

MAHNAZ PAYDARZARNAGHI

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EDUCATION

University of Texas at Arlington Ph.D., Finance and Real Estate Successfully defended a three-essay proposal in December 2023	Dec 2024 (<i>expected</i>)
New Mexico State University M.Sc., Mathematics	Dec 2018
Sharif University of Technology M.Sc., Industrial Engineering	Sep 2014
University of Tehran B.Sc., Mathematics	Sep 2010

RESEARCH INTERESTS

FinTech, Investments, Behavioral Finance, and Social Media Analytics

WORKING PAPERS

Social Media Credibility and Financial Market Activity (*Job Market Paper*)

With David Rakowski and Mahmut Yasar.

Under Review at *Financial Management*

Presented at:

- Financial Management Association Annual Meeting, Grapevine, TX, 2024 (scheduled)
- Financial Management Association European Meeting, Turin, Italy, 2024 (by co-author)
- Multinational Finance Society, Vaasa, Finland, 2024 (by co-author)
- UTA New Voices Research Symposium, Arlington, TX, 2024

This research is derived from Essay 2 of my dissertation. We explore how stock price reactions to Twitter (now known as X) posts are associated with the perceived credibility of social media users making the posts. We introduce new credibility metrics based on the sender and the content of Twitter posts. Less credible tweets influence prices through a transient and non-informational liquidity effect, while more credible tweets lead to a persistent information effect. Our results support the Elaboration Likelihood Model by demonstrating that the direct route of persuasion (represented by post credibility) is larger in magnitude and more persistent over time than the peripheral route of persuasion (represented by sender credibility).

Herding Behaviors in Financial Markets: The Influence of Social Media on Market Perceptions

With Mahyar Sharif Vaghefi, David Rakowski, and Mahmut Yasar

For submission to the *Journal of the Association for Information Systems*

This research is derived from Essay 1 of my dissertation. Based on the herding theory and the Emotion as Social Information model (EASI), we examine herding behavior in financial markets, especially Bitcoin. In this study, we focus on the StockTwits platform. The findings show that herding behavior significantly influences market perceptions, especially in volatile conditions, with unexpected interactions between crowd market trajectory and emotional content, offering new insights into online financial discussions.

Inferring Accounting Conservatism from Textual Analysis of 10-K Forms

With John David Diltz and Salil K Sarkar

For submission to the *Journal of Business Finance & Accounting*

This study applies natural language processing (NLP) techniques to assess the degree of accounting conservatism in a large sample of 10-K filings over the period from 1999 through 2023. Following an extensive body of research focused on analysis of accounting conservatism using objective financial statement data, we explore the possibility that affective meaning (i.e., the subjective content of 10-K text) may provide insight into the degree of, and motivation for, conservative accounting practices. We find that our NLP measures of accounting conservatism generally align with conventional measures with respect to conservatism and uncertainty, but they differ with respect to 10-K readability, tone, and analyst forecast accuracy. We conclude that NLP techniques represent a useful tool for the analysis of accounting conservatism exhibited in SEC filings.

WORKS IN PROGRESS

Who Does the Market Listen to? The Market's Perception of the Demographic Characteristics of Social Media Users

With David Rakowski

Presented at:

- New Ideas in Fintech, Financial Management Association Annual Meeting, Atlanta, GA, 2022

This study is derived from Essay 3 of my dissertation. We examine the link between information diffusion and user demographic characteristics by analyzing social media posts and stock returns. We analyzed around 22 million Twitter posts specific to S&P 500 companies made by 511,458 Twitter users between 2019 and 2022. We test how stock prices react to information associated with the demographic characteristics of social media users who post that information. Firms with more posts generated by older Twitter users and males are more associated with a sustained information effect, while posts by females and younger individuals are more associated with a temporary liquidity effect. We also examine how our user demographic measures provide new information beyond the face width-to-height ratio (fWHR), which has been employed in related studies.

The Influence of Social Media Bots on Financial Markets

With David Rakowski

Presented at:

- New Ideas in Fintech, Financial Management Association Annual Meeting, Chicago, IL, 2023

This study examines the effects of social media content generated by bots versus human users on stock market behavior, focusing on the distinction between liquidity and information channels. We hypothesize that bot-driven content primarily influences market liquidity due to its rapid and widespread dissemination, while human-generated content impacts stock prices through more substantive information effects. Using data from Twitter (now 'X'), spanning 2019 to 2022, we measure the impact of net bot activity on excess stock returns. Our findings will provide new insights into the role of social media bots in financial markets, highlighting the need to differentiate between automated and human sources when considering their influence on market dynamics.

What Do Young Investors Think About Crypto ETFs?

With Nima Vafai and David Rakowski

Presented at:

- Eastern Finance Association Annual Meeting, Washington, DC, 2022
- Invited SEC Student Roundtable with SEC Chair Gary Gensler and SEC staff, June 2021
- New Ideas in Fintech, Financial Management Association Annual Meeting, Denver, CO, 2021

TEACHING EXPERIENCE

Instructorship

University of Texas at Arlington Jan 2023 – Present

- FINA 5350 – Mathematical Finance (Graduate course in Quantitative Finance)
- FINA 3313 – Business Finance
- FINA 3315 – Investments
- MATH 1315 – College Algebra for Economics & Business Analysis
- MATH 1316 – Mathematics for Economics & Analysis

University of North Texas, Collin, and Dallas Colleges Aug 2019 – Aug 2020

- MATH 1780 – Probability Models
- MATH 1180 – College Math for Business, Economics, and Related Fields
- MATH 1190 – Business Calculus
- MATH 2413 – Calculus I
- MATH 1342 – Elementary Statistical Methods
- MATH 1324 – Mathematics for Business and Social Sciences
- MATH 1314 – College Algebra
- MATH 1332 – Contemporary Mathematics

New Mexico State University Jan 2017 – Dec 2018

- MATH 1215 – Intermediate Algebra
- MATH 1220G – College Algebra

Teaching Assistantship

University of Texas at Arlington Aug 2020 – May 2024

- FINA 5376 – Financial Data Analytics
- FINA 5327 – Financial Derivatives
- FINA 5352 – Financial Modeling For Corporate Analysis
- FINA 4311 – Money And Capital Markets
- FINA 4315 – Advanced Business Financial Analysis

New Mexico State University Jan 2017 – Dec 2018

- MATH 2530G – Calculus III
- MATH 2350G – Statistical Methods
- MATH 1521G – Calculus and Analytic Geometry II

Mentorship

- I-Engage Cultivating Mentoring Research (Summer 2023)
- Mentor for the UTA students in the SEC University Roundtables, guiding research and presentations on “Young Investors and Crypto ETFs” to the SEC Chair Gary Gensler (Summer 2021)

PRESENTATIONS AND DISCUSSIONS

Presentations

2024

- Financial Management Association Annual Meeting, Grapevine, TX (scheduled)
- University of Texas at Arlington, New Voices Research Symposium, Arlington, TX.

2023

- New Ideas in Fintech, Financial Management Association Annual Meeting, Chicago, IL
- Southwestern Finance Association, Houston, TX.

2022

- Eastern Finance Association Annual Meeting, Washington, DC
- New Ideas in Fintech, Financial Management Association Annual Meeting, Atlanta, GA.
- Southwestern Finance Association, New Orleans, LA.

2021

- New Ideas in Fintech, Financial Management Association Annual Meeting, Denver, CO.

Discussions

- Southwestern Finance Association Meeting, Houston, 2023, and New Orleans, 2022.
- Financial Management Association Annual Meeting, Denver, CO, 2021.

AWARDS, HONORS, AND SCHOLARSHIPS

University of Texas at Arlington

- College of Business Endowed Doctoral Scholarship 2024
- College of Business Dissertation Research Grant 2024
- Dissertation Research Enhancement Grant 2024
- Dean's Excellence Scholarship 2023
- Graduate Student Travel Grants 2023
- Doctoral Graduate Student Award for outstanding achievements in the College of Business 2023
- Carla Buss Memorial Scholarship for Academic Excellence, Leadership, Collegiality, and Community Service 2022
- Security and Exchange Commission University Roundtable Award for original research and professional presentation of "Young investors' potential demand for, and understanding of, Crypto-ETFs." 2021

New Mexico State University

- Honors Graduate Student, awarded a certificate of recognition for achieving a high overall GPA of 4.0. 2018

SKILLS

- Proficient in Python with specializations in natural language processing (NLP) and machine learning.
- Proficient in web scraping and the Application Programming Interface (API) of social media platforms like Reddit, Twitter, and StockTwits.
- Proficient in the use of Stata, SAS, and RStudio for data analysis.
- Proficient in leveraging Amazon Web Services (AWS) for data storage, computing, face recognition, and image analysis, experienced in using Amazon Mechanical Turk (MTurk) to design, manage, and execute experimental studies.
- Database experience with CRSP, Compustat, Bloomberg, IBES, EDGAR, SEC Analytics Suite, Datastream, and BoardEx.

REFERENCES

Dr. David Rakowski

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Dr. Mahmut Yasar

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