Yueliang (Jacques) Lu

Curriculum Vitae

August 2021

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EDUCATION

2018 - 2023 **Ph.D. in Finance and Economics** — University of North Carolina - Charlotte
Co-advised by Profs. Yufeng Han & Weidong Tian — *GPA: 4.00/4.00*

2016 - 2017 **M.Sc. in Quantitative Finance** & **Risk Analytics** — Rensselaer Polytechnic Institute
Advised by Prof. Aparna Gupta — *GPA: 3.97/4.00*

2012 - 2016 **B.A. in Finance and Economics** — Beijing Foreign Studies University
Dual degree in English Language & Literature

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

- *Asset Pricing*: Empirical (and Theoretical) Asset Pricing, Anomalies, Derivatives and Options, Recovery
- *Financial Risk Management*: Systemic Risk, Longevity Risk, Asset-Liability Management
- *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).

- Best Paper Award, FMA Annual Meeting, 2018
- Best Student Paper Award Finalist, INFORMS Annual Meeting, 2018
- Masters Research Fellowship, Global Association of Risk Professionals (GARP), 2017

WORKING PAPERS

1. Serial Dependence in the Stock Market: What Can We Learn from Derivatives? (*with Weidong Tian*)

- Presented at 2021 CICF (China International Conference in Finance), 7th International Young Finance Scholars' Conference, World Finance Conference 2021
- We obtain a derivative-based formula of time series regression coefficients on the stock market return. We introduce a forward contract on a power VIX index (PVIX) calculated by market index options, and obtain a model-free future price of PVIX by using S&P 500 index options, VIX futures, and VIX index options. Our empirical results suggest a negative autocorrelation (resp. beta coefficient) between monthly market return, but the reversal level is relatively small compared to the past market returns, yielding a long-term positive

trend (resp. intercept term). Moreover, the autocorrelation coefficients computed using derivatives are primarily comparable to the corresponding statistical measure estimated by historical return data between two consecutive months; however, the time-series coefficients using derivatives are significant and more sensitive to the market in the volatile period. Finally, we demonstrate that the derivatives market's forward looking information helps predict future market return.

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

- Presented at SFS Cavalcade North America 2021, FMA 2021 (Scheduled, October 20-23), MFA 2021, AFA 2021 (Ph.D. Poster), CIRF 2021, SFA 2020, WashU Olin Finance Brownbag, and UNC Charlotte Finance Seminar
- Whether or not anomalies are due to mispricing or risk is an important question. We examine the causal effect of a novel shock to short selling, the Job and Growth Tax Relief Reconciliation Act (JGTRRA) of 2003, on an extensive set of 182 anomalies. We find that anomalies become stronger after the dividend record months in the post-JGTRRA periods, driven by stronger mispricing in the dividend record months, mainly from the overpriced stocks. Overall, our results support the idea that anomalies are mostly due to mispricing, and the persistence of mispricing is likely caused by arbitrage barriers such as the JGTRRA.

3. **An On-line Machine Learning Return Prediction** (*with Weidong Tian*)

- Presented at 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.

CONFERENCE AND SEMINARS (*presented by coauthors)

2021 SFS Cavalcade North America*, *Virtual*
China International Conference in Finance (CICF), *Virtual*
Financial Management Association (FMA) annual meeting, Denver CO *(Scheduled)*
World Finance Conference, *Virtual*
China International Risk Forum, *Virtual*
International Young Finance Scholars' Conference, *Virtual*
Midwest Finance Association (MFA) annual meeting*, *Virtual*
American Finance Association (AFA) annual meeting (Ph.D. Poster), *Virtual*
UNC Charlotte Finance Seminar (x2 papers)

2020 Southern Finance Association annual meeting, *Virtual*
Washington University in St. Louis Olin Finance Brownbag
INFORMS annual meeting, *Virtual*
International Risk Management Conference, *Virtual*
European Financial Management Association annual meeting *(Cancelled due to COVID-19)*
Financial Management Association European annual meeting *(Postponed due to COVID-19)*

2019 UNC Charlotte Joint Doctoral Workshop

2018 INFORMS annual meeting, Phoenix AZ
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

PROFESSIONAL SERVICE

Conference Discussant

2021: Financial Management Association Meeting, World Finance Conference
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
Belk College Summer Research Grant, University of North Carolina at Charlotte 2021
Seth Bonder Foundation Student Registration Grant, INFORMS Annual Meeting 2020
Ph.D. Travel Grant, American Finance Association (AFA) Annual Meeting 2020
Summer Research Assistantship, University of North Carolina - Charlotte 2019
Best Paper Award, Financial Management Association (FMA) Annual Meeting 2018
Best Student Paper Award Finalist, INFORMS Annual Meeting (Finance Section) 2018
Highlighted on RPI Admissions Website as Outstanding Graduate Scholar (Links) 2018
Masters Research Fellowship Award, Global Association of Risk Professionals (GARP) 2017
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 3120 Financial Management Summer & Fall 2021

- Key topics include: The Time Value of Money, Discounted Cash Flow Valuation, 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) Spring 2021

- Topic 1: Volatility Trading: Implied volatility, VIX options, VIX futures, and Volatility derivatives pricing
- Topic 2: Historical Simulation in the risk management (Value-at-Risk), Back testing, Stress testing
- Topic 3: Credit Risk: Structural (Merton) model, Reduced-Form model, and Altman's Z-Score method
- Recitation class: 2-hour class, and four times per semester

2. FINN 3226 Financial Theory & Practice (with Prof. Lloyd Blenman) Spring 2021

- Topic 1: Binomial Lattices and American Option Pricing

Teaching Assistant

1. BPHD 8220 Financial Economic Theory II (Second-year Ph.D. course) Fall 2020
2. BPHD 8200 Financial Economic Theory I (First-year Ph.D. course) Fall 2020
3. FINN 6216 Quantitative Risk Management (M.S. in Math Finance) Spring 2021, 2020
4. FINN 3226 Financial Theory & Practice Spring 2021
5. FINN 3233 International Financial Management Spring 2020, 2019

Rensselaer Polytechnic Institute

Teaching Assistant with Recitations

1. Math 1010 Calculus I (with 4-hour recitation class to 120 students per week) 2017

SKILLS AND CERTIFICATIONS

Certifications FRM Passed Part I and Part II, CFA Level III Candidate, Bloomberg Market Concept Certified.
Technical Skills Numerical/Simulation Analysis, Computational Optimization, Stochastic Calculus, Network Science, Bayesian/Time Series Analysis, Machine Learning.
Programming R, MATLAB, Python, Jupyter Notebook, Stata, Neo4j, Gephi, AMPL, and LaTeX.
Languages Native in Chinese, fluent in English, and active learner in Spanish.

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)

REFERENCE

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Dr. Weidong Tian (Co-Chair)
Professor of Finance and Distinguished Professor of Risk Management and Insurance
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