QUAN QI

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Department of Finance and Quantitative Methods ⋄ University of Kentucky
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EDUCATION BACKGROUND

University of Kentucky — Lexington, KY
Ph.D., Finance — 2018-2024 (Expected)

Boston University — Boston, MA
M.A., Mathematics — 2017-2018
B.A., Mathematics (Cum Laude) — 2015-2018

RESEARCH INTEREST

Asset Management, Empirical Asset Pricing, Derivatives, Financial Fragility, Financial Intermediation, Investment, Securities Lending, Real Effects of Financial Markets

TEACHING INTEREST

Big Data, Corporate Finance, Derivatives, Financial Institutions, Fixed-income Securities, Investment

WORKING PAPER

[1] **Mutual Fund Derivative Usage, Fire-sale Spillovers, and Corporate Bond Market Fragility (Job Market Paper)**

- **Presentation**: University of Kentucky (2023), MFA (2023), FMA Doctoral Consortium & Special Ph.D. Paper Presentation (2022), New Zealand Derivative Markets Conference (2022), International Conference on Derivatives and Capital Markets (2022), New Zealand Finance Meeting (2022), SWFA (2023), FMCG Ph.D. Symposium (2023), CES Annual Conference (2023), Research Symposium on Finance and Economics (2023), China International Risk Forum (2023)

[2] **Securities Lending and Short-term Funding Market Stability: Evidence from Collateral Reinvestment in Money Market Fund**

[3] **How Arbitrageurs Exploit Asset Pricing Anomalies: Evidence from Hedge Fund Industry**

- **Presentation**: University of Kentucky (2020), FMA (2021), SWFA (2022)

[4] **How do Financial Reporting Technologies Affect Firm Value? Evidence from the EDGAR Implementation** (with Wenyin Li and Garen Markarian)

- **Presentation**: University of Kentucky (2019), FMA (2020)

WORK IN PROGRESS

[1] **Do Institutional Investors Hedge ESG Risks: Evidence from Mutual Fund Option Holdings and Short-sale Positions** (with Shuaiyu Chen)

[2] **Auditor Skepticism and Mutual Fund's Fair Value Estimation: Evidence from the Adoption of Revised AS 2501** (with Wenyin Li)

[3] **Mutual Funds' Holding of Reverse Repurchase Agreement: Role in Liquidity Management**

TEACHING EXPERIENCE

University of Kentucky

Instructor

- FIN 300 Corporate Finance (Undergraduate) — Summer 2021, 2022, Spring 2023

–Average teacher evaluation: 4.2/5

Teaching Assistant

- FIN 695 Python Predictive Analytics (Master in Finance) — Fall 2021, Spring 2022
- FIN 688 Financial Analytics Tools (Master in Finance) — Spring 2020
- ECO 491 Applied Econometrics (Master in Finance) — Fall 2019
- FIN 410 Investment Analysis (Undergraduate) — Fall 2018, Spring 2022

PRESENTATION AND DISCUSSION

2023: Southwestern Finance Association††, Midwest Finance Association, Financial Markets and Corporate Governance Conference Ph.D. Symposium, Chinese Economists Society Annual Conference, Research Symposium on Finance and Economics††, China International Risk Forum, University of Kentucky
2022: Southwestern Finance Association††, New Zealand Derivative Markets Conference††, FMA Doctoral Consortium & Special Ph.D. Paper Presentation, International Conference on Derivatives and Capital Markets††, New Zealand Finance Meeting††
2021: Financial Management Association††
2020: Financial Management Association††, University of Kentucky
2019: University of Kentucky

* presentation by coauthor
† discussion
†† presentation and discussion

AWARD AND GRANT

Steckler Award	2021-Present
Block Funding Award	2021
Gatton College Graduate Assistantship	2018-Present
Undergraduate Research Grant	2017-2018
Dean's List	2015-2018

SKILL AND PROFESSIONAL CERTIFICATION

Programming	Python, STATA, R, SAS, LaTex
Certification	Pass CFA Level I
Language	Mandarin (native), English (fluent)

PROFESSIONAL SERVICE

Ad Hoc Referee: Emerging Markets Finance and Trade

Conference Discussant: Financial Management Association (2020, 2021, 2022); International Conference on Derivatives and Capital Markets (2022); New Zealand Derivative Markets Conference (2022); New Zealand Finance Meeting (2022); Research Symposium on Finance and Economics (2023); Southwestern Finance Association (2022, 2023)

Program Reviewer: University of Kentucky Finance Conference (2023)

PROFESSIONAL MEMBERSHIP

American Finance Association, European Finance Association, Financial Management Association, Midwest Finance Association

REFERENCE

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SUMMARY OF WORKING PAPERS

[1] **Mutual Fund Derivative Usage, Fire-sale Spillovers, and Corporate Bond Market Fragility**

- **Abstract**: This paper shows that derivative market disruptions can propagate to corporate bond markets via mutual funds that hold both fixed-income securities and derivatives. The transmission arises because when fund managers incur losses in their derivative investments, they are obligated to deliver cash payments to counterparties or provide additional cash collateral to meet margin calls. Using the Covid-19 crisis as an adverse shock on derivative investments bond funds made in 2019 Q4, I find that funds with substantial exposure to derivative market disruptions liquidate fixed-income assets to fulfill corresponding payment obligations. The forced liquidations cause sizable price depressions in bond markets. Furthermore, the fire-sale spills over onto derivative nonusers that hold the same fixed-income securities, producing additional forced selloffs and second-round downward pressure on sold bonds. Overall, these findings suggest that asset managers that invest in relatively segmented markets could transmit an adverse shock from one market to another, and such a cross-market linkage has the potential to exacerbate systematic risks within the financial system.

[2] **Securities Lending and Short-term Funding Market Stability: Evidence from Collateral Reinvestment in Money Market Fund**

- **Abstract**: This paper investigates how mutual funds' securities lending practice introduces fragility risks to the money market fund (MMF) sector and its further impact on short-term debt markets. Due to their cash-like features, prime money funds generally serve as a crucial liquidity management tool for various institutional investors. This characteristic increases MMFs' connection with the risky asset markets that these institutional investors specialize in. This paper concentrates on the mutual fund securities lenders that primarily invest cash collateral received from borrowers into liquid money funds. This cash collateral reinvestment intensifies the connection between money funds and the volatile securities lending markets, which feature numerous speculative market participants like short sellers. By combining novel collateral reinvestment data with granular MMF data, I document that prime money funds with large interconnections with securities lending markets face more investor redemptions once fund lenders are forced to close their security loans and return cash collateral. In response to these fund outflows, MMF managers follow a liquidation pecking order, initially selling liquid claims before accessing illiquid assets. Such a liquidity strain stemming from the exit of security lenders has a spillover effect on the real economy. Concretely, borrowers dependent on these affected money funds witness a greater contraction in their aggregate borrowing and face a higher interest rate if they do borrow. Overall, my study suggests that the interconnection between money markets and risky assets markets can amplify the vulnerability of short-term funding markets.

[3] **How Arbitrageurs Exploit Asset Pricing Anomalies: Evidence from Hedge Fund Industry**

- **Abstract**: I explore how hedge funds exploit equity anomalies and the consequences of their arbitrage activities. Hedge fund managers who passively employ anomalies hardly deliver superior returns. Skilled arbitrageurs exploit anomalies by dynamically varying their portfolio exposure to anomaly-based strategy. I find robust evidence of anomaly-timing ability among top-ranked hedge funds. Top anomaly-timing funds earn 1.49% higher annualized abnormal returns than their bottom counterparts. Furthermore, the documented outperformance becomes stronger when systematic mispricing is prominent. Specifically, anomaly-timing funds only exploit severely mispriced stocks in short-side anomaly portfolios, realize superior performance following market-wide mispricing corrections, and require compensations for bearing arbitrage risks.

[4] **How do Financial Reporting Technologies Affect Firm Value? Evidence from the EDGAR Implementation** (with Wenyin Li and Garen Markarian)

- **Abstract**: Prior literature provides evidence that different information technologies, like social media and financial reporting technology, have fundamentally changed how market participants gather information. The adoption of information technologies not only benefits market outsiders but also improves firm outcomes. This study explores this question by focusing on an information dissemination technology—the EDGAR system. Using its staggered implementation from 1993-1996 as a semi-exogenous shock to financial reporting technology, we find that companies that disclose mandated information electronically have higher corporate valuations as measured by Tobin's Q. This finding is attributed to three potential mechanisms. First, EDGAR adoption enhances information transparency for firms and reduces their cost of capital. Second, after the EDGAR introduction, firms obtain more external funding to invest in profitable projects. Finally, EDGAR implementation facilitates sophisticated outsiders' monitoring activities and improves corporate governance through increased stock liquidity.

[5] **Do Institutional Investors Hedge against ESG Risks: Evidence from Mutual Funds' Option Holdings and Short-sale Positions** (with Shuaiyu Chen)

- **Abstract**: This paper explores how mutual funds employ unconventional investment products to alleviate ESG risks associated with their stock positions. Both policymakers and academic researchers underline the significance of poor ESG performance as a critical risk factor due to its potential to trigger huge regulatory reactions that cause significant financial damage to specific companies. Given the possible underperformance of firms with poor ESG profiles, we find mutual fund managers actively take short positions and put options to counterbalance the ESG risks of their stock holdings. Moreover, the hedging demand arising from mutual funds' practice contains forward-looking information because of its ability to predict the subsequent change in firm-level ESG risk measurement. Finally, we document that mutual funds' hedging demand for ESG risks influences the ESG premium in options markets. This suggests that other investors indirectly benefit from mutual funds' hedging practice, resulting in option premiums for hedging ESG-related uncertainty.

[6] **Auditor Skepticism and Mutual Fund's Fair Value Estimation: Evidence from the Adoption of Revised AS 2501** (with Wenyin Li)

- **Abstract**: This paper assesses whether improving auditors' professional skepticism can enhance the accuracy of fair value (FV) estimations for financial securities. The recurrent deficiencies in audits of FV estimates have raised significant regulatory concerns, with the lack of professional skepticism among auditors identified as a key contributor. By leveraging security-level FV estimate from fixed-income mutual funds and the introduction of revised AS 2501, which integrates the concept of professional skepticism into auditing standards, we find that auditors' skepticism matters for the FV estimation. Notably, adopting new rules increases the precision of FV estimates for securities held by fixed-income mutual funds. Observed results are robust to the parallel trend assumption and an entropy-balanced approach. Cross-sectional analysis indicates that the documented findings are more pronounced among funds with strong incentives to manipulate FV reporting and securities characterized by high estimation uncertainty. In conclusion, our study underscores the significance of considering the impact of auditor mindsets when formulating auditing standards.

[7] **Mutual Funds' Holding of Reverse Repurchase Agreement: Role in Liquidity Management**

- **Abstract**: This paper examines if reverse repurchase agreements function as an effective liquidity management tool for mutual funds to mitigate the adverse externalities of investor redemptions. Shareholders' withdrawal demands can trigger costly forced liquidations and erode fund performance . In response, fund managers could hoard cash buffers, access credit lines, borrow from affiliated funds within the same family, and use the redemption-in-kind approach. In addition to these strategies, fund managers may utilize liquid security holdings (e.g., Treasury securities) as collateral and borrow from their broker-dealers via reverse repurchase agreements. Following large fund outflows, I expect that funds with limited liquidity management devices are more likely to borrow from their broker-dealers. These borrowing funds exhibit less concave performance-flow relations and engage less in forced selling activities.