

Qing Liu

CONTACT INFORMATION

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RESEARCH INTERESTS

Contract Theory, Corporate Finance, Entrepreneurship, Venture Capital

EDUCATION

Boston University Questrom School of Business Boston, MA

Ph.D. candidate in the Department of Finance **2020 (expected)**

- Dissertation: “Essays in Corporate Finance”
- Committee: Lucy White, Andrea Buffa, Jerome Detemple

Washington University in St. Louis St. Louis, MO

B.A. *summa cum laude* in Mathematics, Honors Program in Statistics **2010 - 2013**

ACADEMIC EXPERIENCE

Boston University Questrom School of Business Boston, MA

Lecturer, Finance **present**

- FE 445 Investment Analysis and Portfolio Management (BSBA), 2017 Spring, 2018 Summer

Teaching Assistant, Finance **present**

- FE 449 Corporate Financial Management, 2019 Spring
- MF 731 Corporate Risk Management, 2018 Fall
- FE 445 Investment Analysis and Portfolio Management (BSBA), 2017 Fall, 2018 Spring, Fall
- MF 930 Advanced Corporate Finance (PhD), 2016 Fall
- MF 795 Stochastic Methods of Math Finance (MSMF), 2016 Fall
- MF 770 Advanced Derivatives (MSMF), 2016 Fall
- MF 794 Stochastic Optimal Control & Investment (MSMF), 2016 Spring
- MF 795 Stochastic Methods of Math Finance II (MSMF), 2014 Fall
- MF 702 Fundamentals of Finance (MSMF), 2014, 2015 Fall
- MF 796 Computational Methods of Math Finance (MSMF), 2014 Spring
- FE 829 Futures, Options and Financial Risk Management (MBA), 2014 Spring
- MF 792 Stochastic Methods of Math Finance I (MSMF), 2013 Fall
- FE 323 Financial Management (BSBA), 2013 Fall

JOB MARKET PAPER

“Optimal Financing Contracts in Venture Capital Partnerships”

This paper analyzes a business venture’s financing problem where an entrepreneur and an advisor exert complementary efforts to improve the productivity of a risky investment project under moral hazard. With verifiable contracts, it is optimal for the entrepreneur to sign contingent contracts directly with the advisor and the investors. With unverifiable contracts, the entrepreneur cannot write contingent contracts and she is constrained to employ either angel financing or venture capital financing. In the case of angel financing, the entrepreneur finds it expensive to raise money. In the case of venture capital financing, the entrepreneur contracts only with the advisor like a venture capitalist who has formed a limited partnership with the investors. In competitive capital and labor markets, the entrepreneur maximizes her expected payoff by choosing venture capital financing, which explains its prevalence in practice. The entrepreneur issues convertible preferred stocks to respond to different incentives from the venture capitalist and the investors.

— *To be presented at:*

- (1) Boston University Finance Department Brown Bag Seminar, 2019

WORKING PAPERS **“Optimal Delegated Contracting”** with Andrea Buffa and Lucy White

We investigate a setting where two agents exert complementary efforts on a principal’s project. In standard Principal-Agent theory, it is weakly better for a principal to contract directly with each agent, rather than delegating contracting. Yet in the real world, sub-contracting is very common. In the standard model, agents’ compensation contracts are public information. We show that when only the signatories to incentive contracts can observe the contents of those contracts, then delegated contracting can become optimal. With centralized contracting, each agent fears that the principal will be tempted to economize on compensation by providing the other agent with limited incentives; blunting incentives to exert effort. With delegated contracting, one agent observes the contract of the agent he hires, enhancing effort. The principal trades off the improved observability and effort from subcontracting against the loss of control and rent extraction by the hiring agent in deciding on contracting structure.

— *Presented at:*

- (1) Finance Theory Group Summer School at the Wharton School University of Pennsylvania, 2019
- (2)* The London Business School Summer Finance Symposium, UK, 2019
- (3)* The 72nd European Meeting of the Econometric Society (ESEM) at the University of Manchester, UK, 2019
- (4)* Organizational Economics Lunch at MIT Sloan of Management, 2019
- (5)* Boston University Finance Department Brown Bag Seminar, 2019
- (6)* Microeconomics Theory Lunch Workshop at Boston University Department of Economics, 2019
- (7)* Graduate Student Workshop in Contracts and Organizations at Harvard University Department of Economics, 2019

* presented by a co-author

“Optimal Contracting in a Continuous-time Principal-Agent-Subagent Model”

This paper expands the classic principal-agent model and introduces a new continuous-time principal-agent-subagent model, in which the administrative manager has interpersonal authority over the productive employee. The two optimal contracts, (i) between the investors and the manager and (ii) between the manager and the employee, are uniquely determined in subgame perfect Nash equilibrium, which equates the manager’s continuation value to her maximal profit from hiring the employee. When shirking is a more severe agency problem than stealing, the investors benefit from this three-layer hierarchy as they have limited liability, provide fewer minimum incentives, and their agency costs get mitigated. The manager, getting paid earlier, is self-motivated to supervise the employee, and it is suboptimal for them to collude in shirking. That twenty-year personnel data from a medium-sized firm shows that the agency costs are reduced when more work is conducted by hiring employees—rather than managers—lends support to my model.

— *Presented at:*

- (1) Boston University Finance Department Brown Bag Seminar, 2017
- (2) FMA Doctoral Student Consortium, Boston, USA, 2017
- (3) Auckland Finance Meeting Doctoral Symposium. Queenstown, New Zealand, 2017
- (4) AFA Ph.D. Poster Session, Philadelphia, USA, 2018
- (5) The Third Annual Young Scholars Finance Consortium at Texas A&M University Mays Business School, USA, 2018
- (6) The 18th Annual Trans-Atlantic Doctoral Conference at London Business School, UK, 2018

WORK IN PROGRESS “Multitasking Entrepreneurs”

“The Roles of Committed Capital and Stage Financing in Venture Capital Partnerships”

SEMINAR & CONFERENCE PRESENTATIONS 2019 Finance Theory Group Summer School, Boston University (Finance Brownbag)
2018 AFA (PhD Poster), Young Scholars Finance Consortium, Trans-Atlantic Doctoral Conference
2017 Auckland Finance Meeting Doctoral Symposium, FMA (Doctoral Consortium, Discussant), Boston University (Finance Brownbag)

REFEREEING *Journal of Banking and Finance, Management Science, North American Journal of Economics and Finance*

HONORS AND AWARDS Member of Beta Gamma Sigma, 2018
Award for Outstanding Teaching by a Doctoral Student, Questrom School of Business, BU, 2018
PhD Fellowship, Questrom School of Business, BU, 2013-2019
Martin Silverstein Award, Department of Mathematics, WUSTL, 2013
John A. Ferguson, Jr. Memorial Scholarship, Faculty of Arts & Sciences, WUSTL, 2011-2013

PROFESSIONAL EXPERIENCE **Bank of America Merrill Lynch** Clayton, MO
Spring Investment Analyst 2012
UBS Chesterfield, MO
Summer Client Relations Analyst 2011

WORKSHOPS The Finance Theory Group PhD Summer School, The Wharton School at The University of Pennsylvania, 2019
Structural Estimation in Corporate Finance, Ross School of Business at University of Michigan, 2017

OTHER SKILLS *Software:* C (ANCI C), Excel (VBA), Java, L^AT_EX, Mathematica, Matlab, R, SAS, Stata
Language: Chinese (native), English (fluent)

PERSONAL INFORMATION *D.O.B.:* July 7th, 1990
Gender: Female
Citizenship: China
Marital Status: Single

REFERENCES **Lucy White** **Andrea Buffa**
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Morton H. and Charlotte Friedman Professor of Management
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