

Changlei Lyu

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RESEARCH INTERESTS

Empirical Asset Pricing; Machine learning & Statistical Learning; High Frequency Data; Empirical Corporate Finance with FinTech Methodology; NLP; ESG

EDUCATION

HKUST, PhD in FinTech, supervised by Prof. Yu and Jialin Prof. Li Yingying **Sep.2020-**

Courses: Theoretical/Empirical Asset Pricing, Theoretical/Empirical Corporate Finance, Statistical Machine Learning, Continuous Time Finance, Econometrics, Advanced Deep Learning Architectures.

The Chinese University of Hong Kong, Shenzhen, MSc in Financial Engineering **09/2016 - 11/2017**

Hong Kong University, HKU, MSc in IELM, Financial Engineering Track **09/2015 - 11/2016**

Zhejiang University (ZJU), Department of Control Science and Engineering **09/2011 - 06/2015**

-Bachelor of Engineering in Automation (Control Science).

RESEARCH

- **“How to Dominate the Historical Average”,** with Kai Li, Yingying Li and Jialin Yu, *Review of Financial Studies, forthcoming.*

-Presented at: 2019 Greater Bay Area Summer Finance Conference, HKUST; 2024 the 16th annual meeting of the Society for Financial Econometrics.

Abstract: We present a novel methodology for the out-of-sample forecast of the equity premium. Our predictive slope coefficient is a conservative constant, which has a lower bias than but the same variance as the zero slope employed by the historical average. We demonstrate that, theoretically and empirically, our method dominates the historical average in forecast performance. Our methodology establishes a simple yet powerful paradigm for exploiting the real-time equity premium predictability derived from a predictor. Applications of our method reveal that many predictors can forecast the equity premium, and that parameter estimates in previous studies add value to out-of-sample forecasts.

- **“Stock Co-jump Networks with Mixed Membership”,** with Guoli Liu, Xinghua Zheng and Yingying Li

-Presented at: 2024 Financial Econometrics in the Big Data Era, HKUST.

Abstract: We build the stock co-jump network based on the high-frequency data to study the linkage between stocks. We propose a new model to involve the stock's mixed membership structure and develop a statistical machine learning algorithm, Mixed-SCORE-DMP. We show that Mixed-SCORE-DMP is asymptotically consistent in estimating the mixed membership structures. Empirically, we find a statistically significant co-movement in the fundamentals of mixed membership firms. The purity of individual stocks has a strictly monotonic relationship with both volatility and the Sharpe ratio, and the peer momentum defined by the mixed membership has a stronger network momentum effect.

WORK IN PROGRESS

- **“Jumps, Overnight returns, Intraday Momentum, and Future Stock Returns”.**
- **“Pay for Environment”,** with Arthur Morris and Ruichao Zhu.
- **“Non-financial Incentives, Production Efficiency, and Pricing Firm's Green Actions”.**

PROFESSIONAL EXPERIENCE

- **China Southern Fund, Quantitative Trader,** **12/2017~03/2018**
 - Developed a statistical arbitrage strategy.
 - Constructed a strategy back test platform and its designed GUI.
- **China International Capital Corporation, the CICC Global Institute (CGI), Intern,** **05/2021~08/2022**
 - New drivers of China's economic growth research with FinTech methodologies.
 - The influence of China's digital economy.

TEACHING

PG - Professional Development in Innovation, Technology, and Social Responsibility - Teaching Assistant, 2020 - 2021

MSc - Empirical Methods in Finance - Teaching Assistant, 2022 - 2023

AWARDS AND EXTRACURRICULAR ACTIVITIES

Founder of Zhejiang University Neo-Voice Voluntary Youth Camp **07/2013 - 08/2015**

Morningside Cultural China Scholar Program, Zhejiang University **09/2012 - 06/2015**

SKILLS & LANGUAGE

IT Skills: MATLAB, Python, R, SAS, STATA, LATEX