USC Marshall
School of Business

Finance +Business Economics Department
Marshall School of Business
University of Southern California
3670 Trousdale Parkway
Los Angeles, California 90089

Dear Members of the Recruiting Committee,

I am writing to apply for the NBER Entrepreneurship Research Boot Camp 2023.

I am in the first year of the Ph.D. program in Finance at USC Marshall School of Business. Before coming to Marshall, I ran my own company for years after completing the research-based MSc in Finance program at the University of British Columbia.

I have enclosed my curriculum vitae and application essay. A reference letter from Professor Anthony M. Marino has already been sent in a separate email. His contact information is as follows.

Professor Anthony M. Marino, Department of Finance and Business Economics
Marshall School of Business, University of Southern California,
701 Exposition Blvd, HOH Ste. 231, Los Angeles, CA 90089-1422
Tel: 213-740-6525
E-mail: amarino@usc.edu

Please do not hesitate to contact me if there is any additional information that I can provide. Thank you for your time and consideration. I look forward to your response.

Sincerely yours,

Yanjun Liu
Phone: +1 (310) 339-7023
Email: yliu6402@marshall.usc.edu
Website: https://www.marshall.usc.edu/personnel/yanjun-liu

Yanjun Liu

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EDUCATION AND AWARDS

The University of Southern California

Ph.D. in Finance, Marshall School of Business **Los Angeles, 2022 – Present**

- Finished PhD Courses: Advanced Microeconomics (A), Advanced Econometrics (A-), Debt Contracting (A)
- Course in Progress: Empirical Industrial Organization, Corporate Finance, Asset Pricing

The University of British Columbia

Master of Science in Finance, Sauder School of Business **Vancouver, 2015**

- PhD Finance Courses: Theoretical Asset Pricing (94%), Theoretical Corporate Finance (88%), General Equilibrium Modelling (89%), Theory of Finance (88%), Empirical Corporate Finance (85%), Empirical Asset Pricing (85%)
- Advanced Economics Courses: Microeconomics (99%), Econometrics (95%), Macroeconomics (85%)

Central University of Finance and Economics

Bachelor of Economics, Public Finance - GPA: 94.5/100, Ranked 1st **Beijing, 2012**

- Awarded National Scholarship (2009 & 2011, Top 2%) and Beijing Municipal Graduate (2012, Top 1%)

Harvard University Summer Exchange Program in Finance **Cambridge, 2012**

- Summer Exchange Program in Finance GPA: 95/100

Chartered Financial Analyst (CFA) **CFA Institute, 2022**

RESEARCH PROJECTS

• The hierarchy of debt financing in small business (2022)

- This study tries to empirically understand how small businesses make decisions across various debt contracts available while considering supply-side effects of credit by utilizing a dataset of loans made to SMEs.

• Intermediary Asset Pricing (2015)

- This study deems the financial intermediaries as marginal investors instead of the household to defend the crucial role financial intermediaries played in financial crisis. Using the characteristics of intermediaries, such as CDS spreads and leverage, we empirically explains the risk premium of individual stocks and Fama-French 25 portfolios.

• The Cyclical Feature of Agency Cost of Debt Overhang (2014)

- This study employs a theoretical dynamic partial equilibrium model in which firms simultaneously make investment and financing decisions to numerically measure the severity of the firm's underinvestment during booms and recessions. The results demonstrate that the severity of debt overhang is countercyclical and higher during recessions, thereby further aggravating the recession. This effect is more severe for firms with more cyclical assets in place and growth options.

ENTREPRENEUR EXPERIENCE

Look4 Education **Sep 2014–Present**

Cofounder & Partner **Vancouver**

- Cofounded the tutoring business, which now has annual revenue of $2M, with a 50% market share in Vancouver Universities and more than 100 full-time and part-time tutors

Yicheng Education Consulting **May 2020–Apr 2021**

Partner & COO **Ningbo**

- Collaborated with MIT Scale – Ningbo Innovation center and Ningbo University to provide local study options for international students during Covid Period

PROFESSIONAL EXPERIENCE

DouglaX Capital Group **Aug 2016–Apr 2020**

Senior Associate, Corporate Finance and Capital Market **Vancouver**

- Led the implementation of the entry strategy into India and carried out due diligence during the land acquisition process
- Planned the optimal holding structure of the group for tax and capitalization purposes
- Led the Group fund incorporation process in Cayman Island and Bermuda

HSBC Global Asset Management **Mar 2016–Jul 2016**

Portfolio Administrator **Vancouver**

- Improved procedure efficiency by implementing automatic computations and reconciliations

Yanjun Liu

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Application Essay - NBER Entrepreneurship Research Boot Camp 2023

Prior to pursuing my Ph.D., I worked as an entrepreneur. This experience has intrigued my interest in understanding the factors that either facilitate or impede the growth of small businesses.

I am currently engaged in projects aimed at gaining a better understanding of how small businesses make decisions about various debt contracts. To do this, I am utilizing a dataset of loans made to SMEs. In contrast to public firms, which have access to a wider variety of financing options such as seasonal equity offerings and bond issuance, small businesses tend to rely heavily on bank lending (Robb and Robinson, 2014). As a result, small businesses face the challenge of choosing between different debt contracts. For example, a line of credit offers flexibility but can be costly if drawn upon during times of rising interest rates. On the other hand, a secured term loan could require collateral from the entrepreneur's own wealth, removing the limited liability protection. Empirically, it is challenging to control for supply-side effects such as how creditors perceive the extent of information asymmetry and moral hazard when granting these contracts. I am in search of designs that can assist me in tackling this challenge. My primary objective is to gain an understanding of the factors that influence the selection of various debt contracts and to investigate whether the adoption of different contracts has an impact on the future growth of small businesses.

In addition to my specific research on debt contracts, I am also interested in exploring how monetary policy impacts the growth of small businesses at a more general level. Despite the significant economic growth of the past few decades and historic lows in interest rates, there has been a growing gap in the size of businesses and the wealth of different social classes in the United States (Cagetti and De Nardi, 2008). Based on my own experience and observations, I suspect that expansionary policies do not benefit small businesses as much as they do large firms. One possible explanation, which aligns with the efficient market hypothesis, is that small businesses may already have a fragile capital structure and too much leverage to take advantage of expansionary policies. Alternatively, monetary policy may distort capital allocation. It is well-documented that in a low-interest rate environment, investors seek higher yields and avoid low-return assets such as bank deposits. This can result in severe deposit outflows and lead to a contraction of bank

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lending, which is the primary financing source for small businesses (Drechsler, Savov, and Schnabl, 2017). Assuming that monetary policy affects the funding supply to small businesses but not their funding demand, a shortage of funding to small businesses is more likely to create inefficiencies in which profitable projects are not adequately financed.

My hypothesis regarding the impact of monetary policy on businesses of different sizes has implications for inequality as well. Specifically, if low-interest rates primarily benefit large corporations and the wealthy, expansionary policies could result in concentrated markets and the widening of wealth inequality. These are the areas that I would like to explore further in the context of small business and entrepreneur finance.

I am excited about the opportunity to engage with and draw inspiration from leading researchers in the field of entrepreneur finance. For instance, the work of Professor Nicholas Bloom, who has explored how the rise in within-firm inequality, especially in mega-firms, contributes to the rise in overall earnings inequality, has led me to ponder whether financial markets may play a role in shaping the payment discrepancies between large and small firms, particularly in terms of differences in valuation and liquidity of their securities. Similarly, Professor Antoinette Schoar's research on the correlation between small business revenue loss and the decline in consumption among business owners has also been motivating. I am interested in exploring how the heterogeneity in investment opportunities and technology adaptability among various entrepreneur businesses may contribute to this correlation.

In addition, I am eager to engage with participants from diverse backgrounds and explore potential opportunities for future collaboration with those who share similar research interests in the boot camp. I wish to share my own experiences with the group.

Thank you very much for considering my application.

USC University of Southern California

Finance and Business Economics
Marshall School of Business
Professor Anthony M. Marino

February 13, 2023

Dear Professor Maranjian,

I am writing this letter in support of Yanjun Liu who is applying for the NBER Entrepreneurship Research Boot Camp 2023. Yanjun was a student in my microeconomic theory class last semester. The class is a first year PhD course in microeconomics taken by all Marshall PhD students. It is a very demanding and competitive course, and Yanjun was one of my top students. She is creative and has a high level of technical skill as well as a keen economic intuition. I found her to be both highly motivated and hard working. I believe that her critical thinking skills would make her an asset to your program.

In my opinion, she is a perfect candidate for admission. It is with pleasure that I fully support her application.

Sincerely,

Anthony M. Marino

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