Brett Maranjian
NBER Conference Department
National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138-5398

March 29, 2015

Dear application reviewers,

My name is Alan Kwan, and I am a third-year finance doctoral student at the Samuel Curtis Johnson School of Management at Cornell University. My adviser is Andrew Karolyi, a Professor of finance at The Johnson School, and among numerous other professional distinctions the Executive Editor of the Review of Financial Studies.

I am writing to apply for the 2015 NBER Summer Entrepreneurship Research Boot Camp. In this packet, I have enclosed all of the requested application materials, including a curriculum vitae, an adviser recommendation, and an essay detailing my research program and interests.

Please let me know if there is anything I can do to help the application reviewers in evaluating my candidacy. I hope that you'll find my enthusiasm for entrepreneurship and innovation topics, demonstrated interest in research, and capacity to gain a lot from this program, makes me an attractive candidate for admission.

Sincerely,

Alan Kwan

Contact information:
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301 Sage Hall
Ithaca, NY 14850

Statement of Purpose Research Interests:

I am a third year PhD student in finance at Cornell's SC Johnson School of Management. My research interests lie in company finance – both at the corporate and entrepreneurial level – and behavioral and household finance. Although my research currently does not encompass entrepreneurial finance and innovation, I want to eventually make a pivot into this space.

I will begin by describing my current research portfolio. My second year paper contributes to the field of behavioral finance and explores the information content of a large financial social media platform. I document that posters on this platform – many of whom are publically identifiable finance professionals – negatively predict future returns. My findings further suggest that posters overreact to recent news and price movements, suggesting that social media potentially captures naïve investor reaction. The next step to my research follows the spirit of Baker and Wurgler (2006), in that I will propose an unprecedentedly precise way of measuring investor sentiment and show its implications for predicting stock returns, volatility and liquidity.

My current works-in-progress involve both social media and general topics in corporate finance. In social media, I have a co-authored project exploring the information content from tweets made by firm employees. In corporate finance, I have a few projects underway. For example, with two Cornell professors, I explore real asset allocation policies of firms with large capital assets, using novel firm-level evidence from the shipping industry. Also, pending the result oflate-stage microdata requests from startup companies and government agencies, I have a few projects exploring the role of financial constraints on corporate product market decisions, as well as the role of financial literacy on household investment decisions.

I have loved my research program so far, but doing research on innovation and entrepreneurship literatures means a significant change of course. The *NBER Entrepreneurship Research Boot Camp* strikes me as an incredible opportunity jump to the forefront of these issues.

I first discovered my interest in this area through a doctoral seminar taught by Dr. Murillo Campello. Dr. Campello gave us several opportunities to read frontier empirical corporate finance literature and present a literature review to the class. I latched onto innovation for this project – I found myself most curious and proactive reading papers that studied patent productivity by corporations or venture capital. Since that taking that course, some of my favorite workshops were in this topic area, given by such individuals as Josh Lerner, Shai Bernstein and Sabrina Howell.

In addition to stoking curiosity, I contend this area of research supports a first order policy agenda. As the United States continues its transition toward a service economy, innovation is vital for keeping America's competitive advantage and raising living standards. Entrepreneurial finance and innovation, in my view, involves a complex set of interactions between startup companies, large corporations and a variety of competing financial intermediaries. At the corporate level, Matrey and Thesmar (2015), for example, show that firms with high R&D capital stocks better withstand competitive shocks from Chinese firms. They show that R&D tax credits at the state level were crucial in establishing this advantage. Many suggest the rising cash holdings of American corporations are in large part due to the need to finance internal R&D projects which are hard to contract on, or because of the need to acquire innovative startups.

Entrepreneurs who need financing face significant project-finance frictions. Mann (2014) and Hochberg et al (2014) show that strengthened patent rights and liquidity provision by non-practicing entities alleviate the debt contracting frictions. Crowdfunding might help solve a lot of the uncertainty by allowing entrepreneurs to raise capital conditional on vetting consumer demand, or by reaching a new investor base (or create a large number of fraudulent capital raisings). The shift towards an innovative economy and alternative financing methods could impact US equity markets. Doidge, Karolyi and Stulz (2015) document that the number of listings in the United States is contracting, with a lower number of IPOs coming to market coupled with a contraction of current listings mainly via mergers and acquisitions. In my view, this would be sensible in a world in which innovative startups prefer private equity capital or joining the internal capital market of a large corporation such as Microsoft. Given the strong interconnections between startups, corporations and financial intermediaries, entrepreneurial finance does not represent a subfield of finance but rather a first order dynamic of a broader equilibrium.

At this moment I have several research ideas in various areas of innovation and entrepreneurial finance. I wonder how crowdfunding and its popularity might reflect regional financing frictions. I want to use the new Census-NSF survey on firm-level research and development to develop a new measure of innovative activity in a few years, once the sample size accumulates. I have an idea related to agglomeration, asset-specificity relationships between customers and suppliers, and the ability to withstand foreign competition. My hope is attending this conference will catalyze another more project ideas in hopes of yielding a top flight paper.

Thank you for your time. I hope I have convinced you I am passionate about this subject.

ALAN KWAN

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EDUCATION

Samuel Curtis Johnson of Management, Cornell University *Sept 2012-Present*
PhD student in finance
Coursework: Empirical Asset Pricing, Empirical Corporate Finance, Market Microstructure, Behavioral finance, Theoretical Corporate Finance, Theoretical Asset Pricing, International Finance

Dartmouth College *Sept 2005-June 2009*
BA, Economics with Mathematics
Honors in Economics, Presidential Scholar in Economics

WORK IN PROGRESS

Wisdom of Crowds in Social Media?
Invited Presentations: London Business School Transatlantic Doctoral Conference (2015), Yale Whitebox Doctoral Conference (2015), Cornell Behavioral and Household Finance Symposium (2015)

Using a large, popular U.S. social media platform for stock trading that allows me to identify directional predictions on specific stocks, I document an economically significant negative relation between poster predictions and future returns. In the cross-section, the best posters persist to outperform the worst, but their ability is not convertible to a profitable trading strategy. Peer posters do not seem to discover more skilled investors. Rather than aggregating wisdom of crowds, I instead present evidence social media provides a measure of investor sentiment as in Baker and Wurgler (2006) and investor attention as in Gao et al (2012). Finally, I show that personally-identifiable finance professionals investment advisers and vendors of investment research tend to be much more informative. In reconciling my results with other studies, my findings suggest that behavioral factors as reputation and a cognitive barrier to entry, helps determine the information content of public social media, and that social media is being used by financial professionals with diverse commercial interests, both of which merit future research.

Real and Financial Frictions, Asset Reallocations, and Asset Prices: Evidence from Ship-level Data with Hyunseob Kim and Murillo Campello

Do Employee Tweets Provide Information about Company Operations? with Scott Yonker and Ryan Israelsen

RESEARCH & TEACHING ASSISTANTSHIPS

TA for NBA 5430, Financial Markets and Institutions, Fall 2013, 2014
TA for NBA 5420, Investment and Portfolio Management, Spring 2014
RA for George Gao, Fall 2013
RA for Andrew Karolyi, Summer 2013, Spring 2014

INDUSTRY EXPERIENCE

DC Energy September 2009 - July 2012
Quantitative Investment Analyust *Vienna, VA*

· Quantitative risk, Over-the-Counter trading in US Power Derivatives

Edgeworth Economics June 2009 - August 2009
Consultant *Los Angeles, CA*

Microsoft Corporation June 2008 - September 2008
Software Engineer Intern *Redmond, WA*

Bridgewater Associates March 2008 - May 2008
Technology Intern *Westport, CT*

AWARDS

AFA Travel Grant 2015
Graduate Fellowship from the SC Johnson School (2012-Present)

OTHER DETAILS

Activities	Johnson School of Management PhD Faculty Liaison
Computer	Expert in R, SQL, Experience with LaTeX, SAS, PHP, MATLAB, C#
Languages	English (Native), Cantonese (Conversant)
Nationality	Born US Citizen, Hong Kong Right of Abode
Other Awards	Eagle Scout

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JOHNSON
Cornell University

G. Andrew Karolyi
Professor of Finance and
Global Business
Alumni Chair in Asset Management

Samuel Curtis Johnson
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Letter of Support for Alan Kwan

March 30, 2015

Dear Brett,

I am a professor of finance at The Johnson School at Cornell University and I serve as Alan Kwan's doctoral adviser. I am wholeheartedly writing a recommendation for Alan to attend the NBER Entrepreneurship Research Boot Camp.

I have known Alan for almost 3 years now. I first worked with Alan when he approached me looking to get his feet with in academic research after his 1st year. For our first endeavor together, I asked him to compile the data that is the basis of my new book, "Cracking the Emerging Markets Enigma", forthcoming in 2015 in the Oxford University Press.

Alan did an excellent job. He demonstrated qualities of a trustworthy independent researcher. He worked tirelessly to compile data in 57 countries from a variety of databases that shared no common design, and created usable, well documented datasets on which I base quantitative measures in my book. He was also proactive about suggesting improvements beyond my suggestions and honest about checking and identifying his past mistakes and correcting them. I had an undergraduate RA this last summer try to replicate and update his work, and it was hard to find a flaw.

Since that initial summer project, I have overseen Alan grow as a researcher. His 2nd year paper, which has potentially laid a foundation for a job market paper, involves evaluating the information content one of the largest financial social media platforms: StockTwits. His findings suggest that social media may provide a useful sentiment measure that may guide future empirical work in behavioral finance, and he is working on developing a number of extensions. He also has a stable of other projects going on in corporate finance and social media.

While Alan has not yet done research himself in entrepreneurial finance and innovation, I know he finds these topics interesting. He is most engaged, for instance, during workshop presentations in which the visiting speaker is discussing entrepreneurial finance or innovation.

One thing that makes Alan a potentially unique contributor to the Boot Camp is that Alan himself is very entrepreneurial. He is savvy at networking and in fact actively interacts with entrepreneurs himself in his research. From listening to him talk about this endeavor, he finds the startup world exciting and actively pays attention to startup goings-on.

I will give you a few examples. Alan has completely on his own successfully identified and made contacts at a number of startups that provide online personal financial management tools, hoping to procure company customer data for a number of household finance studies. These talks are underway, and I imagine he will be successful. He also has been in touch with several founders of financial social media platforms, hoping to evaluate the potential for collaborations.

In summary, I think Alan is the exact kind of candidate you want attending your boot camp. He is an active researcher who likes asking good questions, likes discussion about research ideas, he likes entrepreneurial finance, and he knows how this world works from personal experience. He also passes a certain efficacy standard in that he also has a lot to gain from attending your program, but meanwhile has the training and seasoning as a 3rd year to immediately apply whatever he learns.

Thank you for your consideration.

Feel free to contact me if you have any questions.

Sincerely yours,



G. Andrew Karolyi
Professor of Finance and Alumni Chair in Asset Management
Johnson Graduate School of Management
Professor of Economics
College of Arts and Sciences
Cornell University