'énergie et du papier − local 143 (2005–2006)***
  Report on the financial situation and solvency of the company for arbitration proceedings between Goodyear Canada and its union.

ARTICLES AND PUBLICATIONS

"OECD Gender Inclusive Toolkit May Inform Competition Policy," with Jee-Yeon Lehmann and Marissa Ginn, *Law360* (October 2023). Winner of 2024 *Concurrences* Antitrust Writing Awards: Business Articles, General Antitrust, Readers' Choice

"Difficulty Of Detecting AI Content Poses Legal Challenges," with Christopher Bail, et al., *Law360* (April 2023)

"Combining the Power of Artificial Intelligence with the Richness of Healthcare Claims Data: Opportunities and Challenges," with David Thesmar, et al., *Pharmacoeconomics* 37:6, 745-752 (June 2019)

"Decision-Making with Machine Learning in our Modern, Data-Rich Healthcare Industry," with Nick Dadson, et al. Chapter in *Decision Making in a World of Comparative Effectiveness Research: An End-User's Practical Guide to Analysis and Interpretation*, by Howard Birnbaum and Paul Greenberg, eds. Springer (2017)

"Practical Uses For Machine Learning In Health Care Cases," with Mihran Yenikomshian, et al., *Law360* (September 2016)

"Machine-Learning Algorithms Can Help Health Care Litigation," *Law360* (June 2016)

"How to Use Clinical-Trial Data in Court," with Pierre Cremieux, et al., *Law360* (2012)

"The impact of psoriasis on health care costs and patient work loss," with Joseph F. Fowler, et al., *Journal of the American Academy of Dermatology* 59.5: 772-780 (2008)

"The direct and indirect cost burden of atopic dermatitis: an employer-payer perspective," with David A. Mallett, et al., *Managed Care Interface* (2007)

PRESENTATIONS AND SPEAKING ENGAGEMENTS

"The Shifting Crypto Litigation Landscape" panel, 2025 Consensus Conference Toronto (May 2025)

"Will Antitrust Kill Collective Engagement?" panel, Responsible Investor USA Conference (November 2023)

"What Has Gender Got to Do with Competition and Why Should We Care?" panel, Lear Competition Festival 2023 (September 2023)

"ESG and Competition," panel, USC/Analysis Group Global Antitrust/Competition Law Conference (May 2023)

"Predicting Antimicrobial Resistance in Uncomplicated Urinary Tract Infections Using Machine-Learning," with Kalé Kponee-Shovein, et al., presented as a research poster at ISPOR Europe 2022 (November 2022)

"Case Studies of Applications of Data Science," session chair and guest speaker, Canadian Economics Association Annual Conference (June 2021)

"Intelligence artificielle – mythes et réalités," guest speaker, Association CFA Québec (November 2020)

"Big Data and Machine Learning in Banking, Law and Economics," panel, Second New York Fed Conference on FinTech (October 2020)

"Cutting-Edge Methods in Damages," panel moderator, Law & Economics Symposium: Current Topics in Life Sciences (May 2019)

"The Future of Work in a Data Science World," executive seminar, Business Today's International Conference: The Future of Work (November 2018)

"Artificial Intelligence in Healthcare Consulting," panel, Women in Bio: Disruptive Technologies in the Life Sciences and Healthcare Conference (June 2018)

"Data Science for High-Stakes Economics, Litigation and Healthcare Decision Making," guest speaker, Massachusetts Institute of Technology analytics M.B.A. class (December 2017)

"Data Science for High-Stakes Economics, Litigation and Healthcare Decision Making," speaker, Open Data Science Conference East (September 2017)