Haoxiang Zhu

Education

2012	PhD in Finance, Graduate School of Business, Stanford University
2006	B.A. Mathematics and Computer Science, University of Oxford (First Class Honors)

Experience

2021— U.S. Securities and Exchange Commission

- Director, Division of Trading and Markets (since December 10, 2021)

2012— MIT Sloan School of Management

- On Leave from December 10, 2021
- Gordon Y Billard Professor of Management and Finance, 2020—
- Faculty Affiliate, MIT Laboratory for Financial Engineering, 2020—
- Faculty Affiliate, MIT Golub Center for Finance and Policy, 2020—
- Associate Professor of Finance (with tenure), 2019—
- Associate Professor of Finance (without tenure), 2017–19
- Sarofim Family Career Development Professor, 2016–20
- Assistant Professor of Finance, 2012–17

2014— National Bureau of Economic Research

- On Leave from December 10, 2021
- Research Associate, 2019—
- Faculty Research Fellow, 2014–19

2019–21	Finance Department Editor, Management Science (Associate Editor, 2018-19)
2018–21	Associate Editor, Journal of Finance
2016–21	Member, Federal Reserve Bank of Chicago Working Group on Financial Markets
2016–19	Academic Expert, the U.S. Commodity Futures Trading Commission
2017–18	Academic Expert, Bank for International Settlements

Honors and Awards

2017	Amundi Smith Breeden Prize (First Prize), Journal of Finance
2016	First Prize, AQR Insight Award
	Poets and Quants Best 40 Under 40 Business School Professors
	Special Mention, Federation of European Securities Exchanges Joseph de la Vega Prize
	Best Discussant, University of Washington Summer Finance Conference
2015	Kepos Capital Award for Best Paper on Investments, Western Finance Association
	TCW Best Paper Award, China International Conference in Finance
	Best Paper Award, Finance Down Under conference

2013	Review of Financial Studies Young Researcher Prize
	Yihong Xia Best Paper Award, China International Conference in Finance
2012	Michael Brennan Best Paper Award, Review of Asset Pricing Studies
2011	First Prize, Morgan Stanley Prize for Excellence in Financial Markets

Research Interests

Asset Pricing, Market Structure, Market Design

Research Publications (in reverse chronological order)

19. From Market Making to Matchmaking: Does Bank Regulation Harm Market Liquidity?, with Gideon Saar, Jian Sun, and Ron Yang. *Review of Financial Studies*, 2023, 36, 678–732.
18. When FinTech Competes for Payment Flows, with Christine Parlour and Uday Rajan. *Review of Financial Studies*, 2022, 35, 4985–5024.
17. Premium for Heightened Uncertainty: Explaining Pre-Announcement Market Returns, with Grace Xing Hu, Jun Pan, and Jiang Wang. *Journal of Financial Economics*, 2022, 145, 909–936.
16. Strategic Trading When Central Bank Intervention Is Predictable, with Liyan Yang. *Review of Asset Pricing Studies*, 2021, 11, 735–761.
15. Swap Trading after Dodd-Frank: Evidence from Index CDS, with Lynn Riggs, Esen Onur, and David Reiffen. *Journal of Financial Economics*, 2020, 137, 857–886.
14. Back-Running: Seeking and Hiding Fundamental Information in Order Flows, with Liyan Yang.
    Review of Financial Studies, 2020, 33, 1367–1411.
    Special Mention, Federation of European Securities Exchanges Joseph de la Vega Prize, 2016
13. Mortgage Dollar Roll, with Zhaogang Song.
    Review of Financial Studies, 2019, 32, 2955–2996.
12. Quantitative Easing Auctions of Treasury Bonds, with Zhaogang Song.
    Journal of Financial Economics, 2018, 128, 103–124.
11. Are CDS Auctions Biased and Inefficient?, with Songzi Du.
    Journal of Finance, 2017, 72, 2589–2628.
10. Benchmarks in Search Markets, with Darrell Duffie and Piotr Dworczak.
    Journal of Finance, 2017, 72, 1983–2044.
    Amundi Smith Breeden First Prize, Journal of Finance, 2017
9. What is the Optimal Trading Frequency in Financial Markets?, with Songzi Du.
    Review of Economic Studies, 2017, 84, 1606–1651.
    Kepos Capital Award for Best Paper on Investments, Western Finance Association, 2015
    Yihong Xia Best Paper Award, China International Conference in Finance, 2013
8. Size Discovery, with Darrell Duffie.
    Review of Financial Studies, 2017, 30, 1095–1150.
    First Prize, AQR Insight Award, 2016

7. Shades of Darkness: A Pecking Order of Trading Venues, with Albert Menkveld and Bart Zhou Yueshen.
   Journal of Financial Economics, 2017, 124, 503–534.
   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, 2110–2160.
4. Do Dark Pools Harm Price Discovery?
   Review of Financial Studies, 2014, 27, 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, 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, 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, 926–970.

Other Publications

- Non-Fundamental Speculation Revisited, with Liyan Yang.
  Journal of Finance (Replications and Corrigenda), 2017, 72, 2759–2772.

Working Papers

- The Case for Convenience: How CBDC Design Choices Impact Monetary Policy Pass-Through, with Rodney Garratt and Jiaheng Yu, November 2022.
- CCP Auction Design, with Wenqian Huang, September 2021.
- Optimal Issuance under Information Asymmetry and Accumulation of Cash Flows, with Ilya Strebulaev and Pavel Zryumov, July 2016.
  Previous title: “Dynamic Information Asymmetry, Financing, and Investment Decisions”
- 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.

Policy-Oriented Research and Talks

- When Leverage Ratio Meets Derivatives: Running Out Of Options?, with Richard Haynes and Lihong McPhail, April 2019. A shorter version appeared earlier as a CFTC policy brief.
- A FSB/BCBS/CPMI/IOSCO report on the effects of G20 financial regulatory reform on OTC derivatives markets, for which I served as an academic expert, November 2018.

- The Clock is Ticking: A Multi-Maturity Clock Auction Design for IBOR Transition, an auction design that helps the transition of IBORs to new reference rates, October 2018.
- Design of CCP Default Management Auctions, keynote presentation at the second People's Bank of China–Federal Reserve Bank of Chicago OTC Derivatives Symposium, June 26, 2018, Shanghai.
- Reflections on the Post-Crisis Derivatives Market Reform in the U.S., keynote presentation at the European Capital Market Institute Annual Conference, November 23, 2017, Brussels.
- Margin and Haircut: Transparency, Fire-Sale Risk, and Procyclicality, panel presentation at the Office of Financial Research (OFR)–Financial Stability Oversight Council (FSOC) Annual Conference, January 30, 2015, Washington D.C.

Opinions and Op-Eds

- Comment letter on SEC Proposed Rule to Amend Reporting Threshold for Institutional Investment Managers, August 28, 2020.
- Financing Treasury Debt with SOFR Floating Rate Notes: Is It a Good Idea?, July 17, 2020.
- Comment letter on U.S. Treasury's potential issuance of floating rate notes indexed to the Secured Overnight Financing Rate, June 26, 2020.
- Comment letter on CFTC's 48-hour delayed reporting proposed rule, February 27, 2020.
- Comment letter on FINRA's proposed pilot on U.S. corporate bond markets, June 5, 2019.
- Post MiFID II, Dark Trading Should Return to Basics, with Carole Comerton-Forde, Oxford Business Law Blog, January 22, 2018
- Wider and Direct Access to Financial Market Infrastructure Is the Next Step for a More Competitive Financial Market, Pro-Market Blog of the Stigler Center of the University of Chicago, January 17, 2018
- Flash Crash Seven Years on: What is the Optimal Market Speed?, Oxford Business Law Blog, May 6, 2017
- This is your fund manager's secret weapon to fight high-frequency traders, Market Watch, February 24, 2016
- In support of transparent financial benchmarks, with Darrell Duffie and Piotr Dworczak, VOX EU, February 16, 2015
- High-frequency trading payoff tied to news, Market Watch, December 1, 2014

Teaching

MIT Teaching

- 15.433 Financial Markets: Fall 2019, Fall 2021
- 15.474 Current Topics in Finance: Spring 2017, Spring 2018
- 15.401 Managerial Finance: Spring 2016, Spring 2017, Spring 2018, Spring 2019
- 15.401/411 Finance Theory I: Spring 2013, Spring 2014

Other teaching

- PhD class on Financial Market Design at Fudan University, Fall 2020

PhD Supervision

- Thomas Ernst, 2020, chair of dissertation committee, first placement: University of Maryland
- Seung Kwak, 2018, dissertation committee, first placement: Federal Reserve Board
- Hyungjung Kang, 2018, dissertation committee, first placement: Two Sigma
- Bart Zhou Yueshen, 2014, dissertation committee, first placement: INSEAD

Past Activities

- American Finance Association Nominating Committee, 2019
- Consultant for Quinn Emanuel on market structure, 2019–21
- Advisory Board member, SOFR Academy, 2020–21
- Member, Finance Theory Group, 2013–21
- Board of Director for Source Code Capital funds, 2019–21
- Special Term Professor, Tsinghua PBC School of Finance, 2019–21
- Fellow, Luohan Academy, 2020–21
- Analyst, Interest Rate Analytics, Lehman Brothers, London, 2006–2007

Seminars and Conference Presentations

(Year is calendar year; including scheduled and virtual presentations; * indicates conference talks by collaborators)

2021: *Seminars*—Luohan Academy, Washington University at St. Louis, University of Leeds, UC Irvine, CFTC, UT Dallas, Nova SBE, Universidad Adolfo Ibáñez, Microstructure Online Seminars Asia Pacific, University of Hong Kong, Campbell & Company, Search and Matching in Macro and Finance, Sao Paulo School of Economics FGV, Boston University, Federal Reserve Bank of New York, Shanghai Advanced Institute of Finance, MIT Computer Science and Artificial Intelligence Lab

Conferences—SFS Cavalcade*, JHU Carey Finance Conference, Econometric Society China Meeting*, Philadelphia Workshop on the Economics of Digital Currencies*, Virtual Seminar Series on Central Banking & Digital Currencies*, ECB Money Market Conference

2020: *Seminars*—Swiss National Bank, Bank for International Settlements, Baruch College, University of Bonn, Office of Financial Research, Peking University HSBC Business School, Microstructure Exchange, BI Norwegian Business School, Penn State University, Carnegie Mellon University, Brandeis University, University of Memphis

Conferences—American Finance Association* (two papers), GSU-RFS FinTech Conference*, Western Finance Association*, Luohan Academy Symposium, Toulouse Digital Platforms Conference, Moscow Finance Conference

2019: *Seminars*—Goethe University Frankfurt, EPFL, University of Hong Kong, City University of Hong Kong, Chinese University of Hong Kong, Chinese University of Hong Kong Shenzhen, University of British Columbia, Wharton, University of Illinois, Southern Methodist University, University of Washington, Tsinghua University PBC School of Finance, Dartmouth Tuck, Federal Reserve Board

Conferences—RCFS/RAPS Conference, Columbia University/Bank Policy Institute Research Conference*, NBER Summer Institute Household Finance, CEBRA annual conference*

2018: *Seminars*—Arizona State University, Michigan Ross, HEC Paris, Michigan State University, University of Delaware, Bank of Canada, Berkeley Haas, Copenhagen Business School, Bank of England, UK Financial Conduct Authority, University of Oxford

Conferences—American Finance Association meeting*, Western Finance Association meeting

2017: *Seminars*—Federal Reserve Bank of New York, Bank of England, Bank of Canada, University of Melbourne, Australian National University, University of Technology Sydney, University of Sydney, Federal Reserve Bank of Chicago, University of Notre Dame, NYU Stern, Boston College, University of Colorado Boulder, Chicago Booth

Conferences—American Finance Association meeting, Midwest Finance Association meeting*, Conference on Financial Market Design at Georgia State University, Federal Reserve Bank of Richmond Workshop on Market Liquidity, Western Finance Association meeting, 13th Annual Central Bank Conference on the Microstructure of Financial Markets*, NBER Market Design meeting, LAEF OTC Market Conference, Federal Reserve Bank of Atlanta Conference on Financial Regulation*

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

2021: "Decentralized Exchanges" by Lehar and Parlour, Transparency and Market Structure Conference
"Information Acquisition and the Pre-Announcement Drift" by Ai, Bansal, and Han, CICF
"Regulation and Security Design in Concentrated Markets" by Babus and Hachem, FIRS

"The Design of a Central Counterparty" by Kuong and Maurin, Conference on Financial Market Regulation
"A Theory of Collateral Requirements for Central Counterparties" by Wang, Capponi, and Zhang, AFA
"Principal Trading Arrangements: When Are Common Contracts Optimal?" by Baldauf, Frei, and Mollner, AFA

2020: "Liquidity, Volume, and Volatility" by Bogousslavsky and Collin-Dufresne, AFA

2019: "Microstructure in the Machine Age" by Easley, de Prado, O'Hara, and Zhang, Georgia State FinTech Conference
"Speed Acquisition" by Huang and Yueshen, AFA

2018: "Central Counterparty Resolution: The Right Move at the Right Time" by Huang, Faruqui, and Shirakami, the Fifth Joint Bank of Canada and Payments Canada Workshop
"ETF Arbitrage under Liquidity Mismatch" by Pan and Zeng, AFA

2017: "Smart Settlement" by Khapko and Zoican, NBER meeting on Competition and the Industrial Organization of Securities Markets
"A Tale of Two Uncertainties: Financial Sector Transparency and Real Investment" by Sockin, WFA
"Relationship Trading in OTC Markets" by Hendershott, Li, Livdan, and Schürhoff, OTC Markets and their Reform
"Toward a Fully Continuous Exchange" by Kyle and Lee, Stern Microstructure Conference
"Trading Costs and Informational Efficiency" by Dávila and Parlatore, Macro Finance Society meeting
"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

June 2023