LU ZHANG.



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2018/12

Academic Experience

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

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

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 Peo 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

The supply theory of asset p
Conference, Stockholm School of Economics, Sweden, 2019/8

: Stress-testing factor models. 5th AP2-CFF

Research be University of Gothenburg, Sweden, 2018/12

Keynote speech: The supply theory of asset pricing. 2nd Conference on Corporate Policies and Asset Prices, Cass Business School, London, United Kingdom, 2018/12

: Stress-testing factor models. Bernstein Quantitative

Finance Conference, New York City, 2018/10

Keynote lecture: investment CAPM: An update.
Management 2018 Doctoral Seminar, Milan, Italy, 2018/6

Hou and Xue) featured in Wall Street Journal: A reality check on stock- /11/5 When researchers and investors walk into a bar, the investors get hammered /5/12 An algorithm, an ETF and

an academic study walk into a bar James Mackintosh, 2017/5/11

Bloomberg: Professor has some

questions about your index funds

(57:29),

2017/5/24; Ivory tower wonks help traders make a quick buck

2017/5/11;

Anomalies, pitches and promises 2017/5/9 A new paper just took a huge

2017/5/8

Second Prize, the Chicago Quantitative Alliance (with Hou and Xue), 2017

Replicating anomalies

Replicating anomalies. The Inquire Europe Symposium on /10

Keynote speech: investment CAPM. The European Financial Management Symposium on inance and Real Economy, Xiamen, China, 2017/4

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

Hou and Xue) is the most cited article

published at Review of Financial Studies in 2015

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Second Prize, the Chicago

Factor Investing

, 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, 2012-2018

Research Fellow, Charles A. Dice Center for Research in Financial Economics, The Ohio State University, 2010-2018

Distinguished Referee Award, Review of Financial Studies, 2010

Researcher of The Year Award, Stephen M. Ross School of Business, University of Michigan, 2010. 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.

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

Journal of Finance

(Petkova and Zhang, 2005, Journal of Financial Economics) have been featured in Bodie, Kane, Investments, a standard textbook for top business schools, since 2007

is the 4th most highly 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)

the 25 most cited articles in Journal of Finance since 2004 (source: The American Finance Association Web site)

The 2007-08 NTT Research Fellowship Award, University of Michigan

Sanford C. Bernstein Conference on Controversies in Quantitative Finance and Asset Management, New York City, 2008/3

Gutmann Center Research Fellow, University of Vienna, 2007/4

First Prize, the Smith-Breeden Award for Best Paper in 2005, the American Finance Association and Journal of Finance

Runner-up for Best Paper Award at the 2005 Utah Winter Finance Conference

Runner-up for Barclays Global Investors Award for the Best Conference Paper at the 2005 European Finance Association Meetings for e: Testing the investment-based

Publications

2018	Hou, Kewei, Chen Xue, and Lu Zhang, Replicating anomalies, forthcoming, Review of Financial Studies
	[Second Prize, the Chicago Quantitative Alliance Academic Competition, 2017]
	[Featured in A reality check on stock- When researchers and investors walk into a bar,
	the investors get hammered An algorithm, an ETF and an academic study walk into a bar
	[Featured in Bloomberg: Professor has some questions about your index funds Nir Kaissar, 2018/12/24; Ivory tower wonks help traders make a quick buck Anomalies, pitches and promises A new paper just took a huge
2018	Hou, Kewei, Haitao Mo, Chen Xue, and Lu Zhang, Which factors? forthcoming, Review of Finance
	. Second Prize, the Chicago Quantitative Alliance Academic Competition, 2015]
2018	Bai, Hang, Kewei Hou, Howard Kung, Erica X. N. Li, and Lu Zhang, The CAPM strikes back? An equilibrium model with disasters, forthcoming, Journal of Financial Economics .
2018	Petrosky-Nadeau, Nicolas, Lu Zhang, and Lars-Alexander Kuehn, Endogenous disasters, American Economic Review 108 (8), 2212-2245.
2017	Zhang, Lu, The investment CAPM, European Financial Management 23 (4), 545-603, lead article.
2017	Petrosky-Nadeau, Nicolas, and Lu Zhang, Solving the Diamond-Mortensen-Pissarides model accurately, Quantitative Economics 8 (2), 611-650.
2015	Hou, Kewei, Chen Xue, and Lu Zhang, Digesting anomalies: An investment approach, Review of Financial Studies 28 (3), 650-
	[The most cited article published at Review of Financial Studies in 2015]
2014	Liu, Laura Xiaolei, and Lu Zhang, A neoclassical interpretation of momentum, Journal of Monetary Economics 67, 109-128.
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.
- 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.
- 2010 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.
- 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 financing constraints, Review of Financial Studies 19 (4), 1321-1356.
- 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 in 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.
- 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

- Zhang, Lu, European Financial Management, 24 (4), 487.
- Zhang, Lu, Factors war, **Tsinghua Financial Review** 37, 101-104 in Chinese; ID _ œ ÿ Ý ë, .
- 2014 Zhang, Lu, Exploring asset pricing anomalies, **NBER Reporter** 1, 17-19.

Working Papers

Goncalves, Andrei S., Chen Xue, and Lu Zhang, 2018, Aggregation, capital heterogeneity, and the investment CAPM

Hou, Kewei, Haitao Mo, Chen Xue, and Lu Zhang, 2018,

Hou, Kewei, Chen Xue, and Lu Zhang, 2018, Global *q*-factors

[Inquire Europe, Institute for Quantitative Investment Research,

Petrosky-Nadeau, Nicolas, and Lu Zhang, 2018, Unemployment crises

1

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

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
Review of Financial Studies, Associate Editor, 2009-2012

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

2019	
2019	Smoothed returns and shareholder runs: Evidence from real estate and hedge funds
2018	Mengmeng (Mike) Dong, Ohio State. University of California, Riverside
2018	Andrei S. Goncalves, Ohio State. Can reinvestment risk explain the dividend and bond term structures? University of North Carolina, Chapel Hill
2017	Ivan Alfaro, Ohio Stateba BI Norwegian Business School
2016	Hang Bai, Ohio State. nemployment and credit risk University of Connecticut
2015	Woo Hwa Koh, Ohio Statesection of Korea Advanced Institute of Science and Technology (KAIST)
2014	Andrew Y. Chen, Ohio State. model of asset prices and aggregate fluctuations. Federal Reserve Board
2012	Chen Xue, University of Michigansectional stock returns and mutual fund performance evaluation: An investment-based investigation. University of Cincinnati
2009	Ryan Israelsen, University of Michigan. Indiana University
2008	Xiaoji Lin, University of Minnesota. cross se London School of Economics
2007	Erica Xuenan Li, University of Rochester. returns, University of Michigan, Ann Arbor
2005	Laura Xiaolei Liu, University of Rochester. Evidence from historical market-to-book and past return. Hong Kong University of Science and Technology
2005	Horacio Sapriza, University of Rochester. in emerging market e Rutgers Business School
2003	Ralitsa Petkova, University of RochesterFrench factors proxy for 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 finance 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 asset pricing, in relation with macroeconomics,

corporate finance, labor economics, computational economics, economic history, and capital markets research in accounting. His major contribution is The investment CAPM, which provides a unified conceptual framework for understanding capital markets anomalies. As its empirical implementation, the *q*-factor model is a leading workhorse factor model in both academia and investment management industry. His theoretical work on Endogenous disasters shows how labor market frictions can give rise to economic disasters. Dr. Zhang has published extensively at prestigious 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 work has been featured in prominent media outlets such as The Wall Street Journal, Bloomberg, Shanghai Financial News, and The Economist.

Recent publications:

Journal of Financial Economics, 2019; Endogenous disasters Kuehn), American Economic Review, 2018; (with Hou and Xue), Review of Financial Studies, 2015; Journal of Monetary Economics, 2014; (with Belo and Xue), Review of Financial Studies, 2013; Journal of Monetary Economics, 2013.

-Nadeau and

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 by part time MBA students at Fisher College of Business, The Ohio State University.

Jiangxi University of Finance and Economics, B.A. in Economics, 1993. The Graduate School

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 Impact

Professor has some questions about your index funds, by Nir Kaissar, Bloomberg, December 24, 2018

Most reported anomalies fail to hold up, my interview with Robeco Quarterly, September 25, 2018

, my blog interview with Wesley

Gray, Alpha Architect, LLC, July 25, 2018

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Replicating anomalies in the Chinese A-share market, in Chinese,ol Replicating Anomalieso§A

à , • ~ À Æ , PWBo , March 7, 2018

Will a falling stock market take the job market along with it on the way down? by Martha C. White, NBCNews.com, February 9, 2018

, The Economist, February 1, 2018

The value effect and macroeconomic risk, alphaarchitect.com, by Larry Swedroe, January 9, 2018

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

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, 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 _ U 'o , , 0 0 4 4 h ?!) In Chinese, à £, ò À µ

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

, 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? Markets Blog, June 7, 2017

nancial

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

Finanzaoperativa.com

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

omberg, 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

exist, Bogleheads.org

When researchers and investors walk into a bar, the investors get hammered, by Jason Zweig, The Wall Street Journal, May 12, 2017

An algorithm, an ETF and an academic study walk into a bar, by James Mackintosh, The Wall Street Journal, May 11, 2017

Ivory tower wonks help traders make a quick buck, by Noah Smith, Bloomberg View, May 11, 2017

Cleaning out the factor zoo, by James Picerno, The Capital Spectator, May 11, 2017, Investing.com, May 11, 2017, Seeking Alpha, May 12, 2017

Half anomalies are fantasy of the discoverers, IEXProfs, in Dutch, May 11, 2017

Do you think behavioral anomalies will persist? Bogleheads.org

Do trading costs destroy factor investing? ValueWalk.com

Anomalies, pitches, and promises, by Matt Levine, Bloomberg View, May 9, 2017

Research paper says most market anomalies are imaginary, by Eric Weiner, The Globe and Mail, May 9, 2017

Forget factors, paper says most market anomalies are imaginary, by Eric Weiner, Bloomberg, May 9, 2017

A new paper just took a huge shot at some of the world's hottest investments, by Eric Weiner, Bloomberg, May 8, 2017

Market anomalies fail to replicate, MarginalRevolution.com

How to make trouble, Anti-Dismal.com

Replicating anomalies, No Hesitations

Financial research, data mining and star wars (PXÝ Bo, f G7'8 ¤ ñ Ý ë), in Chinese

A new benchmark model for estimating expected stock returns, Oxford University Press Blog

i CAPM, Diary of Imaginary, in Japanese

Battle of new factor models, by Larry Swedroe, ETF.com

Passive investing s foundations, by Larry Swedroe, ETF.com

Lu Zhang: The *q*-factor model can be used in quantitative investment management, in Chinese, Shanghai Financial News (• PXÝ)

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