

Asaf Manela

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### Academic Positions

- 2017– Associate Professor of Finance, Washington University in St. Louis  
2021–2024 Associate Professor of Finance, Reichman University (formerly IDC Herzliya)  
2011–2017 Assistant Professor of Finance, Washington University in St. Louis  
2007–2010 Teaching and Research Assistant, University of Chicago, Booth School of Business

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### Editorial Positions

- 2020– Associate Editor, *Journal of Finance*

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### Education

- 2011 University of Chicago, Booth School of Business  
*Ph.D. in Finance, June 2011*  
*M.B.A., June 2011*  
2005 Boston University  
*B.A. in Economics, January 2005*  
*B.A. in Computer Science, January 2005*  
*Summa cum Laude*

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### Research Interests

Asset Pricing, AI, Machine Learning, Text Analysis, Information Economics, Financial Intermediation

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### Teaching

- 2024– Valuation, Mergers and Acquisitions, EMBA, Washington University in St. Louis  
2019– Financial Technology, BSBA, MBA, MSA levels, Washington University in St. Louis  
2015–2017 Financial Intermediation, BSBA and MBA levels, Washington University in St. Louis  
2012–2015 Options Futures and Derivative Securities, BSBA and MBA levels, Washington University in St. Louis

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## Publications

### ***The Natural Language of Finance*** (with Gerard Hoberg)

*Foundations and Trends in Finance*, 2025, Volume 14, Issue 4, pp. 244–365

We summarize the wide array of natural language processing (NLP) tools used in financial economics research. These tools empower researchers to incorporate rich but subjective textual data into advanced empirical analysis. NLP tools have pros and cons, and some are better suited to certain research agendas. Research using these tools has exploded in prevalence over the past ten years, and we document the major contributions in corporate finance, asset pricing, and beyond.

### ***Does finance benefit society? A language embedding approach*** (with Manish Jha and Hognyi Liu)

*Review of Financial Studies*, forthcoming

We measure popular sentiment toward finance using a computational linguistics approach applied to millions of books published in eight countries over hundreds of years. We document persistent differences in finance sentiment across countries despite ample time-series variation. Books written in the languages of more capitalist countries discuss finance in a more positive context. Finance sentiment declines one year before rather than after financial crises. Positive shocks to finance sentiment lead to greater GDP and credit growth.

### ***Liquidity and the Strategic Value of Information*** (with Ohad Kadan)

*Review of Finance*, Volume 29, Issue 1, January 2025, pp. 1–32 (Lead article)

In Kyle (1985), the ratio of fundamental variance to price impact measures the value of information to a monopolist strategic informed investor. We show this same statistic provides an approximation for the value of information in a more general setting with multiple differentially-informed investors, and estimate it using high-frequency stocks data.

### ***Business News and Business Cycles*** (with Leland Bybee, Bryan Kelly and Dacheng Xiu)

*Journal of Finance*, 2024, Volume 79, Issue 5, pp. 3105–3147

DFA Distinguished Paper Prize, 2025 AFA Meetings

We propose an approach to measuring the state of the economy via textual analysis of business news. News attention closely tracks a wide range of economic activities and can forecast aggregate stock market returns. A text-augmented VAR demonstrates the large incremental role of news text in forecasting macroeconomic dynamics. We retrieve the narratives that underlie these improvements in market and business cycle forecasts.

### ***The Partisanship of Financial Regulators*** (with Joseph Engelberg, Matthew Henriksson and Jared Williams)

*Review of Financial Studies*, 2023, Vol 36, Issue 11, pp. 4373–4416

We analyze the partisanship of SEC Commissioners and Fed Governors. Using a language-based approach, we identify partisan phrases in Congress, such as “red tape” and “climate change,” and observe their usage among regulators. Although the Fed has remained relatively non-partisan throughout our sample period (1930-2019), we find that partisanship among SEC Commissioners rose recently to an all-time high.

**Natural Disaster Effects on Popular Sentiment Toward Finance** (with Manish Jha and Hongyi Liu)

*Journal of Financial and Quantitative Analysis*, 2021, Vol 56, Issue 7, pp. 2584–2604

We use a text-based measure of popular sentiment toward finance to study how finance sentiment responds to rare historical disasters and to the ongoing Covid-19 pandemic. Finance sentiment declines after epidemics and earthquakes but rises following severe droughts, floods, and landslides. These heterogeneous effects suggest finance sentiment responds differently to the realization of insured versus uninsured risks. Finance sentiment declines at the start of the Covid-19 pandemic, but recovers in countries that experienced high stock markets returns and that responded with large fiscal spending. Finance sentiment seems to depend on the insurance provided by private markets and by public finance.

**Text Selection** (with Bryan Kelly and Alan Moreira)

*Journal of Business & Economic Statistics*, 2021, Vol 39, Issue 4, pp. 859–879

Text data is inherently ultra-high dimensional, which makes machine learning techniques indispensable for textual analysis. We develop an economically motivated high dimensional selection model that improves machine learning from text (and from sparse counts data more generally). We apply our framework to backcast, nowcast, and forecast financial variables using newspaper text, and find that it substantially improves out-of-sample fit relative to alternative state-of-the-art approaches.

**Hub-and-Spoke Regulation and Bank Leverage** (with Yadav Gopalan and Ankit Kalda)

*Review of Finance*, 2021, Vol 25, Issue 5, pp. 1499–1545

Hub-and-spoke regulation, where a central regulator with legal power over firms delegates monitoring to local supervisors, can improve information collection, but can also lead to agency problems and capture. We document that following the closure of a US bank regulator's field offices, the banks they previously supervised distribute cash, increase leverage, and increase their risk of failure, more than similar banks in the same time and place.

**Estimating the Value of Information** (with Ohad Kadan)

*Review of Financial Studies*, 2019, Vol 32, Issue 3, pp. 951–991

*Best Paper Award, 2016 FMA Conference on Derivatives and Volatility at CBOE*

How much would investors pay to receive investment-relevant information? We derive a general expression for the value of information to a price-taking investor in a dynamic environment and provide a framework for its estimation. To illustrate, we estimate values of leading macroeconomic indicators (GDP, employment, etc.) and rank them. Using variations in option prices we find that a consumer-investor with conventional preference parameters would pay 3 to 5 basis points of her wealth for a one-time private peek into these indicators.

**Intermediary Asset Pricing: New Evidence from Many Asset Classes** (with Zhiguo He and Bryan Kelly)

*Journal of Financial Economics*, 2017, Vol 126, Issue 1, pp. 1–35 (Lead article)

Innovations to the equity capital ratio of primary dealers price not only equity and government bond market portfolios, but also other more sophisticated asset classes such as corporate and sovereign bonds, derivatives, commodities, and currencies. The price of intermediary capital risk is consistently positive and of similar magnitude in many asset classes, suggesting these financial intermediaries are marginal

investors in many markets and hence key to understanding asset prices.

***News Implied Volatility and Disaster Concerns*** (with Alan Moreira)

*Journal of Financial Economics*, 2017, Vol 123, Issue 1, pp. 137–162

We construct a text-based measure of uncertainty starting in 1890 using front-page articles of the Wall Street Journal. Consistent with a time-varying rare disaster risk model, high news implied volatility (NVIX) predicts periods of above average stock returns, or periods of large economic disasters. News coverage related to wars and government policy explains most of the time variation in risk premia our measure identifies.

***The Shadow Cost of Bank Capital Requirements*** (with Roni Kisin)

*Review of Financial Studies*, 2016, Vol 29, Issue 7, pp. 1780–1820

*Best Paper Award*, 2013 Financial Research Association Meetings

We estimate the shadow cost of capital requirements using data on a costly loophole that allowed banks to relax these constraints. We show theoretically that a bank's use of the loophole reveals its private compliance cost, which takes into account both the costs of issuing equity and the effectiveness of capital regulation. We find that increasing capital requirements would impose a modest cost—\$220 million a year for all participating banks combined per 1pp increase, and \$14 million on average.

***Information Acquisition in Rumor-Based Bank Runs*** (with Zhiguo He)

*Journal of Finance*, 2016, Vol 71, Issue 3, pp. 1113–1158

We study information acquisition and dynamic withdrawal decisions when a spreading rumor exposes a solvent bank to a run. Uncertainty about the bank's liquidity and potential failure motivates depositors who hear the rumor to acquire additional noisy signals. Depositors with less informative signals may wait before gradually running on the bank, leading to an endogenous aggregate withdrawal speed and bank survival time.

***The Value of Diffusing Information***

*Journal of Financial Economics*, 2014, Vol 111, Issue 1, pp. 181–199

How does the speed by which information diffuses affect its value to a stock market investor? Faster-diffusing information means quicker and less noisy profits, but also increases competing informed trading, impounding more information into prices and eroding profits. Structural empirical analysis of stock market reaction to drug approvals using media coverage as a proxy for the transmission rate of information finds that the value of information is hump-shaped in its future transmission rate.

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**Working Papers**

***Chronologically Consistent Large Language Models*** (with Songrun He, Linying Lv and Jimmy Wu)

*Revision requested by the Journal of Financial Economics*

Large language models are increasingly used in social sciences, but their training data can introduce lookahead bias and training leakage. Here, we overcome this challenge by training chronologically consistent large language models timestamped with the availability date of their training data, yet accurate

enough that their performance is comparable to state-of-the-art open-weight models. In an asset pricing application, we compare the performance of news-based portfolio strategies that rely on chronologically consistent versus biased language models and estimate a modest lookahead bias.

***Fundamentals of Perpetual Futures*** (with Songrun He, Omri Ross and Victor von Wachter)

*Revision requested by the Review of Financial Studies*

Perpetual futures are the most popular cryptocurrency derivatives. Perpetuals offer leveraged exposure to their underlying without rollover or direct ownership. Unlike fixed-maturity futures, perpetuals are not guaranteed to converge to the spot price. To minimize the gap between perpetual and spot prices, long investors periodically pay shorts a funding rate proportional to this gap. We derive no-arbitrage prices for perpetual futures in frictionless markets and bounds in markets with trading costs. Empirically, deviations from these prices in crypto are larger than in traditional currency markets, comove across currencies, and diminish over time. An implied arbitrage strategy yields high Sharpe ratios.

***Entity Neutering*** (with Joseph Engelberg, William Mullins, and Luka Vulicevic)

Cutting-edge LLMs are trained on recent data, creating a concern about look-ahead bias. We propose a simple solution called entity neutering: using the LLM to find and remove all identifying information from text. In a sample of one million financial news articles, we verify that, after neutering, ChatGPT and other LLMs cannot recognize the firm or the time period for about 90% of the articles. Among these articles, the sentiment extracted from the raw text and the neutered text agree 90% of the time and have similar return predictability, with the difference providing an upper bound on look-ahead bias. The evidence here suggests that LLMs are able to effectively neuter text while maintaining semantic content. For look-ahead bias, LLMs can be both the problem and the solution.

***Chronologically Consistent Generative AI*** (with Songrun He, Linying Lv and Jimmy Wu)

We introduce a family of chronologically consistent, instruction-following large language models to eliminate lookahead bias. Each model is trained only on data available before a clearly defined knowledge-cutoff date, ensuring strict temporal separation from any post-cutoff data. The resulting framework offers (i) a simple, conversational chat interface, (ii) fully open, fixed model weights that guarantee replicability, and (iii) a conservative lower bound on forecast accuracy, isolating the share of predictability that survives once training leakage is removed. Together, these features provide researchers with an easy-to-use generative AI tool useful for a wide range of prediction tasks that is free of lookahead bias.

***The Value of Data to Fixed Income Investors*** (with Jennie Bai and Jane Li)

We measure popular sentiment toward finance using a computational linguistics approach applied to millions of books published in eight countries over hundreds of years. We document persistent differences in finance sentiment across countries despite ample time-series variation. Books written in the languages of more capitalist countries discuss finance in a more positive context. Finance sentiment declines one year before rather than after financial crises. Positive shocks to finance sentiment lead to greater GDP and credit growth.

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**Conference Presentations** (\* indicates coauthor presentation \*\* scheduled to present)

- 2025 NBER SI AP\*, NBER SI Big Data and High-Performance Computing\*, Finance Research Revolution Conference\*, AFA Annual Meeting\*\*
- 2024 Utah Winter Finance Conference
- 2023 AFA Annual Meeting\*, Future of Financial Information conference\*
- 2022 AFA Annual Meeting, Swedish House of Finance annual conference on AI & Machine Learning in Finance, Conference on NLP for Financial and Economic Modeling at Oxford University
- 2021 BigNOMICS, EFA\*, FMA\*, MFA\*,
- 2020 WFA\*, EFA\*, SFS Cavalcade\*
- 2019 WFA in Huntington Beach\*
- 2018 NBER SI AP, AFA Annual Meeting in Philadelphia\*
- 2017 AFA Annual Meeting in Chicago, CITE Conference in Chicago, Chicago Financial Institutions Conference\*, FIRS Meetings in Hong Kong\*, Jackson Hole Finance Group Conference\*
- 2016 AFA Annual Meeting in San Francisco\*, WFA in Park City, IDC in Herzliya, Duke-UNC Asset Pricing Conference\*, FMA Conference on Derivatives and Volatility at CBOE
- 2015 AFA Annual Meeting in Boston\*, Notre Dame Conference on Financial Regulation\*, GSU Symposium on Liquidity Risk and Capital Requirements, Gerzensee Summer School, FTG Summer School in Financial Intermediation\*, Becker Friedman Institute Media and Communications Conference, NBER AP\*, Chicago Booth Asset Pricing Conference
- 2014 AFA Annual Meeting in Philadelphia\*, NBER Behavioral Finance Meeting in Chicago, FIRS Meetings in Quebec
- 2013 IDC in Herzliya, SFS Cavalcade in Miami\*, Texas Finance Festival in Austin\*, Wharton Conference on Liquidity and Financial Crises, FDIC-JFSR Fall Banking Research Conference\*, FRA Meetings in Las Vegas (*Best Paper Award*)
- 2012 AEA Annual Meeting in Chicago, UNC Finance Group in Jackson Hole, SFS Cavalcade in Virginia/Darden, IDC in Herzliya, SED Annual Meeting in Cyprus, Finance Theory Group workshop\*
- 2011 WFA in Santa Fe
- 2008 Econometric Society Meetings in Brazil, LBS Trans-Atlantic Doctoral Conference in London (*Best Paper Award*)

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**Seminar Presentations**

- 2025 Arizona State University, Fed Board, University of Toronto, AI & Big Data in Finance Research Forum, Dartmouth\*\*, University of California Los Angeles\*\*
- 2024 Hebrew University, Bank of Israel, Virtual Derivatives Workshop

2023	a16z Crypto, LBS, LSE, Reichman University, Washington University in St. Louis
2022	Yale University, Santa Clara University, Tel-Aviv University
2021	City UHK, Chinese UHK, Columbia, CUNY, NHH, Richmond Fed, Temple University
2020	Fed Board, University of Sussex, Virtual Finance Seminar, Washington University in St. Louis
2019	Indiana University, Rice University, Syracuse University, KC Fed, UC Irvine, Washington University in St. Louis
2018	Ohio State, University of Michigan, Tel-Aviv University, Hebrew University, IDC Herzliya, Indiana University, Rice University, Washington University in St. Louis
2017	University of Southern California, INSEAD, Swiss Finance Institute @ EPFL, Dartmouth College, University of Rochester, NY Fed, Texas A&M
2016	Boston College, University of Illinois Urbana-Champaign, University of Oxford, Washington University in St. Louis
2015	Harvard Business School, University of California San Diego, University of Washington, University of Houston, Washington University in St. Louis
2014	University of California Los Angeles, INSEAD, IDC Herzliya, Washington University in St. Louis
2013	Ohio State University, University of North Carolina, Washington University in St. Louis
2012	Tel-Aviv University, Washington University in St. Louis
2011	Arizona State University, Boston College, Chicago Booth, Hebrew University, London Business School, Tel-Aviv University, University of Maryland, Washington University in St. Louis

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#### Session Chair

2025	FIRS
2024	MFA
2023	Finance forum
2022	CICF
2021	AFA
2018	IDC annual conference in financial economics

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#### Discussions

2025	"Geeoeconomic Pressure" by Christopher Clayton, Antonio Coppola, Matteo Maggiori, and Jesse Schreger, NBER AP
2024	"The Zero-Beta Interest Rate" by Sebastian Di Tella, Benjamin M. Hébert, Pablo Kurlat and Qitong Wang, FIRS

- 2023 "Textual Analysis of Short-seller Research Reports"  
by Jules H. van Binsbergen, Xiao Han, and Alejandro Lopez-Lira, AFA
- 2022 "Political Polarization in Financial News"  
by Eitan Goldman, Nandini Gupta, and Ryan Israelsen, FIRS
- "Valuing Financial Data"  
by Maryam Farboodi, Dhruv Singal, Laura Veldkamp, and Venky Venkateswaran, ABFR Forum
- 2021 "Risk Factors that Matter: Textual Analysis of Risk Disclosures for the Cross-Section of Returns"  
by Alejandro Lopez-Lira, AFA
- 2021 "Deep Learning Mutual Fund Disclosure: Risk Sentiment, Risk Taking, and Performance"  
by Sean Cao, Baozhong Yang and Alan L. Zhang, CICF
- 2020 "Leveraged Funds and the Shadow Cost of Leverage Constraints"  
by Zhongjin Lu and Zhongling Qin, WFA
- "Social Interaction and Market Reaction to Earnings News"  
by David Hirshleifer, Lin Peng, and Qiguang Wang , AFA
- "Failure to Share Natural Disaster Risk"  
by Tuomas Tomunen, EFA
- 2019 "Leverage Regulation and Market Structure: A Structural Model of the UK Mortgage Market"  
by Matteo Benetton, Utah Winter Finance Conference
- "Dynamic Interpretation of Emerging Risks in the Financial Sector" by Kathleen Weiss Hanley and Gerard Hoberg, AFA
- "Firm-Level Political Risk Measurement and Effects" by Tarek A. Hassan, Stephan Hollander, Laurence van Lent and Ahmed Tahoun, AFA
- "How Risky are the U.S. Corporate Assets?" by Tetiana Davydiuk, Scott Richard, Ivan Shaliastovich, and Amir Yaron, IDC Conference in Financial Economics
- "Intermediaries and Asset Prices: Evidence from the U.S., U.K., and Japan, 1870-2016" by Matt Baron and Tyler Muir, WFA
- "The Perils of Crying 'Fake News'" by Mancy Luo, Alberto Manconi, and Massimo Massa, Chicago Political Economy of Finance Conference
- 2018 "Shadow Funding Costs: Measuring the Cost of Balance Sheet Constraints" by Matthias Fleckenstein and Francis A. Longstaff, Duke/UNC Asset Pricing Conference
- "The Effect of Bank Supervision on Risk Taking: Evidence from a Natural Experiment" by John Kandrak and Bernd Schlusche, CFIC



- 2017 “Affect, media and earthquakes: Determinants of crash beliefs from investor surveys” by William N. Goetzmann, Dasol Kim, and Robert J. Shiller, Western American Finance Association Meetings
- 2015 “Competition and Bank Opacity” by Liangliang Jiang, Ross Levine, and Chen Lin, Western Finance Association Meetings
- “Tail Risk Premia and Return Predictability” by Tim Bollerslev, Viktor Todorov, and Lai Xu, Midwestern Finance Association Meetings
- 2014 “Adverse Selection and Intermediation Chains” by Vincent Glode and Christian C. Opp, Western Finance Association Meetings
- 2012 “Understanding Bank Runs: Do Depositors Monitor Banks?” by Rajkamal Iyer, Manju Puri and Nicolas Ryan, Minnesota Corporate Finance Conference

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### Grants

- 2024 Israel Science Foundation (ISF) grant for 3 years with a projected award of 200,000 ILS (about \$52,000) per year.

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### Honors and Awards

- 2025 DFA Distinguished Paper Prize, AFA Meetings
- 2016 Best Paper Award, FMA Conference on Derivatives and Volatility at CBOE
- 2014 World’s Best 40 Business School Professors Under the Age of 40, Poets & Quants
- 2013 Best Paper Award, Financial Research Association Meetings
- 2010 Fischer Black Fellow
- 2009 Katherine Dusak Miller Ph. D. Fellowship
- 2009 The Arnold Zellner Doctoral Prize
- 2008 Best Paper Award in Accounting, Economics and Finance, LBS Doctoral Conference
- 2007 CRSP Paper Award, GSB, University of Chicago
- 2006–2010 Ph. D. in Finance Studies Fellowship, GSB, University of Chicago

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### Program Committee Membership

EFA Annual Meeting (2015–2025), FIRS Annual Meeting (2019–2025), MFA Annual Meeting (2019–2022), Utah Winter Finance Conference (2016–2025), WFA Annual Meeting (2018–2025), SFS Cavalcade North America (2020–2025), IDC Herzliya annual conference (2014–2023), CBOE Conference on Derivatives and Volatility (2016–2024), Mitsui Finance Symposium: New Frontiers in Asset Pricing (2024), Young Scholars Finance Consortium (2024–2025)

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### Refereeing

American Economic Review, Econometrica, Economic Theory, Economic Inquiry, Journal of Empirical Finance, Journal of Economic Theory, Journal of Finance, Journal of Financial Economics, Management Science, Quantitative Economics, Review of Asset Pricing Studies, Review of Corporate Finance Studies, Review of Economic Studies, Review of Finance, Review of Financial Studies

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### PhD Supervision (initial placement)

Songrun He, dissertation committee chair, 2026 (TBD)  
Jimmy Wu, dissertation committee chair, 2026 (TBD)  
Jiaen Li, dissertation committee chair, 2025 (Florida State University)  
Manish Jha, dissertation committee member, 2021 (Georgia State University)  
Hongyi Liu, dissertation committee member, 2021 (VISA)  
Ankit Kalda, dissertation committee member, 2018 (Indiana University)  
Xiaoxiao Tang, dissertation committee member, 2018 (UT Dallas)  
Xiaming Zeng, dissertation committee member, 2017 (Barclays)  
Jinji Hao, dissertation committee member, 2017 (Victoria University of Wellington)  
Fang Liu, dissertation committee member, 2015 (Cornell)

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### Programming Languages

Julia, English

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### Non-Academic Experience

2005–2006 Software Engineer – User Interface Expert, Mercury Interactive, Yehud, Israel  
2002–2004 Founder, Regassist.com, Boston, MA  
2000–2001 Applications Team Developer, TrulyGlobal @ VocalTec, Herzliya, Israel  
1997–2000 Israel Defense Force

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### Affiliations

American Economic Association, American Finance Association, Society for Financial Studies, Western Finance Association, Phi Beta Kappa

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### Hobbies

Scuba-diving, Fixer uppers, Running, Chess

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### Languages

Fluent in English and Hebrew