AYUSH JHA

Postdoctoral Scholar in Quantitative Finance & Financial Economics

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Website | LinkedIn | GitHub

Education

Texas Tech University — Lubbock, Texas, USA *2026*
Doctor of Philosophy (Ph.D.) in Economics

Delhi College of Arts & Commerce — University of Delhi, India *2022*
B.A. (Hons) Political Science *[Minor: Economics]*

Research Interests

Asset Pricing; Financial Econometrics; Derivatives and Fixed-Income Valuation; Portfolio Choice and Risk Management; Financial Markets; Machine Learning and Artificial Intelligence in Finance.

Academic Appointments & Teaching

Postdoctoral Scholar *September 2026 – Current*
Department of Mathematics & Statistics, Texas Tech University

Instructor of Record:

- MATH2345 Intro to Statistics: Applications to Business (Fall '26, Spring '27)
- MATH3356 Quantitative Theory of Interest (Spring '27)

Graduate Part-Time Instructor *January 2023 – August 2026*
Department of Economics, Texas Tech University

(i) Instructor of Record

- ECO4316 Managerial Economics with Financial Data Analysis (Summer '26)
- ECO2301 Principles of Microeconomics (Spring '26; Fall '25)
- EC02305 Principles of Economics (Summer II '25; Spring '25)

(ii) Teaching Assistant

- ECO2305 Principles of Economics (Fall '24; Summer '24)
- ECO2301 Principles of Microeconomics (Fall '24)
- ECO3312 Intermediate Microeconomics (Fall '23; Spring '24) — Taught the Math camp covering advanced mathematical concepts on optimization and consumer theory by consent of instructor
- ECO3302 Intermediate Macroeconomics (Summer '23)

- Economics Tutoring Center for undergraduates (Spring '23)

Publications & Research

Published Papers

Ayush Jha, Ali Jaffri, and Hassan A. Butt, "Household Interest in Artificial Intelligence for Financial Advice: Evidence from the United States." *Journal of Behavioral and Experimental Finance. 2026, Vol. 51, pp. 101212.*

Ayush Jha, Abigail Mensah, Hongwei Mei, Rui Wang, Svetlozar Rachev, and Frank J. Fabozzi, "Option Pricing under Stochastic Volatility and Jumps: A PIDE Framework with Empirical Evidence." *Frontiers of Mathematical Finance. 2026, Vol. 9, pp. 41–66.*

Ayush Jha, "Reinforcement Learning for Strategic Asset Allocation: Why the Objective Function Dominates the Agent Architecture." *Journal of Financial Data Science. 2026.*

Ayush Jha, Ali Jaffri, Svetlozar T. Rachev, and Frank J. Fabozzi, "Option-Implied Probabilities and Bond Valuation." *The Journal of Fixed Income. 2026; Vol. 35(3), pp. 6–17.*

Ayush Jha, Ali Jaffri, Svetlozar T. Rachev, and Frank J. Fabozzi, "Equity-Imposed Tilts in Affine Term Structure Models: Evidence from Option-Implied Asymmetries." *The Journal of Fixed Income. 2026; Vol. 35(4), pp. 7–24.*

Ayush Jha, Ali Jaffri, and Hassan A. Butt, "Demystifying FinBERT: How Transformer Models Turn Financial Text into Market Insights." *The Journal of Portfolio Management. 2025, Vol. 52(2), p. 212.*

Ayush Jha, Abootaleb Shirvani, Svetlozar T. Rachev, and Frank J. Fabozzi, "Beyond the Traditional VIX: A Novel Approach to Identifying Uncertainty Shocks in Financial Markets." *Journal of Risk and Financial Management. 2025; Vol. 18(1):11.*

Ali Jaffri, Abootaleb Shirvani, Ayush Jha, Svetlozar T. Rachev, and Frank J. Fabozzi, "Optimizing Portfolios with Pakistan-Exposed Exchange-Traded Funds: Risk and Performance Insight." *Journal of Risk and Financial Management. 2025; Vol. 18(3):158.*

Working Papers

Ayush Jha, Freddie A. Papazyan, and Svetlozar T. Rachev, "Misspecified Learning or Rational Choice? Evidence from Financial Markets." *Review of Asset Pricing Studies* (Revise & Resubmit).

Ayush Jha, Abootaleb Shirvani, Ali Jaffri, Svetlozar T. Rachev, and Frank J. Fabozzi, "Behavioral Probability Weighting and Portfolio Optimization under Semi-Heavy Tails." *Financial Innovation* (Revise & Resubmit).

Ayush Jha, "Attention Traps."

Ayush Jha, "Agentic AI and Real-Time Market Disequilibrium."

Ayush Jha, Ali Jaffri, Svetlozar Rachev, and Frank J. Fabozzi, "Robust Efficient Frontiers under Fixed-Point Variance Selection Rule."

Ayush Jha, Abootaleb Shirvani, Ali Jaffri, Svetlozar T. Rachev, and Frank J. Fabozzi, "State-Dependent Portfolio Choice under Policy-Regime Switching: Evidence from Environmental, Social, and Governance Momentum Strategies"

Noah Liptack, Ali Jaffri, Ayush Jha, and Michael D. Noel, "The Ticketmaster and Live Nation Saga: A Robust Merger Analysis."

Books & Monographs

Jha, A., Jaffri, A., Lindquist, W.B., Rachev, S., Boakye, R., Hettiachchi-Halpe-Kankanamalage, D.C.W., & Mensah, A. (2027). Microstructure, Statistical Fluctuations, and Technical Signals in Rational Asset Pricing (1st ed.). Chapman and Hall/CRC.

Ayush Jha, Ali Jaffri, and Svetlozar Rachev, *Next-Generation Asset Pricing: Integrating Econometrics, Machine Learning, and AI.* World Scientific. (Accepted).

Ayush Jha, Ali Muqadas Jaffri, Abootaleb Shirvani, Ting-Jung Lee, Thidini Mahanama, and Svetlozar T. Rachev, *Risk Analysis and Portfolio Management for AI Innovation ETFs.* De Gruyter Brill. (Accepted).

Ayush Jha, Ali Jaffri, Abootaleb Shirvani, Svetlozar Rachev, Farzana Afroz, and Nicholas Appiah, *Behavioral Market Microstructure Factor Investing and Stochastic Discount Factor under Probability-Weighting Transformations.* Cambridge Scholars Publishing. (Accepted).

Scholarships & Awards

1. Nominated for 2nd Abu Dhabi Investment Authority (ADIA) Financial Data Lab Best Paper Award
2. Graduate Student Research Support Award (Fall '24)
3. Dr. Rashid B. Al-Hmoud Scholarship in Economics, 2023–Present *(Awarded by the Department of Economics, College of Arts & Sciences, Texas Tech University)*
4. Presidential Doctoral Scholarship, Spring '23–Present
5. Graduate School Enhancement Scholarship, Fall '22 *(Awarded by the Graduate School, Texas Tech University)*

Conferences & Competitions

- Peter Carr Conference on Mathematical Finance, University of Maryland (Fall '26)
- Southern Economic Association Annual Meetings, Houston (Fall '26)
- Midwest Macro Meetings, Lubbock (Fall '26)
- 22nd International Behavioral Finance Conference, Chicago (Fall '26)
- 19th International Behavioral Finance Conference, Booth School of Business, University of Chicago (Fall '25)
- Texas Economic Theory Camp, SMU (Fall '25)
- ISA-South, Lubbock (Fall '25)
- Eastern Economic Association Annual Meetings, New York City (Spring '25)
- Graduate Student Research Poster Competition, Lubbock (Spring '24)
- Midwest Macroeconomics Conference, Lubbock (Fall '23)

Professional Service

Global Finance Journal | *Finance Research Letters* | *Financial Innovation*

Computational Skills

Python, MATLAB, R / R Studio; Bloomberg Terminal, WRDS (CRSP, OptionMetrics, and others)

References

Prof. Svetlozar T. Rachev
Professor of Mathematics & Statistics
Dept. of Mathematics & Statistics
Texas Tech University
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Prof. Frank J. Fabozzi
Professor of Practice in Finance
Carey Business School
Johns Hopkins University
ffabozz1@jhu.edu

Dr. Rashid B. Al-Hmoud
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