Xiao Yin
4 Kenmore Ct.
Orinda, CA 94563
773-383-2442
yinxiao@berkeley.edu

November 26, 2019

Dear review panel:

I am writing to apply for the National Bureau of Economic Research's Behavioral Macroeconomics Research Boot Camp. With my academic experience and my research interests at the intersection of macroeconomics, financial intermediaries, and behavioral economics, I believe that I will be a perfect fit for the research boot camp.

I am a second-year PhD student in finance at the Haas School of Business, the University of California, Berkeley, where I have completed PhD courses in microeconomics, macroeconomics, econometrics, corporate finance, asset pricing, and behavioral economics. Concurrently, I am engaged in several research projects related to individuals' financial and consumption decisions when there is asymmetric information or consumers have a limited ability to fully process the publicly available information. Both my academic and research experience prepare me well for the research boot camp.

Professor Michael Weber from the Booth School of Business at the University of Chicago is my recommendation letter writer.

Thank you for your time and consideration of my application for your boot camp.

Regards,
Xiao Yin

Xiao Yin

Email : yinxiao@berkeley.edu
Mobile : +1-773-383-2442

Education

- **University of California, Berkeley** — Berkeley, CA
  Haas School of Business — *Aug 2018 -*
  Ph.D. in Finance

- **University of Washington** — Seattle, WA
  B.S. in Economics, Statistics — *Jun 2016*

Experience

- **Research Professional** — Chicago, IL
  Booth School of Business, University of Chicago — *Jul 2016 - Jun 2018*
  - Assistant to Professor Lars Peter Hansen, Zhiguo He, Bryan Kelly, Margarita Tsoutsoura, and Michael Weber.
  - Collaborated to build and manage a SQL database containing various datasets.
  - Conducted the selection process for CNBC's Local and Asian Business Leader Award 2017.

- **Research Assistant** — Seattle, WA
  Professor Eric Zivot, University of Washington — *Aug 2015 - Jun 2016*
  - Literature review regarding to multivariate GARCH and realized covariance.
  - Assisted the revision of the textbook Modeling Financial Time Series with R.

- **Research Assistant** — Cambridge, MA
  Professor Melissa Dell, Harvard University — *Jun 2015 - Aug 2015*
  - Preliminary data visualization including cleaning data, plotting maps, analyzing variable dynamics, and researching for related events to support abnormal changes in the data.

- **Assistant Investment Analyst** — Shanghai, China
  Central China Security — *Jul 2013 to Sept 2013*
  - Researched for newly published policies by the State Council of China, summarized the developing areas that the Chinese government would focus on in the future, and gave investment suggestions correspondingly.

PhD Classes Taken and in Progress

- **Economics**
  Economic Theory A&B, Macroeconomic Theory A&B, Econometrics A&B, Applied Econometrics, Foundation of Psychology and Economics.

- **Finance**
  Corporate Finance, Market Microstructure, Asset Pricing Theory, Financial Econometrics.

- **Statistics**
  Stochastic Modeling I & II, Theory in Linear Models.

Work in Progress

- **Labor Force Composition and Secular Disinflation**
  with Benjamin Schoefer and Michael Weber

- **More Competitors Make More Profitable Firms**

Academic Visits

- **Bank of Communications** — Shanghai/Zhengzhou, China, *Summer 2019*
- **Shanghai Pudong Development Bank** — Zhengzhou, China, *Summer 2019*

Skills

- Python, Stata, SAS, Mathematica, R, Matlab, SQL, Julia, Java.

The benchmark theories in economics usually assume that people make rational decisions by optimally possessing all information publicly available. From time to time, however, individuals act in a behavioral manner due to constrained abilities or act according to preferences for non-pecuniary factors. Incorporating such aspects in the benchmark economic theories could generate more accurate policy suggestions. I'm fascinated by considering both the rational and behavioral motives of agents and analyzing how the relative weights of those two components affect the macro economy. My research agenda lies in combining expectation and economic decision data at the micro-level to answer questions in the intersection of macroeconomics, financial intermediaries, and behavioral economics, and use RCTs or structural methods to provide empirical evidence. This approach will allow me to quantify behavioral and rational choices of economic agents in real-life settings.

Recently, I am working on a project with one of the largest commercial banks in China. We are trying to extract data related to credit card limit changes and the asymmetric effects of credit limit changes on consumers' total consumption. With these data, I have found that after being offered a credit limit increase, those who did not accept the offer increased their total consumption anyway, from both credit cards and checking and saving accounts. This finding shed light on a signal channel of relaxing credit constraints to the household sector and individuals' demand for commitment devices. In the coming months, the bank will send out a series of surveys, the results of which will enable me to combine consumers' bank balance and transaction data with survey data to analyze both individuals' expectations and economic behaviors.

I am also working on a project examining how increasing product variety could make firms with larger market power gain even more market power. The intuition is straightforward. As the number of products in a market increases, it becomes too costly for consumers to perform a detailed search for all products. Hence, consumers need to rely on a less costly way to infer the product properties. Suppose for all goods the consumers purchased they have a probability to leave a piece of information that results in reducing future consumers' uncertainty regarding to the products' attributes. Then the products with higher past sales will in general achieve a greater number of reviews. In equilibrium, the expected level of quality might be revealed both through searching and from reviews. However, if consumers dislike uncertainty about the products' all kinds of properties, then the number of reviews that decreases the uncertainty of the products'

attributes could increase consumers' demand. Firms with higher past sales, armed with this fact, can charge a higher price without incurring more marginal costs, and thus enjoy higher markups.

The content of the behavioral macroeconomics boot camp relates closely to my research agenda. The boot camp would help me greatly in synthesizing both the mechanisms and techniques in the current literature about how behavioral settings could generate sizeable systematic effects on the macro level. Meanwhile, learning from experienced senior researchers would provide me with important caveats about how to efficiently identify the dominant channels that induce certain phenomena, and how to execute a well-designed research strategy to develop a comprehensive narrative in an actionable manner. With my experience in the non-academia sector, I believe I could not only take in the information from this boot camp but also combine the knowledge with what I observe in the field to create a new perspective related to behavioral macroeconomics.

The University of Chicago
Booth School of Business
5807 South Woodlawn Avenue
Chicago, Illinois 60637
Tel 773.702.1241
michael.weber@ChicagoBooth.edu
http://faculty.chicagobooth.edu/michael.weber

Michael Weber
Associate Professor of Finance
Fama Faculty Fellow

December 2, 2019

Dear Sir/Madam,

I am writing this letter to **enthusiastically support** the application of Mr. Xiao Yin. I have known Xiao since July 2016 when he started working as my research assistant for a paper on nonparametric asset pricing models. At that time, I did not realize how lucky I was. By any metric, Xiao is the best research assistant I have ever had. His energy is enormous, his work ethic is unparalleled, his creativity is terrific, and he has excellent communication skills. In addition, he is not afraid to take initiative, and he has a sea of optimism and positive attitude.

Xiao had helped me to replicate and code up a few firm characteristics in SAS mainly using CRSP and Compustat data for my paper with Freyberger and Neuhierl which is now published in the *Review of Financial Studies*. It was, however, not until I started a new project studying the signaling component of dividends that I fully started to appreciate his enormous work ethic, determination to learn new methods and software programs, and incredible proactivity. In a classic review paper, DeAngelo et al (2009) summarize the empirical evidence on signaling models as follows: "We conclude that managerial signaling motives [...] have at best minor influence on payout policy." In this project with Michaely and Rossi, who is R&R at the *Journal of Financial Economics* we argue dividends do indeed signal, but not the level but the volatility of future cash flows. To empirically test the model predictions, we use the classic VAR return decomposition from Campbell (1991), and applied at the firm level by Vuolteenaho (2002). Xiao was key at each step of the project: from developing the model, to first replicating Vuolteenaho (2002), and then suggesting additional tests to run. I was most impressed by his independent work mentality.

His success in this project underscores the diversity of his interests and versatility of his skill set. Very, very few people at his stage have anything like that.

Xiao is currently at PhD student in Finance at the Haas School of Business at UC Berkeley. His interests lie at the intersection of behavioral finance and macro. After starting at Berkeley, I have stayed in touch with him on a regular basis and we met twice in person afterwards, once during a visit of mine in Berkeley and once in Chicago. Xiao is very creative and easily comes up with new, promising research ideas.

In a current project, he aims to contribute to the literature on the consumption response to the extension of credit. In times of economic downturn, monetary and fiscal policy aim to stimulate consumption through credit, because household consumption comprises the largest share of gross domestic product. At the same time, though, household credit growth has been a major and often unforeseen driver of financial crises. Identifying the micro-level channels through which household credit affects consumption and saving decisions is thus important to understand the dynamics of business cycles as well as to inform the design of effective credit-based expansionary policies.

He adds to the literature by exploiting both increases and decreases in credit limits and causally linking it to consumption decisions. A novel feature of the data is that he can also observe bank customers that are offered increases in credit lines but refuse to accept them. Also for these individuals, Xiao documents a large increase in consumption despite the fact that the credit limit does not change. Given the high degree of income uncertainty and volatility in his setting, it's plausible that consumers interpret the offer of a credit line increase as a signal about their permanent income. The crucial innovation in his work is the ability to run surveys on the sample of individuals to study the information effects of offered increases in credit limits on individual expectations, perceptions and choice, which so far has never been studied before. I am convinced his paper will make an important contribution to several literatures.

In summary, I believe that Xiao has a very brilliant future as an academic. He was among the best students in Chicago. His research potential and creativity are outstanding. I believe that he will shine in academia. Xiao has my **strongest possible** recommendation.

Please do not hesitate to contact me if you have any questions.



Michael Weber