Yueliang (Jacques) Lu, FRM

Curriculum Vitae

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EDUCATION

Ph.D. in Business Administration (Finance), University of North Carolina at Charlotte 2023 (*Expected*)

- Chairs: Yufeng Han & Weidong Tian (Co-Chair)
- Committee Members: Ethan Chiang, Steven P. Clark and Christopher M. Kirby
- Informal Advisor: Guofu Zhou (WashU)

Master of Science in Quantitative Finance and Risk Analytics, Rensselaer Polytechnic Institute 2017

- Advisor: Aparna Gupta

Bachelor of Art in Economics, Major: Finance, Beijing Foreign Studies University 2016

CERTIFICATION

- Certified Financial Risk Manager (FRM), Global Association of Risk Professionals (GARP)
- Chartered Financial Analyst (CFA), Level III candidate
- Bloomberg Market Concepts (BMC) Certified

RESEARCH INTERESTS

- Empirical (and Theoretical) Asset Pricing, Derivatives and Options, Big Data/Machine Learning in Finance

PUBLICATION

1. "Addressing Systemic Risk Using Contingent Convertible Debt - A Network Analysis," ***European Journal of Operational Research***, *2021, Vol 290, Issue 1, pp. 263-277* (with Aparna Gupta and Runzu Wang)

- **2018 FMA Best Paper Award in Derivatives & Options**
- 2018 INFORMS Best Student Paper Award Finalist (Finance Section)
- 2017 GARP Research Fellowship

JOB MARKET PAPER

1. Macroeconomic Extrapolation, Machine Learning, and Equity Risk Premium Forecast (*with Yufeng Han*)

- Presentations: FMA 2022 (scheduled), International Symposium on Forecasting 2022
- Studies on equity risk premium forecasts usually rely on the most recent macroeconomic variables. We present a macroeconomic trend extrapolation approach that utilizes all economic fundamentals of different time periods simultaneously in the aggregate market. We demonstrate that the trend-pooling method statistically and economically outperforms the historical average that assumes a constant equity risk premium, as well as Rapach, Strauss, Zhou's (2010) simple pooling method that ignores the historical information in macroeconomics. We further find that extrapolating via machine learning techniques generates monthly out-of-sample R^2_{OS} statistics as high as 4%. Extrapolating economic fundamentals with a grid of moving averages more closely tracks important macroeconomic fluctuations and more effectively regulates the forecast variability, thereby generating superior and robust forecasting gains consistently over time.

WORKING PAPERS & WORK IN PROGRESS

1. Equity Forward Return from Derivatives (*with Weidong Tian & Steven P. Clark*)
   - Presentations: CICF 2021, AFA 2022 (Ph.D. Poster), FMA 2022 (scheduled),
   - This paper develops a theory of forward returns for an equity index. A term structure of forward returns is estimated using information from derivatives markets, including index option prices and gammas, VIX-futures, and prices of VIX-options. We document a pro-cyclical term structure of S&P 500 forward returns and a robust short-term reversal pattern. Moreover, by designing and implementing a market-timing strategy, we demonstrate that forward equity returns provide real-time trading signals with substantial economic value.

2. Mispricing and Anomalies: An Exogenous Shock to Short Selling from the Dividend Tax Law Change (*with Yufeng Han, Weike Xu & Guofu Zhou*)
   - Presentations: SFS Cavalcade North America 2021, AFA 2021 (Ph.D. Poster), MFA 2021, CICF 2022
   - Whether anomalies are due to mispricing or risk is an important question. We study the causal effect of short-sale constraints on anomalies by examining an extensive set of 182 anomalies documented in the accounting, finance and economics literature. Our identification strategy relies on a persistent, robust and plausibly exogenous shock to short-selling supply induced by the dividend tax law change in the Job and Growth Tax Relief Reconciliation Act (JGTRRA) of 2003. We find that anomalies become stronger following the dividend record months, driven by stronger overpricing as opposed to underpricing in the post-JGTRRA periods. Interestingly, while the shock magnifies returns to most anomaly types, we find that valuation anomalies seem unlikely to be driven by mispricing.

3. An On-line Machine Learning Return Prediction (*with Weidong Tian*)
   - This paper presents a new prediction methodology for long-short portfolio return in its multiplicative version. Our method relies on the on-line universal portfolio construction. We derive a closed-form predicting formula whose coefficients are solely determined by historical data. We empirically and robustly demonstrate that the predictive error can be as small as 2%. This methodology provides a promising application of on-line machine learning to portfolio return prediction with a sufficiently large dataset.

4. Reconciling Forecasts (under empirical analysis stage)
5. Options and the Expected Market Return (under empirical analysis stage)

TEACHING

University of North Carolina at Charlotte

Lecturer and Guest Lecturer*

1. FINN 3226 Financial Theory and Practice (*Advanced Corporate Finance*)
   - Evaluation: 4.78 (4.39, Finance section mean)
2. FINN 3120 Financial Management
   - Evaluation: 4.45 (4.22), 4.35 (4.25), 4.40 (4.20)
3. FINN 6216 Quantitative Risk Management* (*MS in Math Finance*, with Prof. Weidong Tian)
4. FINN 3223 International Financial Management* (with Prof. Lloyd Blenman)

CONFERENCES AND SEMINARS

2022 FMA (**x2 papers**), CICF, AFA (Ph.D. Poster), International Symposium on Forecasting
2021 SFS Cavalcade North America, CICF, AFA (Ph.D. Poster), MFA, FMA
2020 WashU Brownbag, SFA, INFORMS, IRMC
2018 FMA, INFORMS, EFMA, IRMC

FELLOWSHIPS, GRANTS, AND AWARDS

2022 UNC Charlotte Belk College Summer Research Grant
2021 UNC Charlotte Belk College Summer Research Grant
2020 AFA Ph.D. Travel Grant
2020 INFORMS Ph.D. Student Grant
2018 FMA Best Paper Award in Derivatives & Options
2018 INFORMS Best Student Paper Award Finalist (Finance Section)
2017 Global Association of Risk Professionals (GARP) Research Fellowship

PROFESSIONAL SERVICE

Journal Referee

- International Review of Economics & Finance

Conference Discussant & Chair & Paper Reviewer

2022 FMCG (x2 papers), CIRF, Derivative Markets Conference
2021 FMA (x2 papers), SFA, EasternFA
2020 FMA, SFA

REFERENCES

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