Yueliang (Jacques) Lu, FRM

Curriculum Vitae

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Department of Finance, Belk College of Business, University of North Carolina at Charlotte, 9209 Mary Alexander Rd, Charlotte, NC 28262, USA.
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EDUCATION

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

- Chairs: Yufeng Han & Weidong Tian (Co-Chairs)
- 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*

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

WORKING PAPERS & WORK IN PROGRESS

1. Macroeconomic Trends and Equity Risk Premium (with Yufeng Han & Guofu Zhou)

- Presentations: FMA 2022, FMA Doctoral Consortium 2022, International Symposium on Forecasting 2022
- We present the first evidence on how macroeconomic trends affect equity risk premium, going beyond the literature that rely on only the most recent values. Our results show that macro trends are important, and they contribute statistically and economically to the out-of-sample aggregate market return predictability. Moreover, we present novel evidence that nonlinearity matters in market return predictability by combining macro trends with neural networks, yielding an out-of-sample R^2_{OS} statistic as high as 1.6%. We find that pooling time-series trends helps to track more closely the important macroeconomic fluctuations and to regulate more effectively the forecast variability, thereby generating superior and robust forecasting gains consistently over time.

2. Market Risk Premium Expectation: Combining Option Theory with Traditional Predictors (with Hong Liu, Weike Xu & Guofu Zhou)

- Presentations: WashU Brownbag
- The market risk premium is central in finance, and has been analyzed by numerous studies in the time-series predictability literature and by growing studies in the options literature. In this paper, we provide a novel link between the two literatures. Theoretically, we derive a lower bound on the market risk premium in terms of option prices and state variables. Empirically, we show that combining information from both options and investor sentiment significantly improves the out-of-sample predictability of the market risk premium versus using either type of information alone, and adding an economic upper bound raises predictability further.

3. Equity Forward Return from Derivatives (with Weidong Tian & Steven P. Clark)

   - Under Review at the *Review of Financial Studies (RFS)*
   - Presentations: CICF 2021, AFA 2022, FMA 2022
   - This paper develops a theory of forward returns for an equity index. We obtain the forward returns 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&P500 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.

4. Mispricing and Anomalies: An Exogenous Shock to Short Selling from JGTRRA (with Yufeng Han, Weike Xu & Guofu Zhou)

   - Under Review at the *Management Science*
   - Presentations: SFS Cavalcade North America 2021, AFA 2021, 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.

5. 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 prediction formula whose coefficients are solely determined by historical data. We demonstrate empirically that the predictive error can be as small as 2%, and is robust. This methodology provides a promising application of on-line machine learning to portfolio return prediction with a sufficiently large dataset.

6. Reconciliation Forecasts (under empirical analysis stage, with Yufeng Han)
7. Forward Betas from Derivatives (under empirical analysis stage, with Weidong Tian & Steven P. Clark)

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 department 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, WashU Brownbag, International Symposium on Forecasting
2021 SFS Cavalcade North America, CICF, AFA, MFA, FMA
2020 WashU Brownbag, SFA, INFORMS, IRMC
2018 FMA, INFORMS, EFMA, IRMC

PAPER DISCUSSIONS

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

SERVICE

Journal Referee: *Computational Economics*, *International Review of Economics & Finance*

Program Committee

2021 SFA, EasternFA

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

CERTIFICATIONS

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

REFERENCES

Yufeng Han (Chair)
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