Zihan (Chris) Guo

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EDUCATION

University of Michigan, Ann Arbor Ann Arbor, MI
Master of Science in Quantitative Finance and Risk Management Aug. 2021 – Dec. 2022
Core Courses: Numerical Methods with Financial Applications, Stochastic Processes, Stochastic Analysis for Finance, Financial Mathematics I & II, Statistical Learning I: Regression, Statistical Models and Methods for Financial Data

University of Liverpool Liverpool, UK
Bachelor of Science in Mathematics with Finance Sept. 2019 – June 2021
Overall GPA: 4.0/4.0 **Rank**: Top 1%

Xi'an Jiaotong-Liverpool University Suzhou, China
Bachelor of Science in Financial Mathematics Sept. 2017 – Aug. 2019
Overall GPA: 4.0/4.0
Coursework: Calculus, Linear Algebra, Multivariable Calculus, Statistical Inference, Applied Probability, Measure Theory and Probability, Applied Stochastic Models, Numerical Analysis for Financial Mathematics

INTERNSHIP

Guotai Junan Securities Shanghai, China
Pricing Quant Intern, OTC Derivatives Department June 2021 – Aug. 2021
- Priced exotic options (strong path-dependent American options, hybrid barrier options with rebate) using numerical methods and analytical approximation
- Constructed trading and dynamic hedging system; provided technical support on exotic option trading desk
- Designed customized derivative products with exotic payoff structure and worked on scenario analysis to clients

Guolian Securities Beijing, China
Quantitative Investment Intern, Equity Derivative Department Oct. 2020 – Dec. 2020
- Developed programs updating daily trading volume and unit net value automatically
- Worked out investment ratios based on extracted data; introduced time series analysis to evaluate fund performance
- Visualized data using Seaborn and completed product reports displayed on official roadshow
- Assisted in developing pure alpha and index enhancement trading strategies

Baohe Capital Shanghai, China
Investment Manager Assistant July 2020 – Sept. 2020
- Collected investee companies' information; illustrated the company profile, ownership and equity structure
- Investigated the investee companies' industrial layout, current industry state and future prospect
- Analyzed the industrial chains, the companies' profitability and pricing power
- Performed preliminary valuation on the investee company and prepared fundraising report

RESEARCH

Are Cryptocurrencies Priced in the Cross-section? A Portfolio Approach Liverpool, UK
Co-Author with Professor Adelphe Ekponon at University of Liverpool May 2021 – Present
- Modified previous econometrics methods (Fama-Beth approach) on cross-section regression by re-sorting portfolios (from portfolio exposure to single factor to multifactor)
- Conducted research on explanations for higher significance of volatility (second moment)
- Proposed intuitive justification for the positive correlation between momentum factor and beta distribution
- Investigated the significant correlation between crypto market and commodity market

Advanced Python for Financial Engineering Suzhou, China
Research Assistant to Professor Kenneth Gleason at Columbia University July 2020 – Aug. 2020
- Explored advanced pandas function and performed data analysis on multiple data sets
- Employed OLS Regression and time series analysis to model the American stock market
- Applied advanced time series hypothesis tests to implement and calibrate a simple trading strategy
- Constructed efficient portfolios, using Mean-Variance framework to optimize portfolio

PUBLICATION

Title: ***Volatility Spillover Effect of U.S. Economic Policy Uncertainty on China's Financial Submarkets***
Description: Used DCC-GARCH model to compare and analyzed the volatility Spillover Effect of AEPU on different Chinese financial submarkets from the macro level
Publisher: The 2021 International Academic Conference on Machine Learning, Big Data and Statistics, Financial Information Technology (ICMBSF 2021)

ADDITIONAL INFORMATION

Programming Skills: Python, R, MATLAB, Excel VBA, MAPLE, Wind database
Certifications: Securities Qualification Certificate, CFA I