Bradford Levy

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EDUCATION

University of Pennsylvania, The Wharton School

2023

Ph.D.

M.A., Statistics (Thesis: Robust Inference in Big Data Settings)

University of Michigan, Ross School of Business

2017

M.B.A. (President of Data Analytics Club, Out for Business, Section Ethics co-chair)

Worcester Polytechnic Institute

2010

B.S., Mechanical Engineering

ACADEMIC POSITIONS

The University of Chicago Booth School of Business Assistant Professor, Applied AI and Accounting

2023-present

RESEARCH INTERESTS

Machine learning and AI, causal inference, information in capital markets, transparency and fraud

PUBLICATIONS

Holding Foreign Insiders Accountable (with R. Jackson and D. Taylor), Management Science

- <u>United States Senate Testimony</u>, Based on this paper: <u>Holding Foreign Insiders Accountable Act</u>
- Select press: FT, WSJ, Harvard Law School Forum

BeanCounter: A low-toxicity, large-scale, and open dataset of business-oriented text (with S. Wang), Accepted at Neural Information Processing Systems (NeurIPS) 2024

- Assembled a dataset of sufficient scale to train a model similar to GPT-3 (ChatGPT) on solely business writing
- Showed that training on this data can reduce toxicity of generated content and improve performance on financial tasks

Crypto Litigation and Market Efficiency (with R. Bishop, F. Partnoy, D. Taylor, and A. Yeh), *Accepted at Harvard Law Review*

- Developed the application of market efficiency tests—core to securities litigation cases—to cryptocurrency markets

WORKING PAPERS

Caution Ahead: Numerical Reasoning and Look-ahead Bias in AI Models, Under Review

Devised a simple test for look-ahead bias in LLMs applied to numerical content. Show that effectively all the *apparent* performance of LLMs on earnings prediction can be attributed to look-ahead bias

Hidden Mandatory Disclosure (Job market paper), Second Round Revise and Resubmit

- Select press: <u>FT</u>
- Committee: Bob Holthausen (co-chair), Robert J. Jackson Jr., Daniel Taylor (co-chair), and Christina Zhu

Uncovering Information (with A. Costello and V. Nikolaev), *Under Review*

- Trained firm-specific large language models (LLMs) from scratch and developed a method for identifying information using them. Presented evidence that the method incrementally explains abnormal returns and firm performance.
- Presented at the <u>NBER AI and Big Data conference</u>
- University of Chicago is pursuing a patent on our method

Price Improvement and Payment for Order Flow: Evidence from a Randomized Controlled Trial, Under Review

- Cited by SEC proposals for Order Competition and Best Execution
- Selected for the Jacobs Levy Equity Management Center Working Paper Series
- Invited presentations at the SEC, Wharton-INSEAD Consortium, Wharton Initiative on Financial Policy and Regulation

The Information Content of Corporate Websites (with D. Taylor), Revise and Resubmit

Invited to present at the National Bureau of Economic Research (NBER) Big Data Conference

Late Filings and Insider Trading: Broken Windows or Opportunism? (with R. Jackson and D. Taylor)

- Subsequent this paper, the SEC—which had not conducted any enforcement sweeps of late filed trades since 2014—has conducted enforcement sweeps in 2023 and 2024, collecting \$1.6MM and \$3.8MM in fines, respectively
- Select press: <u>WSI</u>
- Invited presentation at Bocconi, Stanford, and the Harvard Information, Markets, and Organizations conference

Odd Lots & Optics: Manipulation in Response to Scrutiny (with C. Downing, M. Phillips, and E. So), *Revise and Resubmit*

- Study the adoption of a *voluntary* disclosure program by the largest market makers. Find evidence that stakeholders *fail to compel* meaningful voluntary disclosure suggesting that *mandatory* disclosure regulation can add value

Pricing Public Information: The Role of Trade (with F. Nockher)

- Outstanding Research Paper Prize 2022 - Jacobs Levy Center

PRACTITIONER PAPERS, BREIFS, AND REGULATORY COMMENTS

Brief in Support of SEC's Authority to Require Climate Disclosure (with eight former chairs, commissioners, or directors of the SEC and numerous other academic co-authors), Jul 2024.

- Drew on analysis for June 2022 comment letter to provide evidence on SEC's authority to require climate disclosure.

Comment on NYSE's Proposed Rule Change to Exempt CEFs from Holding Annual Shareholder (with six other coauthors), Jul 2024.

- SEC delayed the decision to allow for additional comments and instituted proceedings on the proposal

Comment on the SEC's Proposed Climate Related Disclosures (with five former SEC Commissioners and numerous scholars and practitioners), June 2022.

- Analyzed climate disclosure in annual reports from 1900 onwards to demonstrate the SEC's history of providing climate disclosure guidance and industry's response

- Select press: Columbia Law School Blue Sky Blog (June 2022); Wall Street Journal (March 2024)

Brief in Support of Claims that SPACs are Not Valued as Operating Companies (with numerous other academic coauthors), Nov 2021.

- Parties ultimately settled, the SEC issued revised rules for SPACs, and billions were returned to investors

Brief in Support of Claims that 10b5-1 Trading Plans Can Be Probative of Scienter (with J. Mitts, D. Taylor, and six other academic co-authors), Sept 2021.

- Appeals court agreed with our brief and ruled a lower court erred in ruling 10b5-1 plans cannot be probative of scienter

Comment on the SEC's Proposed Rule 144 Holding Period and Form 144 Filings (with D. Larcker and D. Taylor), Mar 2021.

- Featured in Harvard Law School Forum on Corporate Governance and Financial Regulation (Mar 2021); Council of Institutional Investor's Comment Letter to the SEC (Mar 2021)

Gaming the System: Three Red Flags of Potential 10B5-1 Abuse (with D. Larcker, P. Quinn, B. Tayan, and D. Taylor) Stanford Closer Look Series, Jan 2021.

- Cited by SEC Chairman Gary Gensler (Jun 20201) while discussing the SEC's regulatory agenda
- Featured in Grant's Interest Rate Observer (Mar 2021); Harvard Law School Forum on Corporate Governance and Financial Regulation (Jan 2021); Cooley PubCo (Feb 2021); Council of Institutional Investor's Comment Letter to the SEC (Mar 2021); Reuters (June 2021); Bloomberg (June 2021); Bloomberg Money Stuff (June 2021); Financial Times (June 2021, July 2021); Law 360 (June 2021 x4; July 2021); Wall Street Journal (June 2021, Aug 2021, June 2022)

The Spread of COVID-19 Disclosure (with D. Larcker, B. Tayan, and D. Taylor) Stanford Closer Look Series, June 2020.

- Invited to brief the *House Financial Services Committee* (Jul 2020)
- Presented (by D. Taylor) to the SEC's Investor Advisory Council (Dec 2020)
- Featured in *Bloomberg Money Stuff* (Jun 2020); *Cooley PubCo* (Jun 2020); *Harvard Law School Forum on Corporate Governance and Financial Regulation* (Jul 2020); included in NIRI's Covid-19 Crisis Response Library (Jul 2020)

Risk:Return Assessment chapter from "Financial Technology for Industrial Renewal" (with Peter Adriaens, Antti Tahvanainen, et al.) Elinkeinoelämän Tutkimuslaitos, 2016.

Simulation of Mechanical Hydraulic System Dynamics Using Coupled Specialized Fluid Models and Multibody Dynamics <u>ASME Engine Design and Mechanical Development</u>, Nov 2015.

TEACHING

University of Chicago

Chiversity of Chicago	
Professor, AI and Financial Information (New course, developed myself; 4.7/5 avg. (5/5 med.) rating, 84% resp. rate)	
Professor, Financial Accounting (4.98/5 avg. rating across two sections)	2024
University of Pennsylvania	
Co-teacher, Wharton Honors Course - Evaluating Evidence (3.75/4.0 avg. rating)	2022
Mentor, Wharton Directed Reading Program	2021
Teaching Assistant, Forensic Analytics	2020, 2021, 2022, 2023
Teaching Assistant (with recitation), Executive-MBA Core Accounting	2019
Teaching Assistant (with recitation), Undergraduate Core Accounting	2019
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University of Michigan

Lecturer, Undergraduate core course: Making Financial Decisions	2017
Teaching Assistant (with recitation), MBA/Undergraduate elective course: Fixed Income Securities (Avg. Rating: 4.97 / 5)	2017
Teaching Assistant, MBA/Undergraduate elective course: Financing Research Commercialization (Avg. Rating: 4.72 / 5)	2016

AWARDS

Outstanding Research Paper Prize, Jacobs Levy Equity Management Center	2022
Jacobs Levy Equity Management Center for Quantitative Financial Research Grant	2021
McGowan Fellow Runner-up (One of five runner-ups out of more than 400 students)	2016
Cummins Chairman's Quality Award (Given to one team out of more than 90)	2012
Best Thesis in Mechanical Engineering, Worcester Polytechnic Institute	2010
Strage Innovation Award - Second Place, Worcester Polytechnic Institute	2008

CONFERENCE PARTICIPATION AND PRESENTATIONS

- 2024: NBER AI and Big Data (presenter); Neural Information Processing Systems (presenter); Harvard University (presenter); Chicago Booth Center for Applied AI (presenter); Kellogg Accounting Conference; Journal of Accounting Research; Columbia Juniors
- 2023: Journal of Accounting Research; Harvard Information, Markets, and Organizations; Massachusetts Institute of Technology (presenter); University of Chicago (presenter x2); University of Michigan (presenter); University of Minnesota (presenter); University of Washington (presenter); Securities and Exchange Commission (presenter)
- 2022: Securities and Exchange Commission (presenter), Harvard Research Seminar in Law, Economics, and Organizations (presenter), Wharton-INSEAD Doctoral Consortium (presenter), UC Berkeley Fraud Fest, Stanford Human-centered AI (invited)
- 2021: NBER Big Data (presenter), Stanford Human-centered AI (invited), FARS, RAST, JAR, Georgetown University AI in Asset Management, UNC Tax Symposium, UC Berkeley Fraud Fest, Stanford Foundational AI Workshop (invited), Stanford Hoffman-Yee Symposium
- 2020: NBER Big Data, JAE, JAR, UNC Tax Symposium
- 2018: Google TensorFlow (Deep Learning) Developer Summit (invited), Amazon Machine Learning (presenter), JupyterCon (Reproducible research) (invited and sponsored by UC Berkeley)
- 2017: Inaugural Google TensorFlow (Deep Learning) Developer Summit (invited)
- 2015: SAE World Congress (session organizer)
 ASME Internal Combustion Engine Division Fall Technical Conference (presenter)
- 2014: SAE World Congress (session organizer)
- 2012: North American Gamma Technologies Conference (presenter)

SERVICE

Ad hoc reviewer for American Society of Mechanical Engineers, Management Science, Journal of Accounting and Economics, Journal of Accounting Research, Review of Accounting Studies, Review of Financial Studies, Society of Automotive Engineers, The Accounting Review.

MENTORING

I work or have worked with the following outstanding students:

Doctoral

- Charles Downing, Ph.D. Candidate at MIT Sloan. With Matthew Philips and Eric So.
- Andrew Yeh, Ph.D. Candidate at Wharton. Two projects related to cryptocurrencies, with Dan Taylor.

Pre-doctoral

- Siyan (Carrie) Wang, pre-doc at Chicago Booth from 2023 through present. Currently applying to Ph.D programs in Human Computer Interaction across top Information and Computer Science programs.
- Eszter Kiss, pre-doc at Chicago Booth from 2024 through present. Co-advised with Anna Costello

Selected Undergraduate

- Joseph Gorman (UoC Financial Markets Program)
- Alec Guthrie (JP Morgan Trading)
- Humzah Merchant (Apollo Global Management)

PATENTS

US10475451B1	Universal and user-specific command processing	2017
Not Yet Assigned	Framework for Multi-Skill Responses and Linking (Pending)	2017
US9249698B2	Compression relief brake reset mechanism	2016
US20160146074A1	Engine brake lash adjuster device and method	2014
WO2014152944A1	Valve actuation system	2014
US20160025018A1	Compression relief brake reset mechanism	2014

PROFESSIONAL EXPERIENCE

Amazon, Senior Product Manager - Technical, Seattle, WA	2017-2018
Gamma Technologies, Senior Engineer, Westmont, IL	2013-2015
Cummins, Senior Design Engineer, Columbus, IN	2010-2013

REFERENCES

Robert W. Holthausen (co-chair)

Professor of Accounting and Finance The Wharton School University of Pennsylvania holthaus@wharton.upenn.edu (215) 898-7781

Daniel Taylor (co-chair)

Arthur Andersen Professor of Accounting The Wharton School University of Pennsylvania dtayl@wharton.upenn.edu (302) 897-0644 Robert J. Jackson Jr.

Professor of Law School of Law New York University robert.j.jackson@nyu.edu (212) 998-6225

Christina Zhu

Assistant Professor of Accounting The Wharton School University of Pennsylvania <u>chrzhu@wharton.upenn.edu</u> (215) 898-7783