Diane Danying Fu

Ph.D. Student in Finance

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Mar 25, 2021

National Bureau of Economic Research
1050 Massachusetts Ave, Cambridge, MA 02138

Dear Sir/Madam,

I am writing to apply for the 14th Entrepreneurship Research Boot Camp (ERBC) that will be held by the NBER in this August. Under the supervision of Professors Tim Jenkinson and Thomas Noe, I am a 4th year Ph.D. student at Said Business School, University of Oxford, and my research focus on Entrepreneurial Finance. I believe my research interests and professional expertise aligns closely with expected qualifications of a suitable attendee of ERBC.

My research interests lie in Entrepreneurial Finance. My current research looks at the financial contracting between entrepreneurs and investors, and how the rights distribution between these two parties can be affected by the performance of the investee ventures and by the qualities of entrepreneurs and investors. This research project has won the Kenan Institute Frontiers of Entrepreneurship Research Grant 2019 and the primary result of it was presented in the Ph.D. Poster session of the American Finance Association Annual Meeting 2020. Another research project that I am currently conducting explores the valuation gap between the common stock and preferred stocks issued by the same new ventures and how this gap varies over different stages of issuing ventures. I also plan to study the corporate governance issue of start-ups, specifically, the contracting between entrepreneurs and employees. The detailed description of these three projects is provided in the enclosed Essay 'Why do I want to attend the Entrepreneurship Research Boot Camp?'.

I have a good understanding of the financing ecosystem of new ventures. Prior to my Ph.D. journey, I got operational experience of start-ups by working closely with entrepreneurs in two start-ups. Besides, I have over three years of work experience in financial market trading, business control, and tax consultation. Also, my work experience with a UK lobby group as an economy policy researcher allows me to learn about the effectiveness of policy interventions in stimulating investment in private companies.

I have enclosed my curriculum vitae, which details my qualifications for your reference. My Ph.D. supervisor and co-author Professor Tim Jenkinson has agreed to provide the reference letter to support my application, and the letter has been sent to Mr. Brett Maranjian separately. Thank you for your consideration!

Faithfully,

Diane Fu

Diane Danying FU

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EDUCATION

2017-Present Ph.D. in Finance, Said Business School, University of Oxford
Research Interest: Entrepreneurial Finance, Corporate Governance
Supervised by Tim Jenkinson and Thomas Noe
***Ph.D. Courses Completed**:*
Microeconomics; Financial Economics; Behavioural Economics; Public Economics

2013-2015 M.Sc. in Statistics, National University of Singapore

2007-2011 B.A. in Finance, Guangdong University of Foreign Studies

RESEARCH

Current Working Paper

- Danying Fu, Tim Jenkinson and Christian Rauch (2021), "How do Financial Contracts Evolve for New Ventures".
- Danying Fu (2021), "Your Value, My Terms".

Conference Presentation
AFA 2020 San Diego Ph.D. Student Poster Session

Research Grant
The Kenan Institute Frontiers of Entrepreneurship Research Grant 2019

PROFESSIONAL EXPERIENCE

2021 Economic Policy Researcher (Intern), Confederation of British Industry, UK
Conduct analysis and draft research briefings primarily on:
- The role business investment in the UK's economic recovery;
- The effectiveness of venture capital tax incentives

2015-2016 Tax Associate, Deloitte & Touche LLP, Singapore
Delivered VAT tax compliance, audit, and advisory services to clients.

2015 Business Control Intern, Tetra Pak Jurong Entity Pte Ltd, Singapore
Supported the business control team in cost data analysis.

2014-2015 Intern, Haku Pte Ltd, Singapore
Assisted the start-up in building up its internal control system.

2014-2015 Intern, BDO Singapore LLP, Singapore
Assisted the tax team in providing tax compliance services to clients.

2012-2013 Analyst, China International Futures Co. Ltd, Guangzhou, PRC

2011-2012 Founding officer, Alexander Hunt International Limited, Guangzhou, PRC

Why do I want to attend the Entrepreneurship Research Boot Camp?

Diane Danying Fu
Saïd Business School, University of Oxford

I would like to attend the boot camp as I can see this is a great opportunity to learn thoroughly about the leading research topics in Entrepreneurial Finance-the research area I am focusing on, to obtain professional mentoring from experienced researchers in this area, and to get to know other Ph.D. students or young researchers who are also interested in doing research in Entrepreneurship. I am confident that I have the desired qualifications for an attendee of the Research Boot Camp.

I am a 4th year Ph.D. student at Said Business School, University of Oxford. My research focus on Entrepreneurial Finance, specifically financial contracting between entrepreneurs and investors, the valuation of start-ups and the corporate governance of VC-backed start-ups. What makes me different from a typical Ph.D. candidate is that I have operations experience with two start-ups. The challenges start-ups are facing in finding external capital has been the spark of motivation for me to study the financing options for start-up companies.

I have been actively maintaining connections with both entrepreneurs of high-tech companies and practitioners in the private capital industry and have been working with a lobby group in UK, as an economy policy researcher, on their campaign for more generous supports to private investment in SMEs. These unique industrial experience enables me to have a good understanding of the financing ecosystem faced by private ventures, to better pin down the research projects that may have a big impact in the industry and to efficiently find out the data sources that can facilitate such research.

The data analysis and modelling skills obtained by pursuing the Master degree in Statistics and legal reading skills trained by working as a tax consultant further allow me to derive efficiently important patterns out of both hard and soft data. Meanwhile, I am also a hobbyist artist who turns to think out of the box and can tackle a complicated situation creatively, which I believe is an important quality of a good researcher.

My current research explores the rights distribution among the entrepreneur and investors of different classes of stock, and its impact on the valuation and outcome of the investee ventures. Making use of raw data extracted from legal filings, I have built an extensive data set of

financial terms applying to common and preferred stock over the life of the randomly selected U.S. new ventures. The paper 'How Do Financial Contracts Evolve for New Ventures?[1]', which is co-authored with my supervisor Tim Jenkinson and Christian Rauch at American University of Sharjah, is the first paper that identifies the 'default contract' adopted by start-ups in Series A and by using an innovatively 3-direction classification, it tracks how contractual terms evolve over funding rounds. It won the Kenan Institute Frontiers of Entrepreneurship Research Grant 2019 and its first draft has been presented in the AFA 2020 Ph.D. student poster session.

In my second research project, I compile this data set with manual collected common stock value of these companies to analyse how the values attached to contractual rights granted to investors vary over time. I then further examine how the value of preferred and common stock differs and then estimate the extent to which headline valuations of new ventures are over-stated. The first draft of this paper 'Your Value, My Terms' is expected to be finished this Summer.

A project I plan to conduct looks at the contracting between new ventures and employees, and how this may have an influence on the new ventures' financing and performance. I am currently writing the research proposal for this project and have found the potential data providers.

Another research project to be undertaken studies whether there is a systematic difference between PE funds' the expected rate of return and the realized rate of rate, and examines the potential factors that contribute to this gap. This will be a co-authored paper with Professor Tim Jenkinson, and we have already found the data sources for this project.

All the experience, skill sets, and research interests mentioned above have prepared me well for this intensive research boot camp organised by NBER. I believe this boot camp would help improve my skills and qualities to conduct high-quality research in Entrepreneurial Finance, and I have confidence that I would be a positive addition to this workshop.

[1] The most recent version of this paper can be found at http://ssrn.com/abstract=3512304.

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Tim Jenkinson
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25 March 2021

Danying Fu

It is my pleasure to write in support of Danying (Diane) Fu's application for the Entrepreneurship Research Boot Camp.

Diane is a PhD student at University of Oxford, working on the funding of start-up businesses. I am her university supervisor (her co-supervisor is Thomas Noe). Her work is investigating the terms that are offered by venture capitalists to entrepreneurs, and how these evolve over multiple funding rounds. She finds that there is surprisingly little heterogeneity in the initial (Series A) financing, and then tracks the terms for the subsequent funding founds and how the terms on the earlier rounds are re-negotiated (if at all) when new financing is raised. So, in a sense, she takes the original analysis by Kaplan and Stromberg (which derived the contracts from VC firms, but those VC firms might only participate for a round or two) and analyses how contracts evolve over the entire funding life-cycle of early stage ventures.

By gathering data meticulously from legal documents, merging these with lots of human characteristics of the founders and funders, she is producing some really interesting research on the nature, determinants and dynamics of venture capital funding. She has already produced some preliminary results based on a sample of about 170 companies, but considerable additional data gathering is required, along with econometric analysis of the various hypotheses. The more descriptive results are already available on SSRN. To give a flavor of the types of issue she is considering, she looks at the extent to which the most prestigious venture capitalists negotiated harder, or softer, deals with entrepreneurs, how investor network impact on re-negotiation (or subordination of earlier investors) and the extent to which the terms of the initial funding are correlated with successful outcomes. One interesting implication of the findings so far is that contracts differ less than might be anticipated over funding rounds, and so, for successful ventures where there is little doubt that holders of convertible preferred equity will choose to convert into common stock, the headline valuations of companies from post-money valuations at later funding rounds may well be reasonably accurate (in contrast to the analysis of Strebulaev and Gornall, who questioned whether many unicorns deserved their status as $1bn + companies).

She would gain a lot from participating in the Boot Camp (I have a feel for the types of students and what they study, as I spoke at it some years ago). She has had some exposure to other students working in the area (for instance, she had a poster session at the 2020 AFA, before the world locked-down) but as she approaches the end of her PhD she could do with a bit more interaction with the profession (which has, of course, been a problem for all our students). One important thing she could contribute is a really deep understanding of the data that is available from the various sources for early stage financing – including the strengths and limitations of sources like VC Experts, Certificates of Incorporation, Crunchbase, SEC filings (e.g. Form D), Pitchbook etc. The data efforts that lay behind her dissertation are extensive and she often surprises me with informed commentary on the limitations of particular sources that are widely used in the profession.

Diane is an excellent student, who is creative and hardworking. She would gain a lot from participating in the Bootcamp, and would throw herself into it. I hope you can find space for her.

I hope this is helpful. If you would like to discuss anything on the phone, please do not hesitate to call.

Best regards

