Personal Information

Name: Ziqian Liu

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School: Foster School of Business, University of Washington

Area of Interest: Entrepreneurial Finance, Innovation Dynamics, Contract Theory, Corporate Finance

Year of Entry: 2024

Expected Year of Completion: 2029

Recommender: Mark M. Westerfield

Ziqian Liu

zliu17@uw.edu

EDUCATION

Foster School of Business, University of Washington 2024 -
Ph.D. in Finance & Business Economics, Advisor: Mark M. Westerfield
Peking University 2020 - 2024
B.A. in Economics

RESEARCH INTERESTS

Entrepreneurial Finance, Innovation Dynamics, Contract Theory, Corporate Finance

FIRST-YEAR PAPER

Exploration under Financial Constraints in a Principal-Agent Problem

WORKING PAPER

The Effect of House Prices on Fertility: Evidence from House Purchase Restrictions (with Yu Zhang)
AMES 2024 Ho Chih Minh, CCER Summer Institute 2024, CEIBS Economics Symposium 2024, China Economic Summer Institute 2024, the 2nd Summer Meeting in Urban Economics, The CES Meeting at ASSA 2025, ABFER 2025, CICM 2025, PHBS-IER Conference 2025

RESEARCH EXPERIENCE

Research Assistant for Professor Stephan Siegel, University of Washington 2025 -
Research Assistant for Professor Xu Lu, University of Washington 2025 - 2026
Research Assistant for Professor Yu Yang, Peking University 2022 - 2023
Research Assistant for Professor Juanjuan Meng, Peking University 2022 - 2023

COMPLETED & PLANNED PHD COURSES

Microeconomic Analysis I, II, III; Econometrics I, II, III; Macroeconomic Analysis I, II, III; Theoretical Asset Pricing; Theoretical Corporate Finance; Empirical Asset Pricing; Empirical Corporate Finance; Empirical Methods in Finance; Advanced Topics in Finance; Dynamic Choice Models and Counterfactual Reasoning; Contract Theory; Advanced Stochastic Processes I, II

HONORS, SCHOLARSHIPS AND FELLOWSHIPS

Michael G. Foster Student First fellowship, University of Washington 2025 - 2026
Top Scholar Award, University of Washington 2024 - 2025
Outstanding Graduate, Peking University 2023 - 2024
Leo KoGuan Scholarship, Peking University 2022 - 2023

SKILLS

Software: STATA, Python, MATLAB, R, LaTeX
Languages: English (Proficient), Chinese (Native)

Research Statement

My research interest lies in innovation dynamics. As exemplified by my first-year paper, my current research studies how financial constraints shape firms' incentives to explore productivity-enhancing innovations. Based on DeMarzo and Sannikov (2006), I build a continuous-time principal-agent model and derive the optimal innovation contract for financially constrained firms. In this work, I show that firms forgo innovation opportunities until the agent's continuation wealth exceeds a threshold. Furthermore, the finding highlights that near the threshold, the principal is paying more than is required to incentivize the agent. I also find that innovative activity is procyclical. In the optimal contract, principal is endogenously risk averse and shifts risk of innovation to the agent through risk payment. Risk-sharing behavior arises endogenously as the optimal response in this problem to insure principal against innovation shock, which, unlike in the existing literature, enhances rather than destroys firm value. This study provides a dynamic foundation for understanding entrepreneurial innovation decisions under financial frictions and naturally motivates the study of how venture capitalists screen new projects.

Building on this work, my future research plan is to study venture capital investment strategies and the role of venture capital in startup financing. In particular, I want to know how venture capital firms allocate resources between exploring new projects and exploiting existing portfolio companies, and how their information gathering activities shape the financing and governance process of startups.

In the first project, I plan to study how venture capital GPs allocate capital between continuing existing portfolio investments and screening and experimenting with new projects. I will develop a dynamic contract theory model in which experimentation generates private information for GPs, while costs are borne by LPs. I aim to show how this information asymmetry distorts capital allocation and the timing of experimentation, highlighting a dynamic principal-agent problem with double layered trade-offs. In the second project, I plan to examine whether venture capital financing is more beneficial for startups than alternative funding sources. I will analyze how VCs' information-gathering role improves startup value, while their weaker knowledge of firm-specific mission and technology may lead to inefficient control allocation. I want to find out the conditions under which VC control enhances startup value.

The NBER Entrepreneurship Research Boot Camp will be valuable for me to refine my research projects and to position them at the frontier of entrepreneurial finance. I am eager to deepen my understanding of empirical work in this field and to engage closely with leading studies to broaden my perspective. I would greatly benefit from exposure to recent work, high-quality lectures, and feedback from faculty and fellow participants working in entrepreneurial finance.

Mark M. Westerfield
Michael G. Foster Endowed Professor
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Foster School of Business
UNIVERSITY of WASHINGTON

February 2026

To the Selection Committee,

It is my great pleasure to write a letter of recommendation for **Ziqian Liu**, a second-year PhD student in Finance at the Foster School of Business. I am her primary advisor, and I've engaged with her as a supervisor for her first-year paper, as well as in class and out-of-class activities like reading groups. Ziqian is an extremely strong student; while it is early in the program, she is on par with the best students Foster has produced in the last decade or more.

Ziqian's first-year paper used the DeMarzo and Sannikov (2006) agency model as a framework for financial constraints and then asked how those constraints interact with innovation intensity and funding. She was able to show that the firm's marginal value of financial slack is higher after innovation than before, precisely when innovation has the potential to deliver the most value. In that case, the firm takes excessive risk – more than it needs to incentivize innovation – to prioritize post-innovation slack, and this prediction has direct implications for how startups manage risk around breakthroughs. The result was surprising because her prior going in was that the firm would value extra innovation runway, but the reverse was true.

Her paper illustrates her strengths as a student-researcher. First, she was able to capture a valuable intuition in a relatively simple setting. Second, she was able to work through and solve a dynamic agency model in the summer of her first year. Neither of these accomplishments is common in first-year students. Ziqian is self-directed, creative, and methodical, and it shows in her results.

I have also taught Ziqian in my Theory of Corporate Finance class, and she joined my reading group on Dynamic Corporate Finance. The reading group acts almost as a class: students are expected to read and prepare papers for a detailed discussion with the group every two or three weeks and to participate in everyone else's discussions. In both activities, she has been actively engaged, trying to extract as much value from each one. In addition, she has taken more than the required number of classes to get exposure to more ideas and techniques, and

her grades under her higher course load have been excellent, the highest in her cohort. More generally, Ziqian has a tremendous capacity for high-quality work.

Ziqian's core research interest is the financing of innovation: how financial frictions shape which ventures get funded, how much risk they take, and how productively they innovate. Her first-year paper is a first step in this agenda, and we have talked through extending it in both theoretical and empirical directions. The Boot Camp would expose her to the entrepreneurship literature and to researchers approaching these questions from complementary angles, which is valuable precisely because her dissertation agenda is taking shape now. She is temperamentally and academically suited to be a researcher: self-directed, resourceful, and rigorous. I believe she will be an excellent fit for the program.

I recommend Ziqian without reservation. Please do not hesitate to contact me if I can provide any additional information.

Yours sincerely,



Mark Westerfield