Charles Quanwei Cao
Smeal College of Business
Pennsylvania State University
University Park, PA 16802, USA
Tel: (814) 865-7891, Email: qxc2@psu.edu

EDUCATION

Ph.D. (Finance), Graduate School of Business, University of Chicago, 1993
M.S. (Statistics), University of Kentucky , 1988
B.S. (Mathematics), Peking University , 1984

PROFESSIONAL APPOINTMENTS

Pennsylvania State University, Smeal College of Business

Smeal Chair Professor of Finance, 2007 – Present
Professor of Finance, 2005 - Present
David McKinley Professor of Business Administration, 2002 - 2007
Associate Professor of Finance (with tenure), 1999 - 2005
Assistant Professor of Finance, 1993 - 1999
Coordinator of Ph.D. Program in Finance, 2001 – 2006

Bankers Trust Company (New York), 1991

Fidelity Management & Research Company (Boston), 1991

HONORS, AWARDS AND GRANTS

Academic of Finance Best Paper Award in Investment, 2022
The Graham and Dodd Best Paper Award of Excellence, 2018
Best Paper Award on Capital Markets, CFA Society Toronto, NFA, 2013
Research Grant from the BNP Paribas Hedge Fund Center at SMU, 2013
Research Grant from the Real Estate Research Institute, 2012
Research Grant from the Q group, 2010
Research Grant from the BNP Paribas Hedge Fund Center at SMU, 2009
Fellow and Competitive Research Grant from FDIC Center for Financial Research, 2006-2007
Morgan Stanley Equity Market Microstructure Research Grant, 2004
New York Stock Exchange Award for Best Paper in Equity Markets, WFA, 1999
Competitive Paper Award in Financial Institutions, FMA, 1996
The University of Chicago Fellowship, 1988-1991
Center for Research in Security Price Research Award, University of Chicago, 1990
The University of Kentucky Fellowship, 1987-1988

EDITORSHIPS

Editorial Board Member, Pacific-Basin Finance Journal, 2016 - present
Co-Editor, Pacific-Basin Finance Journal, 2009 - 2016
Associate Editor, Journal of Financial Markets, 2000 - present
Associate Editor, Review of Derivatives Research, 2007 - present

Associate Editor, Review of Quantitative Finance and Accounting, 2006 - present
Associate Editor, Pacific-Basin Finance Journal, 2006 - 2008
Editorial Board Member, Annals of Economics and Finance, 2000 – present
Editorial Board Member, Journal of Alternative Investments, 2015 - present

PUBLICATIONS

1. The Economics of Hedge Fund Startups: Theory and Empirical Evidence (with Grant Farnsworth and Hong Zhang), **Journal of Finance, 76, 2021, 1427-1469** (PDF file)

2. Information Choice, Uncertainty, and Expected Returns (with David Gempesaw and Tim Simin), **Review of Financial Studies, 34, 2021, 5977-6031** (PDF file)

3. Assessing Models of Individual Equity Option Prices (with Gurdip Bakshi and Ken Zhong), **Review of Quantitative Finance and Accounting, 2021, 1-28** (PDF file)

4. Predicting the Equity Premium with the Implied Volatility Spread (with Tim Simin and Han Xiao), **Journal of Financial Markets, 2020, 1-17.** (PDF file)

5. Index Membership and Small Firm Financing (with Matthew Gustafson and Raisa Velthuis), **Management Science, 8, 2018, 1-23.** (PDF file)

6. Hedge Funds and Stock Price Formation (with Yong Chen, William Goetzmann and Bing Liang), **Financial Analysts Journal, 3, 2018, 54-68.** (PDF file)

   Winner of Graham and Dodd Award of Excellence, 2018

7. The Decline of Informed Trading in the Equity and Options Markets (with David Gempesaw and Tim Simin), **Journal of Alternative Investments, 2018, 16-29**. (PDF file)

8. Hedge Fund Holdings and Stock Market Efficiency (with Bing Liang, Andrew Lo and Lubomir Petrasek), **Review of Asset Pricing Studies, 8, 2017, 77-116.** (PDF file)

   Winner of Best Paper Award on Capital Markets, CFA Society Toronto, NFA, 2013

9. Return Smoothing, Liquidity Costs, and Investor Flows: Evidence from a Separate Account Platform (with Grant Farnsworth, Bing Liang and Andrew Lo), **Management Science, 63, 2017, 2233-2250**. (PDF file)

10. Style Drift: Evidence from Small-Cap Mutual Funds (with Peter Iliev, and Raisa Velthuis), **Journal of Banking and Finance, 78, 2017, 42-57.** (PDF file)

11. What Is the Nature of Hedge Fund Manager Skills? Evidence from the Risk Arbitrage Strategy (with Bradley Goldie, Bing Liang and Lubomir Petrasek), **Journal of Financial and Quantitative Analysis, 51, 2016, 929-957.** (PDF file)

12. Real Estate Risk and Hedge Fund Returns (with Brent Ambrose and Walter D'Lima), **Journal of Real Estate, Finance and Economics, 52, 2016, 197-225.** (PDF file)

13. Liquidity Risk and Institutional Ownership (with Lubomir Petrasek), **Journal of Financial Markets, 21, 2014, 76-97**. (PDF file)

14. Liquidity Risk in Stock Returns: An Event-study Perspective (with Lubomir Petrasek), **Journal of Banking and Finance 45, 2014**, **72-83**. (PDF file)

15. Can Hedge Funds Time Market Liquidity? (with Yong Chen, Bing Liang and Andrew Lo), **Journal of Financial Economics 109, 2013, 493-516**. (PDF file)

16. Do Mutual Fund Managers Time Market Liquidity?, (with Tim Simin and Ying Wang), **Journal of Financial Markets 16, 2013, 279-307**. (PDF file)

17. Pricing Credit Default Swaps with Option-Implied Volatility, (with Fan Yu and Ken Zhong), **Financial Analysts Journal 67, 2011, 67-76.** (PDF file)

18. Derivatives do Affect Mutual Fund Returns: Evidence from the Financial Crisis of 1998, (with Eric Ghysels and Frank Hatheway), **Journal of Futures Markets 31, 2011, 629-658**. (PDF file)

19. The Information Content of Option-Implied Volatility for Credit Default Swap Valuation, (with Fan Yu and Ken Zhong), **Journal of Financial Markets 13, 2010, 321-343.** (PDF file)

20. Can Growth Options Explain the Trend in Idiosyncratic Risk? (with Tim Simin and Jing Zhao), **Review of Financial Studies 21, 2008, 2599-2633.** (PDF file)

21. An Empirical Analysis of the Dynamic Relationship between Mutual Fund Flow and Market Return Volatility, (with Eric Chang and Ying Wang), **Journal of Banking and Finance 32, 2008, 2111-2123.** (PDF file)

22. The Information Content of an Open Limit Order Book, (with Oliver Hanscah and Xiaoxin Wang), **Journal of Futures Markets 29, 2008, 16-41**. (PDF file)

23. Order Placement Strategies in a Pure Limit Order Book Market, (with Oliver Hansch and Xiaoxin Wang), **Journal of Financial Research**, **Vol. XXXI, 2008, 113-140.** (PDF file)

24. Determinants of S&P 500 Index Option Returns, (with Jingzhi Huang), **Review of Derivatives Research**, **10, 2008, 1-38.** (PDF file)
25. Informational Content of Option Volume Prior to Takeovers, (with Zhiwu Chen and John Griffin), **Journal of Business, 78, 2005, 1073-1109.** (PDF file)

26. Is Investor Misreaction Economically Significant? Evidence from Short- and Long-term Index Options, (with Haitiao Li and Fan Yu), **Journal of Futures Markets, 25, 2005, 717-752.** (PDF file)

27. Does Insider Trading Impair Market Liquidity: Evidence from IPO Lockup Expirations, (with Laura Field and Gordon Hanka), **Journal of Financial and Quantitative Analysis 39, 2004, 25-46**. (PDF file)

28. Share Repurchase Tender Offers and Bid-Ask Spreads (with Heejoon Ahn and Hyuk Choe), **Journal of Banking and Finance 25, 2001, 445-478.** (PDF file)

29. Price Discovery without Trading: Evidence from Nasdaq Pre-opening, (with Eric Ghysels and Frank Hatheway), **Journal of Finance 56, 2000, 1339-1365.** (PDF file)

Winner of New York Stock Exchange Award for Best Paper in Equity Markets, WFA, 1999

Nominated for a Smith Breeden distinguished paper award, AFA, 2001.

30. Do Call Prices and the Underlying Stock Always Move in the Same Direction? (with Gurdip Bakshi and Zhiwu Chen), **Review of Financial Studies 13, 2000, 549-584.** (PDF file)

31. Pricing and Hedging Long-Term Options, (with Gurdip Bakshi and Zhiwu Chen), **Journal of Econometrics 94, 2000, 277-318**. (PDF file)

32. Empirical Performance of Alternative Option Pricing Models (with Gurdip Bakshi and Zhiwu Chen), **Journal of Finance 52, 1997, 2003-2049.** (PDF file)

On the list of the 50 top-cited articles of all time from the Journal of Finance.

33. Does the Specialist Matter? Differential Execution Costs and Inter-Security Subsidization on the NYSE (with Hyuk Choe and Frank Hatheway), **Journal of Finance 52, 1997, 1615-1640**. (PDF file)

Winner of the Competitive Paper Award in Financial Institutions, FMA, 1996.

34. Decimalization and Competition Among Exchanges: Evidence from the Toronto Stock Exchange Cross-listed Securities, (with Heejoon Ahn and Hyuk Choe), **Journal of Financial Markets, 1998, 51-87**. (PDF file)

35. Evolution of Transitory Volatility over the Week (with Hyuk Choe), **Annals of Economics and Finance, 1997, 49-78.**

36. What is Special about the Opening: Evidence from NASDAQ (with Hyuk Choe and Frank Hatheway, **Seoul Journal of Business**, 1997, 1-36.

37. Tick Size, Spread and Volume, (with Heejoon Ahn and Hyuk Choe), **Journal of Financial Intermediation 5, 1996, 2-22**. (PDF file)

38. Nonlinear Time Series Analysis of Stock Return Volatility, (with Ruey Tsay), **Journal of Applied Econometrics 7, 1992, 165-185**. (PDF file)

39. Inequality Constraints in the Univariate GARCH Model, (with Daniel Nelson), **Journal of Business & Economic Statistics 10, 1992, 229-235.** (PDF file)

WORKING PAPERS (COMPLETED)

1. Liquidity Characteristics of Market Anomalies and Institutional Trading (with Bing Liang, Tong Yao, and Andrew Zhang), 2025

2. From Conference Room to Living Room: The Hidden Costs of Remote Work on Mutual Fund Performance (with Tim Simin and Han Xiao), 2025

3. An Anatomy of Cryptocurrency Sentiment (with Mehmet Canayaz, Zongbo Huang, Giang Nguyen and Qiang Wang), 2025

4. Delegated Leverage and Asset Prices (with Grant Farnsworth, Hong Zhang and Yijun Zhou), 2025

5. Does Generative AI Facilitate Cryptocurrency Trading? Evidence from ChatGPT Outages (with Kenneth Wang and Deli Yang), 2025

6. Revisiting the International CAPM (with Stephen Owen, Timothy Simin and James Wu), 2025

7. Whom You Know Matters: The Portfolio and Performance Implications of Mutual Fund Workplace Networks (with Suiheng Guo and Yuan Gao), 2025

8. Cryptocurrency Exchange Volume Manipulation and Volatility (with Terry O'Brien and Deli Yang), 2024

9. Are Hedge Fund Capacity Constraints Binding? Evidence on Scale and Competition (with Tim Simin and Raisa Velthuis), 2023

10. Why does Hedge Fund Alpha Decrease over Time? (with Ken Zhong), 2023

BOOK CHAPTERS

1. "Predicting the Equity Premium with The Implied Volatility Spread" (with Tim Simin and Han Xiao) in **Handbook of Investment Analysis, Portfolio Management, and Financial Derivatives**, World Scientific, 2022.

2. "Option Pricing and Hedging Performance under Stochastic Volatility and Stochastic Interest Rates" (with Gurdip Bakshi and Zhiwu Chen), in **Handbook of Financial Econometrics and Statistics**, Springer Publishing, 2014.

3. "Option Pricing and Hedging Performance under Stochastic Volatility and Stochastic Interest Rates" (with Gurdip Bakshi and Zhiwu Chen), in **Handbook of Quantitative Finance and Risk Management**, Springer Publishing, 2010.

4. "Liquidity Consequence of IPO Lockup Expiration" (with Laura Field and Gordon Hanka), in **Focus on Financial Institutions and Services**, Nova Science Publishers, 2004.

5. "Empirical Performance of Alternative Option Pricing Models" (with Gurdip Bakshi and Zhiwu Chen), in **Model Risk,** Haymarket House, London, U.K., 2000.

6. "Empirical Performance of Alternative Option Pricing Models" (with Gurdip Bakshi and Zhiwu Chen), in **Options Markets**, Edited by G. Constantinides and A. Malliaris, (Critical Writing in Financial Economics, Series Editor: Richard Roll), Edward Elgar Publishing Ltd. UK, 2000.

7. "Nonlinear Time Series Analysis of Stock Return Volatility", (with Ruey Tsay), in **Nonlinear Dynamics, Chaos and Econometrics**, John Wiley & Sons, Ltd., 1993.

TEACHING EXPERIENCE

Penn State University (1993 – present)

Derivative Securities (Undergraduate)
Investments (Undergraduate)
Derivative Securities (MBA)
Theory of Financial Decisions (Ph.D.)
Derivative Securities (Ph.D.)

RESEARCH INTERESTS

FinTech, Cryptocurrencies
Hedge Funds, Mutual Funds, and Institutional Investment
Liquidity, Liquidity Risk, Credit Risk
Derivative Securities, Market Microstructures

PROFESSIONAL ACTIVITIES

Referee for:

Journal of Finance
Journal of Financial and Quantitative Analysis
Journal of Financial Markets
Econometrica
Journal of Business
Journal of Business & Economic Statistics
Journal of Empirical Finance
Financial Management
Review of Quantitative Finance and Accounting
Journal of Economic Dynamics and Control
Journal of International Money and Finance
Review of Financial Studies
Management Science
Journal of Financial Intermediation
Journal of Econometrics
Journal of Banking and Finance
Journal of Futures Markets
Pacific-Basin Finance Journal
Review of Derivatives Research
Financial Review
Canadian Journal of Economics
International Economic Review

Reviewer for:

National Science Foundation
Sun-Yefang Foundation

Service to Profession:

- Program Committee, Western Finance Association Annual Meetings, 2017-2024
- Scientific Committee, Annual Hedge Fund and Private Equity Research Conference, 2015-2025
- Program Committee, China's International Conference in Finance (CICF), 2009-2025
- Program Committee, Financial Management Association, 1996, 2002, 2012, 2013, 2021-2025
- Program Committee, China Financial Research Conference (CFRC), 2020-2025
- Program Chair, China International Conference in Finance (CICF), 2005-2008

- Program Committee, The Society for Financial Studies (SFS) Finance Cavalcade conference, 2011, 2022
- Program Committee, Conference on Financial Economics and Accounting at the University of Maryland, 2010
- Competitive Paper Award Committee, Financial Management Association, 1996, 2014, 2015
- Program Committee, New York Stock Exchange Conference on U.S. Equity Markets in Transition, 1999

Service to Penn State University

- Chair, Finance Department Peer Review Committee, Smeal College of Business, Penn State University, 2024-2025
- Recruiting Committee, Department of Finance, Smeal College of Business, Penn State University, 2007-2021, 2024-2025
- Promotion and Tenure Committee, Smeal College of Business, Penn State University, 1995-1996, 2001-2002, 2016-2017, 2019-2020
- Graduate Council Committee, Penn State University, 2008-2010
- Senate Committee on Research, Penn State University, 2008-2010
- Coordinator of Ph.D. Program in Finance, Smeal College of Business, Penn State University, 2001 – 2006
- Chair Professors Search Committee, Smeal College of Business, Penn State University, 2002-2004
- William Elliott Chair Search Committee, Smeal College of Business, Penn State University, 2000-2004
- Ph.D. Program Renewal Committee, Smeal College of Business, Penn State University, 2001

PH.D. STUDENTS SUPERVISED (CHAIRED OR CO-CHAIRED)

Mike Piwowar	1996	Ph.D., Penn State University, Department of Finance Employment: Iowa State University
Heejoon Ahn	1996	Ph.D., Penn State University, Department of Finance Employment: City University of Hong Kong
Michale Chernov	2000	Ph.D., Penn State University, Department of Finance Employment: Columbia University
Jennifer Juergens	2001	Ph.D., Penn State University, Department of Finance Employment: Arizona State University

Xiaoxin Wang	2002	Ph.D., Penn State University, Department of Finance Employment: Southern Illinois University
Ken Zhong	2008	Ph.D., Penn State University, Department of Finance Employment: Rutgers University
Lubomir Petrasek	2011	Ph.D., Penn State University, Department of Finance Employment: Federal Reserve Board (Washington, D.C.)
Brad Goldie	2012	Ph.D., Penn State University, Department of Finance Employment: University of Kansas
Grant Farnsworth	2015	Ph.D., Penn State University, Department of Finance Employment: Texas Christian University
Raisa Velthuis	2016	Ph.D., Penn State University, Department of Finance Employment: Villanova University
David Gempesaw	2019	Ph.D., Penn State University, Department of Finance Employment: Miami University
Stephen Owen	2021	Ph.D., Penn State University, Department of Finance Employment: University of North Texas
Lu Yang	2023	Ph.D., Penn State University, Department of Finance Employment: Florida State University
Han Xiao	2023	Ph.D., Penn State University, Department of Finance Employment: Chinese University of Hong Kong (Shenzhen)
Terry O'Brien	2023	Ph.D., Penn State University, Department of Finance Employment: University of Maryland
Darcy Pu	2024	Ph.D., London Business School (served as a committee member) Employment: Peking University
Carol Wang	2025	Ph.D., Penn State University, Department of Finance (served as a committee member) Employment: University of Calgary

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