

Dong Liu

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RESEARCH INTEREST

- Empirical Asset Pricing
- Currency and Foreign Exchange market
- Big data analytics and Fintech
- Machine learning applications in finance
- Blockchain technology and crypto coins

EDUCATION

Master of Finance (MFin) Big data track, Case Western Reserve University, Cleveland, OH **May./2024**

- **GPA: 3.923**
- Graduate Teaching Assistant, Research Assistant

Bachelor of Science, Shanghai Lixin University of Accounting and Finance, Shanghai, China **June./2021**

- **GPA: 3.29(top 30)**
- Student union, public Relations Dept., Assistant Minister

REASEARCH EXPERIENCE

Researching Assistant to Professor Joon Woo Bae **Aug. 2023 – May. 2025**

- Converted lecture materials from SAS to Python, improving accessibility and enhancing the usability of computational tools for student engagement.
- Conducted extensive research on currency value, focusing on various predictive and explanatory factors:
 - Analyzed the relationship between foreign exchange excess returns and climate risk factors, evaluating its potential as a robust predictor of currency valuation.
 - Investigated the role of commodity price fluctuations in explaining the anomalous performance of ENSO-driven currency portfolios.
 - Applied nine investment strategies, including Carry, Short-term Momentum, and Net Foreign, to identify key determinants influencing currency value.

Risk Analysis of New York Community Bank (NYCB) **May. 2024**

- Conducted a quantitative risk assessment of NYCB's loan portfolio, focusing on multi-family residential and commercial real estate (CRE) loans, using advanced financial modeling techniques.
- Applied Credit Default Swap (CDS) analysis to estimate default risk and recovery potential, integrating market data to support evaluations.
- Developed and compared five Value at Risk (VaR) models, including GARCH, EWMA, Monte Carlo, and Historical models, leveraging a rolling window approach to analyze risk trends across loan categories.
- Evaluated comparative risk exposures of different loan types through statistical modeling and scenario analysis, identifying key vulnerabilities and actionable insights for risk management strategies.
- Presented findings with detailed visualizations and empirical evidence, incorporating data from Bloomberg and FRED to substantiate conclusions.

Replication of Hedge Fund Returns **Aug. – Dec. 2023**

- Performed data cleaning, regression modeling, and advanced statistical analyses in SAS, utilizing different selection methods such as forward, backward and so on to identify significant predictors from a comprehensive set of factors.
- Conducted supplementary Principal Component Analysis (PCA) and Factor Analysis to uncover latent variables and reduce dimensionality, providing additional perspectives on the drivers of hedge fund returns.
- Used Excel to simulate hedge fund performance scenarios, integrating findings from SAS analyses to develop a practical framework for strategic decision-making.

Examining Initiation of Dividend Payments **Nov. – Dec. 2022**

- Conducted an event study to assess market reactions to dividend initiation announcements, measuring abnormal and cumulative returns using CAPM-adjusted models.
- Investigated key factors influencing market responses, such as dividend yield, firm size, and market beta, through

regression analysis.

- Developed predictive models to estimate the likelihood of dividend initiation, incorporating firm characteristics and industry classifications.
- Validated findings through robustness checks and visualized results to identify significant trends and implications for corporate financial strategies.

TECHNICAL SKILLS

- **Technologies:** SAS (Advanced), Python (Advanced), SQL, MATLAB, Tableau, Microsoft Office Suite (Advanced)
- **Work Skills:** Quantitative Analysis, Machine Learning Applications, Financial Modeling, Data Visualization, and Process Optimization

HONORS and AWARDS

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| • Fowler Center's Impact Investing Competition 3rd price Finalist | 2024 |
| • Merit Scholarships | 2023 |
| • Wealth Management Case Competition's Top 5 Finalist | 2023 |
| • Innovating Last Mile Delivery Case Competition's Top 5 Finalist | 2023 |
| • 2nd Prize Academic Scholarship (top 10%) | 2020 |
| • 2nd Prize Academic Scholarship (top 10%) | 2019 |
| • Social Practice Scholarship (top 10%) | 2019 |

PROFESSIONAL EXPERIENCE

Case Western Reserve University Cleveland, OH

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| • Teaching Assistant (Financial Models using Big Data) | Jan. – May. 2024 |
| Help professors grade assignments and answer student questions (SAS base) | |
| • Teaching Assistant (Empirical Finance) | Aug. – Dec. 2023 |
| Office Hour for Students to solve statistic and code problems (SAS base) | |

Ningxia Teli Building Materials Co., Ltd, Ningxia, China

Accountant Intern Jul. – Sep. 2021

- Assisted with daily accounting tasks such as invoicing, reconciliation, and preparing financial statements, enhancing practical skills and understanding of financial processes.

Industrial Securities, Ningxia, China

Investment Consultant Intern Mar. – May. 2020

- Evaluated the risks and profits characteristics of mutual fund products and recommended to clients accordingly; achieved \$ 20,000 in sales of equity funds and \$4,000 in sales of bond funds within a month, which ranked the top 3 in the department.