Haoxiang Zhu

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Academic Appointments

2012– Assistant Professor of Finance, MIT Sloan School of Management
Sarofim Family Career Development Professor, 2016–

2014– Faculty Research Fellow, National Bureau of Economic Research

Research Interests

Asset Pricing, Market Structure, Market Design

Education

2007–2012 PhD in Finance, Graduate School of Business, Stanford University

2003–2006 B.A. Mathematics and Computer Science, University of Oxford
First Class Honors. M.A. Mathematics and Computer Science, 2010

Publications and Accepted Papers (in reverse chronological order)

11. What is the Optimal Trading Frequency in Financial Markets?, with Songzi Du. Forthcoming in *Review of Economic Studies*
This paper largely subsumes Welfare and Optimal Trading Frequency in Dynamic Double Auctions, with Songzi Du, December 2015.
Kepos Capital Award for Best Paper on Investments, Western Finance Association, 2015
Yihong Xia Best Paper Award, China International Conference in Finance, 2013

10. Benchmarks in Search Markets, with Darrell Duffie and Piotr Dworczak. Forthcoming in *Journal of Finance*

9. Size Discovery, with Darrell Duffie. Forthcoming in *Review of Financial Studies*
First Prize, AQR Insight Award, 2016

8. Are CDS Auctions Biased and Inefficient?, with Songzi Du. Forthcoming in *Journal of Finance*

7. Shades of Darkness: A Pecking Order of Trading Venues, with Albert Menkveld and Bart Zhou Yueshen. Forthcoming in *Journal of Financial Economics*
TCW Best Paper Award, China International Conference in Finance, 2015
Best Paper Award, Finance Down Under conference, 2015

6. Bilateral Trading in Divisible Double Auctions, with Songzi Du
Journal of Economic Theory (2017), 167, 285–311.

5. Commodities as Collateral, with Ke Tang
Review of Financial Studies (2016), 29(8): 2110–2160.

4. Do Dark Pools Harm Price Discovery?
Review of Financial Studies (2014), 27(3): 747–789.
First Prize, Morgan Stanley Prize for Excellence in Financial Markets, 2011

3. Finding a Good Price in Opaque Over-the-Counter Markets
   Review of Financial Studies (2012), 25(4): 1255–1285.
   Review of Financial Studies Young Researcher Prize, 2013
2. Does a Central Clearing Counterparty Reduce Counterparty Risk?
   with Darrell Duffie. *Review of Asset Pricing Studies* (2011), 1(1): 74–95.
   Review of Asset Pricing Studies Michael Brennan Best Paper Award, 2012
1. A New Perspective on Gaussian Dynamic Term Structure Models, with Scott Joslin and Ken Singleton. *Review of Financial Studies* (2011), 24(3): 926–970.

Working Papers

- Back-Running: Seeking and Hiding Fundamental Information in Order Flows, with Liyan Yang, March 2016.
  Special Mention, Federation of European Securities Exchanges Joseph de la Vega Prize, 2016
- Optimal Issuance under Information Asymmetry and Accumulation of Cash Flows, with Ilya Strebulaev and Pavel Zryumov, July 2016. Revise and Resubmit at *Journal of Finance*. Previous title: "Dynamic Information Asymmetry, Financing, and Investment Decisions"
- Mortgage Dollar Roll, with Zhaogang Song, February 2016. Revise and Resubmit at *Review of Financial Studies*.
- QE Auctions of Treasury Bonds, with Zhaogang Song, August 2016. Revise and Resubmit at *Journal of Financial Economics*.
- Risk and Return Trade-off in the U.S. Treasury Market, with Eric Ghysels, Anh Le, and Sunjin Park, March 2014.
- Risk Premia in Gold Lease Rates, with Anh Le, October 2013.

Honors and Awards

- Best Discussant, University of Washington Summer Finance Conference, 2016
- Special Mention, Federation of European Securities Exchanges Joseph de la Vega Prize, 2016
- First Prize, AQR Insight Award, 2016
- Poets and Quants Best 40 Under 40 Business School Professors, 2016
- Kepos Capital Award for Best Paper on Investments, Western Finance Association, 2015
- TCW Best Paper Award, China International Conference in Finance, 2015
- Best Paper Award, Finance Down Under conference, 2015
- Yihong Xia Best Paper Award, China International Conference in Finance, 2013
- Review of Financial Studies Young Researcher Prize, 2013
- Michael Brennan Best Paper Award, Review of Asset Pricing Studies, 2012
- First Prize, Morgan Stanley Prize for Excellence in Financial Markets, 2011

Teaching

- 15.401/411 Finance Theory I: Spring 2013, Spring 2014
- 15.401 Managerial Finance: Spring 2016, Spring 2017

Professional Activities

- Member, Finance Theory Group (since 2013)
- Journal referee: American Economic Review, American Economic Journal: Microeconomics, Econometrica, International Journal of Central Banking, Journal of Economic Theory, Journal of Finance, Journal of Financial Economics, Journal of Financial Intermediation, Journal of Financial Markets, Journal of Financial and Quantitative Analysis, Journal of Monetary Economics, Journal of Political Economy, Journal of Risk and Insurance, Management Science, Quarterly Journal of Economics, Review of Asset Pricing Studies, Review of Economic Studies, Review of Financial Studies, and more
- Conference program committee: Western Finance Association (2013–2017), Society of Financial Studies Cavalcade (2014–2017), European Finance Association (2015–2017), Finance Down Under (2015–2017), Midwest Finance Association (2016–2017)
- Conference session chair: WFA (2016), AFA (2017)

Seminars and Conference Presentations

(Including scheduled. Conference presentations by coauthors are denoted by *.)

2017 *Conferences*: American Finance Association meeting

2016 *Seminars*: Wilfrid Laurier University, Rice University, Yale School of Management, Georgia State University, Securities and Exchange Commission, SUNY at Buffalo, Babson College, Northwestern Kellogg, INSEAD, Imperial College London, University of Houston

Conferences: American Finance Association meeting (2 papers), American Economic Association meeting*, Econometric Society winter meeting, Third International Conference on Sovereign Bond Markets*, Paul Woolley Centre Annual Conference, Western Finance Association meeting*, Northern Finance Association meeting, Joint ECB-IMF Workshop (on Money Markets, Monetary Policy Implementation and Market Infrastructures), NBER Market Design meeting, Federal Reserve Bank of Atlanta Workshop on the Impact of Extraordinary Monetary Policy on the Financial Sector, Market Microstructure Confronting Many Viewpoints conference 2016

2015 *Seminars*: European Central Bank, Wisconsin School of Business, Federal Reserve Board, CFTC

Conferences: America Economic Association meeting, Finance Down Under*, NBER Chinese Economy meeting, Fixed Income Conference*, UPenn Workshop on Multiunit Allocation, SEC Annual Conference on Financial Regulation, Finance Theory Group spring meeting, NBER Commodity Markets meeting, SFS Finance Cavalcade, Financial Intermediary Research Society meeting* (2 papers), Mitsui Finance Symposium, Paul Woolley Centre Annual Conference, Barcelona Information Workshop*, Western Finance Association meeting (2 papers), Bonn Workshop on Information Aggregation, Society for Economic Dynamics meeting* (2 papers), Society for Financial Econometrics meeting*, Erasmus Liquidity Conference*, European Financial Management Association meeting*, China International Conference in Finance* (2 papers), NBER Summer Institute Asset Pricing meeting, Society for the Advancement of Economic Theory meeting (2 papers), Econometric Society

World Congress* (2 papers), Philadelphia Fed Search and Matching Conference, OU Energy Finance Research Conference*, Northern Finance Association meeting*, 11th Central Bank Workshop on Microstructure of Financial Markets (2 papers), Inquire Europe 2015*, Conference on Financial Economics and Accounting*, Conference on Monetary Policy Implementation and Transmission in the Post-Crisis Period, NBER Market Microstructure meeting

2014 *Seminars*: IESE Business School, University of Cincinnati, London School of Economics, London Business School

Conferences: American Finance Association meeting, American Economic Association meeting*, Duke-UNC Asset Pricing Conference, Fixed Income Conference, Western Finance Association meeting, Financial Intermediation Research Society meeting, NBER Summer Institute Asset Pricing meeting, NBER Summer Institute Forecasting and Empirical Methods meeting*, Econometric Society summer meeting*, China International Conference in Finance*, Stanford Institute for Theoretical Economics meeting*, Trading in Electronic Markets Conference at Toulouse, Central Bank Workshop on the Microstructure of Financial Markets, FIRN asset pricing meeting, High Frequency Trading Conference at Imperial College London*

2013 *Seminars*: Humboldt University Berlin, HEC Paris, UNC Kenan-Flagler, Rochester Simon, Boston University, University of Illinois at Chicago, Carnegie Mellon Tepper, University of Toronto, Hong Kong University, HKUST, Beijing University, Tsinghua University, EPFL/University of Lausanne

Conferences: UNC-Duke Corporate Finance Conference, China International Conference in Finance, Society for the Advancement of Economic Theory meeting, Finance Theory Group Berkeley meeting, Barcelona Information Workshop*, Econometric Society summer meeting*, Vanderbilt Conference on Institutional Investors and Price Efficiency, NBER Commodity Markets meeting*, NBER Market Microstructure meeting

2012 *Seminars*: Chicago Booth, Princeton, University of Illinois at Urbana-Champaign, MIT Sloan, NYU Stern, Wharton, UT Austin, Berkeley Haas, UCLA Anderson, Northwestern Kellogg, University of South Carolina, Michigan Ross, Bank of Canada, Federal Reserve Board, Cornell Johnson, Stockholm School of Economics, Copenhagen Business School

Conferences: SFS Finance Cavalcade, New York Fed Money and Payments Workshop, Econometric Society summer meeting*, Society for Industrial and Applied Mathematics meeting*, Financial Intermediation Research Society meeting, NBER Summer Institute Asset Pricing meeting, European Finance Association meeting, UNC Junior Research Roundtable

2011 *Seminars*: University of Houston

Conferences: American Economic Association meeting, Utah Winter Finance Conference, Western Finance Association meeting, NBER Market Design meeting, ECB–Bank of England Asset Pricing Workshop*

2010 *Conferences*: American Finance Association meeting, Trans-Atlantic Doctoral Conference, ECB–Bank of England Workshop on Central Counterparties, MTS Conference on Financial Markets

Conference Discussions

2017: "QE reverse auctions in the UK and the U.S." by Boneva, Kastl and Zikes, AEA

2016: "China's Model of Managing the Financial System" by Brunnermeier, Sockin, and Xiong, NBER Chinese Economy working group meeting
"The Volcker Rule and Market-Making in Times of Stress" by Bao, O'Hara, and Zhou, Notre Dame Conference on Financial Regulation
"The Execution Quality of Corporate Bonds" by O'Hara, Wang, and Zhou, University of Washington Summer Finance Conference
"A Dynamic Model of Optimal Creditor Dispersion" by Zhong, AFA

2015: "When Fast Trading Looks Like Priced Noise" by Chinco and Ye, FRA
"Should We be Afraid of the Dark? Dark Trading and Market Quality" by Foley and Putnins, WFA
"Feature-Selection Risk" by Chinco, AFA
"CoMargin" by Lopez, Harris, Hurlin and Pérignon, AFA

2014: "Intermediaries as Informed Aggregators: An Application to U.S. Treasury Auctions" by Boyarchenko, Lucca and Veldkamp, U.S. Treasury Roundtable
"CDS and Sovereign Bond Market Liquidity" by Sambalaibat, Stern Microstructure Meeting
"Synthetic or Real? The Equilibrium Effects of Credit Default Swaps on Bond Markets" by Oehmke and Zawadowski, AFA

2013: "Optimality of Debt under Flexible Information Acquisition" by Yang, China International Conference in Finance
"Tug-of-War: Incentive Alignment in Securitization and Loan Performance" by Dai, Zhang, and Zhao, China International Conference in Finance
"Short-sale Constraint, Bid-Ask Spreads, and Information Acquisition" by Liu and Wang, China International Conference in Finance
"The Social Dynamics of Performance" by Cujean, WFA

2012: "Hidden Liquidity: Some New Light on Dark Trading" by Bloomfield, O'Hara, and Saar, 8th Central Bank Workshop on Microstructure
"CDS Auctions" by Chernov, Gorbenko, and Makarov, WFA
"Financial Sector Linkages and the Dynamics of Bank and Sovereign Credit Spreads" by Kallestrup, Lando, and Murgoci, Fixed Income Conference

Selected Media Mention

- Does a Central Clearing Counterparty Reduce Counterparty Risk?
  Wall Street Journal (02/2009), Euromoney (02/2009), Bloomberg (03/2009), Stanford Knowledgebase (04/2009), Reuters (04/2009), Financial Times (04/2009), Business Insider (05/2009)
- Do Dark Pools Harm Price Discovery?
  Business Insider (10/2012), Institutional Investor (12/2012, 5/2014), CNBC (1/2013), MIT News (2/2014), Morningstar (5/2014)
- Are CDS Auctions Biased and Inefficient?
  Financial Times (03/2012)
- QE Auctions of Treasury Bonds
  Fortune (07/2014), Central Banking (08/2016)

- Welfare and Optimal Trading Frequency in Dynamic Double Auctions
  MarketWatch (12/2014)
- Back-Running: Seeking and Hiding Fundamental Information in Order Flows
  MarketWatch (2/2016)

Industry Experience

- Analyst, Interest Rate Analytics, Lehman Brothers, London, 2006–2007

29$^{\text{th}}$ December, 2016