

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: Drs. [Yufeng Han](#) & [Weidong Tian](#) (Co-Chair)
- Committee Members: Drs. [Ethan Chiang](#), [Steven P. Clark](#) and [Chris Kirby](#)
- Informal Advisor: Dr. [Guofu Zhou](#) (WashU)

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

- Advised by Prof. [Aparna Gupta](#)

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

PROFESSIONAL POSITIONS

2021 - 2023 **Lecturer of Finance**, Department of Finance, UNC Charlotte
2018 - 2023 **Research/Teaching Assistant**, Department of Finance, UNC Charlotte
2019 **Summer Research Assistant**, Department of Management, UNC Charlotte
2017 **Teaching Assistant**, Department of Mathematical Sciences, Rensselaer Polytechnic Institute
2017 **Summer Research Assistant**, Lally School of Management, Rensselaer Polytechnic Institute
2017 **Research Fellow**, Global Association of Risk Professionals (June 2017 - December 2017)

RESEARCH INTERESTS

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

PUBLICATIONS

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](#)).

- *FMA Best Paper Award in Derivatives & Options (2018)*
- *INFORMS Best Student Paper Award Finalist (2018)*
- *Global Association of Risk Professionals Research Fellowship (2017)*

WORKING PAPERS

1. **Macroeconomic Extrapolation, Machine Learning, and Equity Risk Premium Forecast** (with [Yufeng Han](#))
 - **Job Market Paper**
 - Presented at [FMA 2022](#) (scheduled), [International Symposium on Forecasting 2022](#), CIRF 2022,
 - 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_{OS}^2 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.

2. Equity Forward Return from Derivatives (with [Weidong Tian](#) & [Steven P. Clark](#))

- Presented at [FMA 2022](#) (scheduled), the 4th Derivatives Youth Forum, [PKU-NUS 2022](#), [AFA 2022 \(Ph.D. Poster\)](#), [2021 CICF \(China International Conference in Finance\)](#)
- This paper presents the equity index's forward return with market available index option price and gamma, VIX-future, and VIX-option price. Using this expression of forward return from derivatives, we document a pro-cyclical term structure of expected equity risk premium and a robust short-term reversal pattern. Moreover, by designing and implementing a market-timing strategy, the forward return predicts well an underperformed market, and its investment value can be substantial.

3. Mispricing and Anomalies: An Exogenous Shock to Short Selling from the Dividend Tax Law Change (with [Yufeng Han](#), [Weike Xu](#) & [Guofu Zhou](#))

- Presented at [CICF 2022](#), [SFS Cavalcade North America 2021](#), [AFA 2021 \(Ph.D. Poster\)](#), [MFA 2021](#), [FMA 2021](#), [CIRF 2021](#), [SFA 2020](#), [WashU Olin Finance Brownbag](#), and [UNC Charlotte Finance Seminar](#)
- 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.

4. An On-line Machine Learning Return Prediction (with [Weidong Tian](#))

- Presented at [CIRF 2022](#), [INFORMS 2020](#), [International Risk Management Conference 2020](#)
- This paper presents a new prediction methodology on relative stock index return - the ratio of a stock index return to an interest rate. The prediction methodology relies on the on-line universal portfolio construction. We derive a closed-form predicting formula whose coefficients are solely determined by historical data and demonstrate that the average daily predictive error in 2010-2018 can be as small as 2 percent. This approach provides a promising application of on-line machine learning to return prediction.

WORK IN PROGRESS

1. Reconciling Forecasts (with [Yufeng Han](#), under empirical analysis stage)
2. The Expected Market Return (with [Hong Liu](#), [Weike Xu](#) & [Guofu Zhou](#), under empirical analysis stage)

CONFERENCES AND SEMINARS (*presented by co-authors)

- 2022** Financial Management Association (FMA) annual meeting, Atlanta (**x2 papers**, *Scheduled*)
 FMA Doctoral Student Consortium, (*Scheduled*)
 American Finance Association (AFA) annual meeting (Ph.D. Poster), *Virtual*
 China International Conference in Finance (CICF), *Virtual*
 The 4th Derivatives Youth Forum (only 6 papers are selected each year), *Virtual*
 China International Risk Forum (CIRF), (**x2 papers**)
 The PKU-NUS Annual International Conference on Quantitative Finance and Economics (**x2 papers**)
 Financial Markets and Corporate Governance (FMCG) annual conference (**x2 papers**)
 The Auckland Centre for Financial Research Derivative Markets Conference, *Virtual*
 FMA European Annual Conference, *Virtual*
 International Symposium on Forecasting*
 UNC Charlotte Finance Seminar
- 2021** SFS Cavalcade North America*, *Virtual*
 China International Conference in Finance (CICF), *Virtual*
 American Finance Association (AFA) annual meeting (Ph.D. Poster), *Virtual*
 Financial Management Association (FMA) annual meeting, Denver CO
 Midwest Finance Association (MFA) annual meeting*, *Virtual*
 China International Risk Forum (CIRF), *Virtual*
 World Finance Conference, *Virtual*
 International Young Finance Scholars' Conference, *Virtual*
 Shanghai University of Finance and Economics Finance Seminar*
 Wuhan University Finance Seminar*
 UNC Charlotte Finance Seminar
- 2020** Washington University in St. Louis Olin Finance Brownbag
 Southern Finance Association annual meeting, *Virtual*
 INFORMS annual meeting, *Virtual*
 International Risk Management Conference, *Virtual*
 European Financial Management Association annual meeting*
 Financial Management Association European annual meeting*
- 2019** UNC Charlotte Joint Doctoral Workshop
- 2018** Financial Management Association (FMA) annual meeting*, San Diego CA
 European Financial Management Association annual meeting*, Milan Italy
 International Risk Management Conference annual meeting*, Paris France
 INFORMS annual meeting, Phoenix AZ

PROFESSIONAL SERVICE

Journal Referee

International Review of Economics & Finance

Conference Discussant

- 2022: Financial Markets and Corporate Governance (FMCG) annual conference (x2 papers)
 2021: Financial Management Association Meeting (x2 papers)
 2020: Financial Management Association Meeting, Southern Finance Association Meeting

Conference Session Chair

2021: Financial Management Association Meeting

2020: Financial Management Association Meeting, Southern Finance Association Meeting

Conference Paper Reviewer

2021: Southern Finance Association Meeting, Eastern Finance Association Meeting

FELLOWSHIPS, GRANTS, AND AWARDS

- Ph.D. Graduate Assistantship, University of North Carolina at Charlotte 2018 – 2023
- UNC Charlotte Belk College Summer Research Grant
 - Project: “Macroeconomic Extrapolation, Machine Learning, and Equity Risk Premium Forecast” 2022
 - Project: “What is the Time Series Regression of the Stock Market Return?” 2021
- GPSG Summer Travel Grant, University of North Carolina at Charlotte 2022
- Ph.D. Travel Grant, [American Finance Association \(AFA\)](#) Annual Meeting 2020
- [Seth Bonder Foundation Ph.D. Student Grant](#), INFORMS Annual Meeting 2020
 - Paper: “An On-line Machine Learning Return Prediction”
- Summer Research Assistantship, University of North Carolina at Charlotte 2019
- Best Paper Award, [Financial Management Association \(FMA\)](#) Annual Meeting 2018
 - Paper: “Addressing Systemic Risk Using Contingent Convertible Debt — A Network Analysis”
- Best Student Paper Award Finalist, INFORMS Annual Meeting (Finance Section) 2018
 - Paper: “Addressing Systemic Risk Using Contingent Convertible Debt — A Network Analysis”
- Masters Research Fellowship, [Global Association of Risk Professionals \(GARP\)](#) 2017
 - Paper: “Addressing Systemic Risk Using Contingent Convertible Debt — A Network Analysis”
- Graduate Teaching Assistantship, Rensselaer Polytechnic Institute 2017
- Summer Research Assistantship, Rensselaer New Knowledge and Innovation Program 2017
- Masters’ Scholars Research Program Award, Lally School Rensselaer Polytechnic Institute 2017

TEACHING

University of North Carolina at Charlotte

Lecturer of Finance

1. FINN 3226 Financial Theory and Practice (Advanced topics for the finance major students)
 - Three empirical projects to study the executive (CEO) team, board of directors, corporate governance environment; cost of capital and capital structure; and payout policy.
 - Databases including *SEC EDGAR*, *Mergent Online* and *Bloomberg terminal*.
2. FINN 3120 Financial Management
 - Key topics include: The Time Value of Money, Interest Rates and Bond Valuation, Equity Markets and Stock Valuation, Risk and Return, and Cost of Capital

Guest Lecturer

1. FINN 6216 Quantitative Risk Management (with Prof. Weidong Tian)

- Topic 1: Volatility Trading: Implied volatility, VIX options, VIX futures, and Volatility derivatives pricing
- Topic 2: Credit Risk: Structural (Merton) model, Reduced-Form model, and Altman's Z-Score method
- Review sessions

2. FINN 3223 International Financial Management (with Prof. Lloyd Blenman)

- Topic: Foreign currency derivatives: futures and options

Teaching Assistant

1. BPHD 8220 Financial Economic Theory II (Prof. Weidong Tian, second-year Ph.D. course)

2. BPHD 8200 Financial Economic Theory I (Prof. Weidong Tian, first-year Ph.D. course)

3. FINN 6216 Quantitative Risk Management (Prof. Weidong Tian, M.S. in Math Finance)

4. FINN 6203 Financial Economic Theory (Prof. Yufeng Han, M.S. in Math Finance)

5. FINN 3233 International Financial Management (Prof. Lloyd Blenman)

Rensselaer Polytechnic Institute**Teaching Assistant with Recitations**

1. Math 1010 Calculus I (with 4-hour recitation class to 120 students per week)

CERTIFICATE

Certified Financial Risk Manager (FRM), Global Association of Risk Professionals (GARP)

Chartered Financial Analyst (CFA), Level III candidate

Bloomberg Market Concepts (BMC) Certification

PROFESSIONAL MEMBERSHIP

American Finance Association (AFA)

Society for Financial Studies (SFS)

Financial Management Association (FMA)

Global Association of Risk Professionals (GARP)

Institute for Operations Research and the Management Sciences (INFORMS)

REFERENCES

Yufeng Han (Chair)

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