# LU ZHANG,

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**JULY 2017** 

# **Academic Experience**

## Max M. Fisher College of Business, The Ohio State University

The John W. Galbreath Chair, Professor of Finance, 6/2017-present Fisher College of Business Distinguished Chair, Professor of Finance, 10/2015-5/2017 Dean's Distinguished Chair, Professor of Finance, 10/2010-9/2015

## Stephen M. Ross School of Business, University of Michigan

Professor of Finance, 2009-2010 Associate Professor of Finance (with tenure), 2006-2009

### William E. Simon Graduate School of Business Administration, University of Rochester

Assistant Professor of Finance, 2002-2006

### Education

The Wharton School, University of Pennsylvania. 1998-2002. Ph.D. in Finance, 2002. M.A. in Finance, 2000. Ph.D. dissertation: Essays on the cross section of returns

Washington University in St. Louis. 1996-1998. M.A. in Economics, 1997

The Graduate School of the People's Bank of China (renamed PBC School of Finance, Tsinghua University). 1993-1996. M.S. in Finance, 1996

Jiangxi University of Finance and Economics. 1989-1993. B.A. in Economics, 1993

# Professional Honors and Awards

"Replicating anomalies" (with Hou and Xue) featured in Wall Street Journal: "A reality check on stock-market 'anomalies'," by Wesley Gray, November 5, 2017; "When researchers and investors walk into a bar, the investors get hammered," by Jason Zweig, May 12, 2017; "An algorithm, an ETF and an academic study walk into a bar," by James Mackintosh, May 11, 2017,



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as well as Bloomberg: "Ivory tower wonks help traders make a quick buck," by Noah Smith, May 11, 2017; "Anomalies, pitches and promises," by Matt Levine, May 9, 2017; "A new paper just took a huge shot at some of the world's hottest investments," by Eric Weiner, May 8, 2017

Keynote lecture, "The investment CAPM: An update," "Merton H. Miller" European Financial Management 2018 Doctoral Seminar, Milan, Italy, June 2018

Second Prize, the Chicago Quantitative Alliance Academic Competition, "Replicating anomalies" (with Hou and Xue), 2017

Keynote speech: "Replicating anomalies," the Inquire Europe Symposium on "Advances in Factor Investing," Montreux, Switzerland, October 2017

Keynote speech: "The investment CAPM," the European Financial Management Symposium on "Finance and Real Economy," Xiamen, China, April 2017

Special Term Professor, PBC School of Finance, Tsinghua University, 2017-present

"Digesting anomalies: An investment approach" (with Hou and Xue) is the most cited article published at Review of Financial Studies in 2015

Inquire Europe, Institute for Quantitative Investment Research, grant of €10,000 for "Global *q*-factors" (with Hou and Xue), 2016

Second Prize, the Chicago Quantitative Alliance Academic Competition, "A comparison of new factor models" (with Hou and Xue), 2015

**The Outstanding Working Professional MBA Elective Faculty Award**, Fisher College of Business, The Ohio State University, 2015

Special Term Professor, School of Finance, Shanghai University of Finance and Economics, 2012-present

Research Fellow, Charles A. Dice Center for Research in Financial Economics, The Ohio State University, 2010-present

Distinguished Referee Award, Review of Financial Studies, 2010

Researcher of The Year Award, Stephen M. Ross School of Business, University of Michigan, 2010. "In recognition of his achievements on multiple scholarly dimensions, his stellar reputation in the field of finance, and his efforts to improve the research environment at the Stephen M. Ross School of Business"

Inaugural Distinguished Referee Award, Review of Financial Studies, 2009

National Bureau of Economic Research: Research Associate, 2009-present, Faculty Research Fellow, 2005-2009, Asset Pricing program

Special Term Professor, Shanghai Advanced Institute of Finance, Shanghai Jiaotong University, 2009-2012

- 2014 Tang, Yue, Jin (Ginger) Wu, and Lu Zhang, Do anomalies exist ex ante? **Review of Finance** 18 (3), 843-875, lead article.
- 2013 Belo, Frederico, Chen Xue, and Lu Zhang, A supply approach to valuation, **Review of Financial Studies** 26 (12), 3029-3067.
- Lin, Xiaoji, and Lu Zhang, The investment manifesto, Journal of Monetary Economics 60 (3), 351-366.
- 2011 Gulen, Huseyin, Yuhang Xing, and Lu Zhang, Value versus growth: Time-varying expected stock returns, **Financial Management** 40 (2), 381-407.
- 2011 Chen, Long, and Lu Zhang, Do time-varying risk premiums explain labor market performance? Journal of Financial Economics 99 (2), 385-399.
- Li, Dongmei, and Lu Zhang, Does *q*-theory with investment frictions explain anomalies in the cross-section of returns? **Journal of Financial Economics** 98 (2), 297-314.
- 2010 Wu, Jin (Ginger), Lu Zhang, and X. Frank Zhang, The *q*-theory approach to understanding the accrual anomaly, **Journal of Accounting Research** 48 (1), 177-223.
- Liu, Laura Xiaolei, Toni M. Whited, and Lu Zhang, Investment-based expected stock returns, Journal of Political Economy 117 (6), 1105-1139.
- Li, Erica X. N., Dmitry Livdan, and Lu Zhang, Anomalies, Review of Financial Studies 22 (11), 4301-4334, lead article.
- 2009 Livdan, Dmitry, Horacio Sapriza, and Lu Zhang, Financially constrained stock returns, Journal of Finance 64 (4), 1827-1862.
- Liu, Laura Xiaolei, and Lu Zhang, Momentum profits, factor pricing, and macroeconomic risk, **Review of Financial Studies** 21 (6), 2417-2448.
- 2008 Lyandres, Evgeny, Le Sun, and Lu Zhang, The new issues puzzle: Testing the investment-based explanation, **Review of Financial Studies** 21 (6), 2825-2855.

[Runner-up for Barclays Global Investors Award for the Best Conference Paper at the 2005 European Finance Association Annual Meetings]

- Liu, Naiping, and Lu Zhang, Is the value spread a useful predictor of returns? Journal of Financial Markets 11 (3), 199-227, lead article.
- 2008 Campello, Murillo, Long Chen, and Lu Zhang, Expected returns, yield spreads, and asset pricing tests, **Review of Financial Studies** 21 (3), 1297-1338.
- 2008 Chen, Long, Ralitsa Petkova, and Lu Zhang, The expected value premium, Journal of Financial Economics 87 (2), 269-280.
- 2006 Gomes, Joao F., Amir Yaron, and Lu Zhang, Asset pricing implications of firms' financing constraints, **Review of Financial Studies** 19 (4), 1321-1356.

2005 Petkova, Ralitsa, and Lu Zhang, Is value riskier than growth? Journal of Financial Economics 78 (1), 187-202.

[Featured in Bodie, Kane, and Marcus, 2014, Investments]

Zhang, Lu, The value premium, Journal of Finance 60 (1), 67-103.
 [First Prize, the Smith-Breeden Award for Best Paper, 2005, the American Finance Association and Journal of Finance]

[Featured in Bodie, Kane, and Marcus, 2014, Investments]

[The 4th most cited article in the literature on anomalies and fundamental analysis since 2000 with the highest average number of citations per year. Source: Richardson, Tuna, and Wysocki (2010, Journal of Accounting and Economics)]

[One of the 25 most cited articles in Journal of Finance since 2004. Source: The American Finance Association Web site]

- 2004 Brandt, Michael W., Qi Zeng, and Lu Zhang, Equilibrium stock return dynamics under alternative rules of learning about hidden states, Journal of Economic Dynamics and Control 28 (10), 1925-1954, lead article.
- 2003 Gomes, Joao F., Amir Yaron, and Lu Zhang, Asset prices and business cycles with costly external finance, **Review of Economic Dynamics** 6 (4), 767-788.
- 2003 Gomes, Joao F., Leonid Kogan, and Lu Zhang, Equilibrium cross section of returns, Journal of Political Economy 111 (4), 693-732, lead article.

[Reprinted in "Stephen A. Ross, Mentor: Influence Through Generations," ed. Mark Grinblatt, McGraw-Hill Irwin, 2008]

# **Other Publications**

2016 Zhang, Lu, Factors war, **Tsinghua Financial Review** 37, 101-104 in Chinese; 资产定价中的因子大战,

2014 Zhang, Lu, Exploring asset pricing anomalies, NBER Reporter 1, 17-19.

### Working Papers

Petrosky-Nadeau, Nicolas, Lu Zhang, and Lars-Alexander Kuehn, 2017, Endogenous disasters, under third review, American Economic Review

Bai, Hang, Kewei Hou, Howard Kung, Erica X. N. Li, and Lu Zhang, 2016, The CAPM strikes back? An investment model with disasters, under revision for second review, **Journal of Financial Economics** 

Goncalves, Andrei S., Chen Xue, and Lu Zhang, 2017, Aggregation, capital heterogeneity, and the investment CAPM

Hou, Kewei, Chen Xue, and Lu Zhang, 2017, Replicating anomalies

[Second Prize, the Chicago Quantitative Alliance Academic Competition, 2017]

[Featured in Wall Street Journal: "A reality check on stock-market 'anomalies'," by Wesley Gray, November 5, 2017; "When researchers and investors walk into a bar, the investors get hammered," by Jason Zweig, May 12, 2017; "An algorithm, an ETF and an academic study walk into a bar," by James Mackintosh, May 11, 2017]

[Featured in Bloomberg: "Ivory tower wonks help traders make a quick buck," by Noah Smith, May 11, 2017; "Anomalies, pitches and promises," by Matt Levine, May 9, 2017; "A new paper just took a huge shot at some of the world's hottest investments," by Eric Weiner, May 8, 2017]

Hou, Kewei, Haitao Mo, Chen Xue, and Lu Zhang, 2017, The economics of value investing

Hou, Kewei, Chen Xue, and Lu Zhang, 2017, Global q-factors

[Inquire Europe, Institute for Quantitative Investment Research, grant of €10,000]

Zhang, Lu, 2017, Factor theories

Petrosky-Nadeau, Nicolas, and Lu Zhang, 2013, Unemployment crises

Hou, Kewei, Chen Xue, and Lu Zhang, 2014, A comparison of new factor models, NBER working paper 20682, permanent working paper

[Second Prize, the Chicago Quantitative Alliance Academic Competition, 2015]

Zhang, Lu, 2005, Anomalies, NBER working paper 11322, permanent working paper. Runnerup, Best Paper Award at the 2005 Utah Winter Finance Conference

# Teaching

# Max M. Fisher College of Business, The Ohio State University

Investment Management I, M.B.A. and Undergraduate programs Theory of Finance, Ph.D. Advanced Asset Pricing, Ph.D.

### Stephen M. Ross School of Business, University of Michigan

Derivative Securities, B.B.A. Capital Markets and Investment Strategy, M.B.A. Empirical Methodology in Finance, Ph.D.

### William E. Simon Graduate School of Business Administration, University of Rochester

Investments, Corporate Finance, M.B.A. Advanced Topics in Capital Markets, Ph.D.

# **Professional Activities**

## **Professional Leadership**

China Finance Review International, International Editorial Advisory Board, 2017-present
Critical Finance Review, Associate Editor, 2010-present
European Financial Management, Associate Editor, 2017-present. Guest Editor, Special issue on "Corporate Policies and Asset Prices"
Finance Research Letters, Associate Editor, 2013-present
Financial Management, Associate Editor, 2009-2011
Journal of Banking and Finance, Associate Editor, 2015-present
Journal of Financial and Quantitative Analysis, Associate Editor, 2011-present
Journal of Financial Economics, Associate Editor, 2011-present
Management Science, Associate Editor, 2009-2012
Quarterly Journal of Accounting and Finance, Advisory Editor, 2015-present

### Service Leadership

Macro Finance Society: Founding President (2012-2013), Board of Directors (2012-2014)

American Finance Association: Nominating Committee (2013)

The Ohio State University: Department of Finance Executive Committee (2011-present), Fisher College Promotion and Tenure Committee (2012-2016), both elected by faculty

University of Michigan: Finance Area Chair (2009-2010), Chair of Investments Curriculum Task Force (2008-2009), Ross School of Business Community Values Committee (2007-2008)

### Ph.D. Students Supervised

- 2018 Mengmeng (Mike) Dong, Ohio State, "Global anomalies." In progress
- 2018 Andrei S. Goncalves, Ohio State, "Can reinvestment risk explain the dividend and bond term structures?" In progress
- 2017 Ivan Alfaro, Ohio State, "Production-based exchange rates." Placement: BI Norwegian Business School
- 2016 Hang Bai, Ohio State, "Unemployment and credit risk." Placement: University of Connecticut
- 2015 Woo Hwa Koh, Ohio State, "The impact of uncertainty shocks on the cross-section of returns." Placement: Korea Advanced Institute of Science and Technology (KAIST)
- 2014 Andrew Y. Chen, Ohio State, "External habit in a production economy: A unified model of asset prices and aggregate fluctuations." Placement: Federal Reserve Board
- 2012 Chen Xue, University of Michigan, "Cross-sectional stock returns and mutual fund performance evaluation: An investment-based investigation." Placement: University of Cincinnati

- 2009 Ryan Israelsen, University of Michigan, "Investment based valuation." Placement: Indiana University
- 2008 Xiaoji Lin, University of Minnesota, "Endogenous technological progress and the cross section of stock returns." Placement: London School of Economics
- 2007 Erica Xuenan Li, University of Rochester, "Corporate governance, the cross section of returns, and financing choices." Placement: University of Michigan
- 2005 Laura Xiaolei Liu, University of Rochester, "Do firms have target leverage ratios? Evidence from historical market-to-book and past return." Placement: Hong Kong University of Science and Technology
- 2005 Horacio Sapriza, University of Rochester, "Sovereign default and interest rates in emerging market economies." Placement: Rutgers Business School
- 2003 Ralitsa Petkova, University of Rochester, "Do Fama-French factors proxy for innovations in predictive variables?" Placement: Case Western Reserve University

## **Professional Affiliations**

American Economic Association. The Econometric Society. American Finance Association. Western Finance Association. Macro Finance Society.

### Biography

Dr. Lu Zhang is The John W. Galbreath Chair, Professor of Finance, at Fisher College of Business, The Ohio State University, as well as Research Associate at National Bureau of Economic Research (Asset Pricing program) and Associate Editor for Journal of Financial Economics and Journal of Financial and Quantitative Analysis. He is Founding President of Macro Finance Society, an international academic society devoted to advancing and disseminating high-quality research at the intersection of financial economics and macroeconomics. Before joining Ohio State in 2010, he taught at Stephen M. Ross School of Business at University of Michigan and William E. Simon Graduate School of Business Administration at University of Rochester. Dr. Zhang's research focuses on asset pricing, in relation with macroeconomics, corporate finance, labor economics, computational economics, and capital markets research in accounting. His major contribution is the investment CAPM, a unified conceptual framework for understanding asset pricing anomalies. His recent work also shows how labor market frictions give rise endogenously to economic disasters. Dr. Zhang has published extensively at leading academic journals. His doctoral thesis "The value premium" won the Smith-Breeden Award for Best Paper for 2005 from American Finance Association and Journal of Finance. His academic research has been featured in prominent media outlets such as The Wall Street Journal, Bloomberg, and Shanghai Financial News.

Recent publications include "The investment CAPM," European Financial Management, 2017; "Digesting anomalies: An investment approach" (with Hou and Xue), Review of Financial Studies, 2015; "A neoclassical interpretation of momentum" (with Liu), Journal of Monetary Economics, 2014; "A supply approach to valuation" (with Belo and Xue), Review of Financial Studies, 2013; "The investment manifesto" (with Lin), Journal of Monetary Economics, 2013;

Dr. Zhang has extensive teaching experience at the undergraduate, M.B.A., and Ph.D. levels. He has taught Investment Management, Derivative Securities, Capital Markets and Investment Strategy, Corporate Finance, Theory of Finance, and Advanced Asset Pricing. In 2015, he was voted **the Outstanding Working Professional MBA Elective Faculty Award** recipient at Fisher College of Business, The Ohio State University.

Jiangxi University of Finance and Economics, B.A. in Economics, 1993. The Graduate School of the People's Bank of China (renamed PBC School of Finance, Tsinghua University), M.S. in Finance, 1996. Washington University in St. Louis, M.A. in Economics, 1997. The Wharton School, University of Pennsylvania, M.A. in Finance, 2000, Ph.D. in Finance, 2002.

Born on August 31, 1972. Citizen of China, U.S. Permanent Resident Married to Yiqing Zhang. Two cats: Kiddy, Mashou. Three parrots: Mango, Greenie, Tilly

## **Media Mention**

Podcast interview: The economics of value investing (价值投资经济学), in Chinese, by Zhijian Wu, CEO, Woodsford Capital Management, Zhijian's Evidentialist Channel (伍治坚证据主义)

A reality check on stock-market 'anomalies', by Wesley Gray, The Wall Street Journal, November 5, 2017

Asset type matters with factors, ETF.com, by Larry Swedroe, October 30, 2017

Want to learn more about factor investing? Read this, ValueWalk.com, October 26, 2017

Factor investing conversation with Lu Zhang, my blog interview with Wesley Gray, CEO/CIO, Alpha Architect, LLC, October 26, 2017

Takeaways from a non-phd who powered through a 144-page factor investing paper, alphaarchitect.com, by Ryan Kirlin, October 25, 2017

Bewildering 447 anomalies (447 种股票异常, 你看花眼了吗?!) In Chinese, 网易, 理财纪

Retesting investment anomalies with Dr. Lu Zhang, by Jeremy Schwartz, wisdomtree.com

Replicating anomalies, ValueWalk.com, October 15, 2017

Behind the Markets on Wharton Business Radio, hosted by Jeremy Schwartz and Wesley Gray, October 13, 2017

Replicating anomalies, alphaarchitect.com, by Wesley Gray, October 13, 2017

A 5 factor evaluation, ETF.com, by Larry Swedroe, September 25, 2017

Replicating anomalies, hedge.lu.com, July 3, 2017

Attention aux fake strategies smart beta, Associés en Finance, in French, June 30, 2017

Replicating anomalies in financial markets with Hou, Xue, and Zhang, The Economics Detective Radio, June 30, 2017

Bursting the big data bubble.... with theory, RealClearAgriculture.com, June 23, 2017

Replicating scientific research: Ugly truth, True Economics, June 16, 2017

Hou, Xue, and Zhang: Replication controversies in finance and accounting, The Replication Network, June 14, 2017

Financial anomalies are contingent on being unknown, Statistical Modeling, Causal Inference, and Social Science, June 10, 2017

Are markets efficient if you are a particle physicist? Prof. Jayanth R. Varma's Financial Markets Blog, June 7, 2017

Mast investment letter, Mast Investment Advisors LLC, June 2017

My smart beta ETF premised on cats rang up an 849,751% return, Bloomberg

Reexamining accepted market wisdom, TwoPlusTwo Magazine

E' possibile battere il mercato? Finanzaoperativa.com

One by one, the anti-EMH arguments collapse, TheMoneyIllusion.com

"What'd You Miss?" (57:29), Bloomberg, May 24, 2017

A practical approach to factor-based investing, The Globe and Mail, May 23, 2017

Most stock anomalies fake news? CXO Advisory, May 23, 2017

All about microcaps, Daily Speculations, May 23, 2017

Problems with the factor zoo, by Larry Swedroe, ETF.com

How well do anomalies in finance and accounting replicate? The Replication Network

P-hacking versus skin in the game: How can understanding incentive structures help us think about market efficiency? Episodeblog.com

Weekly top 5 papers - May 15th 2017, The SSRN Blog

P-hacking in anomaly research, Diary of Imaginary, in Japanese

Active manager lags despite research, by Larry Swedroe, ETF.com, May 12, 2017

Kicking the tires of market anomalies, by James Mackintosh, The Wall Street Journal, Business & Finance B1-B2, May 12, 2017

WSJ: Most market anomalies academics have identified don't exist, Bogleheads.org

When researchers and investors walk into a bar, the investors get hammered,

Lu Zhang: The *q*-factor model can be used in quantitative investment management (张橹: *q*-因 子模型可用于量化投资管理), in Chinese, Shanghai Financial News (上海金融报)

Improving on Fama-French, by Larry Swedroe, ETF.com

Factor investing is more art, and less science, by Wesley Gray, Alpha architect

A new four-factor investing model, by Larry Swedroe, BAM Intelligence

Is outperforming the market alpha or beta? by Larry Swedroe and Andrew Berkin, The AAII Journal, American Association of Individual Investors

Using profitability as a factor? Perhaps you should think twice..., by Wesley Gray, Alpha architect

The academic finance papers that changed my mind, by Wesley Gray, Alpha architect

Stock anomaly smorgasbord-Wow! by Wesley Gray, Alpha architect

Understanding the value premium, by Larry Swedroe, ETF.com

Challenge to the Fama French three factor model, Bogleheads.org

The expected value premium, CFA Institute Publications

Explaining the value premium, Index Fund Advisors

The countercyclical value premium? CXO Advisory

Is value riskier than growth? Edhec-Risk

The value of value, Advisor Perspectives

Smart beta: Strategies and implementation, PNC.com

Factor investing, tickrz.com

Value investing: Timeless reading, ValueWalk.com