# 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**

 $q^5$ : Stress-testing factor models.

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

q<sup>5</sup>: Stress-testing factor models.

Finance Conference, New York City, 2018/10

stock-

Bernstein Quantitative

Keynote lecture: investment CAPM: An update. European Financial

Management 2018 Doctoral Seminar, Milan, Italy, 2018/6

Hou and Xue) featured in Wall Street Journal: A reality check on /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:

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 Academic (with Hou and Xue), 2017

Replicating anomalies

Replicating anomalies. The Inquire Europe Symposium on Factor Investing /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 Quantitative Alliance Acade , 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 (with Lyandres and Sun)

rits, The Wharton School, 1998-2002

#### Research

Area of specialization: Asset pricing, in connection with macroeconomics, corporate finance, labor economics, computational economics, microeconometrics, capital markets research in accounting, economic history, and meta-science

#### **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 wa	alk into a har				
	the investors get hammered and an academic study walk into	An algo	orithm, an ETF				
	[F wonks help traders make a quick pitches and promises						
2018	Hou, Kewei, Haitao Mo, Chen Xue, and Lu Zhang, Which factors? forthcoming, Review of Finance						
	Prize, the Chicago Quantitative A	Alliance Academic Competition, 2015]	. Second				
2018	Bai, Hang, Kewei Hou, Howard Kung, Erica X. N. Li, and Lu Zhang, The CAPM strikes back? An equilibrium model with disasters, forthcoming, <b>Journal of Financial Economics</b> .						
2018	Petrosky-Nadeau, Nicolas, Lu Zhang, and Lars-Alexander Kuehn, Endogenous disasters, American Economic Review 108 (8), 2212-2245.						
2017	Zhang, Lu, The investment CAPN 603, lead article.	M, European Financial Managemen	<b>t</b> 23 (4), 545-				
2017		Lu Zhang, Solving the Diamond-Morte antitative 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 201	5]				
2014	Liu, Laura Xiaolei, and Lu Zhang Journal of Monetary Economic	, A neoclassical interpretation of momes 67, 109-128.	nentum,				
2014	Tang, Yue, Jin (Ginger) Wu, and Finance 18 (3), 843-875, lead ar	Lu Zhang, Do anomalies exist <i>ex ant</i> ticle.	e? Review of				
2013	Belo, Frederico, Chen Xue, and I Financial Studies 26 (12), 3029	Lu Zhang, A supply approach to valua -3067.	ation, Review of				
2013	Lin, Xiaoji, and Lu Zhang, The interconomics 60 (3), 351-366.	vestment manifesto, Journal of Mone	etary				
2011	Gulen, Huseyin, Yuhang Xing, ar expected stock returns, <b>Financia</b>	nd Lu Zhang, Value versus growth: Ti al Management 40 (2), 381-407.	me-varying				
2011	Chen, Long, and Lu Zhang, Do tiperformance? Journal of Finance	me-varying risk premiums explain lab	or market				

- 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.
- 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.
- 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*]
- 2005 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.
- 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; i D \_ œ ÿÝ ë,
- 2014 Zhang, Lu, Exploring asset pricing anomalies, **NBER Reporter** 1, 17-19.

### **Working Papers**

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

Hou, Kewei, Haitao Mo, Chen Xue, and Lu Zhang, 2018,  $q^5$ 

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

[Inquire Europe, Institute for Quantitative Investment Research,

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

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

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## **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. Riverside		University of California,			
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 State. School	-ba	BI Norwegian Business			
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, Universit University	y of Michigan.	Indiana			
2008	Xiaoji Lin, University of M cross se	linnesota. London School of Econ	nomics			
2007	Erica Xuenan Li, University of Rochester.					

## **Media Impact**

my interview with Robeco Quarterly, September 25, 2018 , my blog interview with Wesley Gray, CEO/CIO, Alpha Architect, LLC, July 25, 2018 Ï•⁻©k 9 t. è¢ June 27, 2018 » i  $\P$  , J–J<sup>a</sup> ù g , Ž " Ý < 3 M PXÝ " , June 14, 2018 Replicating anomalies in the Chinese A-share market, in Chinese,o¦Replicating Anomalieso§ à , • ~ À Æ, P W B o, 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 value effect and macroeconomic risk, alphaarchitect.com, by Larry Swedroe, January 9, 2018 Podcast interview: The economics of value investing ( ), in Chinese, by Zhijian Wu, CEO, Woodsford Capital Management, , by Wesley Gray, The Wall Street Journal, A reality check on stock-November 5, 2017 Asset type matters with factors 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 ,0044h?! à£òÀμ 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 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 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 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 Mast investment letter

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Reexamining accepted market wisdom le battere il mercato?

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

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

, 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 B Q f G7'8 ¤ ñ Ý ë ), in Chinese

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

**T** 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 , 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