Contact Information

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Statement

My name is Jack Li, and I am a second-year Finance Ph.D. at MIT Sloan. My ongoing research is related to corporate finance, financial intermediation, and financial stability. I am particularly excited to learn more about executive compensation as it combines ideas from corporate finance—a field that I have spent the majority of my research years in—with ideas from a variety of other economic fields that I hope to gain more exposure to, such as contract theory and organizational economics. Additionally, something more specific that I hope gain from this workshop are tools that can allow me to think about the ef fect of managerial compensation on risk-taking within financial intermediaries.

In particular, one of my ongoing projects theoretically studies the optimal regulation of banks that can use internal risk models to estimate the credit risk of their assets. For context, banks can report internal risk estimates to regulators, who then use them to determine bank capital requirements. Since banks can affect how much they *themselves* are regulated, there is an ongoing debate on whether internal models allow banks to intentionally underreport risk, leading to lower-than-optimal capital requirements. In my current model, the bank's optimal reporting rule is governed by a simple trade-off: risk underreporting boosts their expected wealth contingent on the regulator accepting their report, but simultaneously lowers this probability of acceptance. The regulator's optimal regulation therefore involves another trade-off: while increasing regulatory strictness can reduce underreporting, it cannot be overly stringent, as this could lead banks to cease reporting altogether, depriving the regulator of potentially useful information.

Something that I hope explore more is a better microfoundation of the bank's risk-taking incentives, which requires a deeper dive into the way bank executives are compensated. In the context of this model, a question that I hope to be able to better address is: rather than designing an optimal policy that takes as given the bank's risk-taking motives as I have done, can we instead design an optimal contract that can fairly compensate bank executives, but can dampen their desire to underreport? More broadly, bank executives are often deemed to have rogue incentives. For instance, it has been common for bank executives to make highly publicized but economically questionable claims against regulation, whether it is higher capital requirements after the Great Financial Crisis or the banning of internal risk models during the ongoing Basel III Endgame proposals. Given that current regulation has its limits, I am curious if there is room to study not only the effects of managerial compensation in shaping the incentives of bank executives, their portfolio decisions, and therefore financial stability, but also the normative question of optimal compensation design to mitigate present issues.

Although a bit outside the scope of this workshop, I have another ongoing project that documents a novel mechanism stemming from the Bank of Japan's (BOJ) equity purchase program: using the price-weighted nature of these purchases as a source of quasi-exogenous variation, I show that the BOJ reduces the downside volatility of equities, leading to an influx of actively managed institutional investors. I then establish that the BOJ-driven price changes that these investors react to deteriorate price informativeness, suggesting that informed investors actively capture, as opposed to correct, the non-informational price pressure exerted by the BOJ.

The NBER Doctoral Training Workshop on Economics of Executive Compensation sounds like an incredible way to not only learn from and become inspired by the work of faculty, but to meet and work with other like-minded students from across the world. I really hope to be able to be part of this opportunity this summer.

Jack Li

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Education

MIT Sloan School of Management
Ph.D., Finance, 2022–

Courses taken:

Corporate Finance (15.471)

Advanced Corporate Finance (15.473)

Asset Pricing (15.470)

Advanced Asset Pricing (15.472)

Current Topics in Finance (15.474)

Advanced Macroeconomics I (14.461)

Advanced Macroeconomics II (14.462)

Time Series (14.384)

First-year core sequence in micro (consumer theory, game theory, decision theory, contract theory)

First-year core sequence in macro (dynamic optimization, growth, business cycles, and crises)

First-year core sequence in econometrics

Harvard University
A.B., *cum laude* with Highest Honors, Applied Mathematics and Economics, 2022

Papers in Preparation

Bank Risk Misreporting and Optimal Policy

Abstract: Since the onset of Basel II, banks are given the option to use internal risk models to estimate the credit risk of assets they hold. These credit risk estimates are reported to regulators, and if approved, are used to determine capital requirements. Since banks can influence how much they *themselves* are regulated, there are concerns that they systematically underreport risk, leading to lower-than-optimal capital requirements. I examine this interaction between bank and regulator in a stylized model with the goal of determining optimal regulation. In the model, the bank's optimal reporting rule is governed by a simple trade-off: more underreporting of risk boosts their expected wealth contingent upon the bank's report being accepted by the regulator, but simultaneously lowers this probability of acceptance. After solving for the bank's decision rule, I then consider the optimal regulation problem, which is governed by another trade-off: increasing regulatory strictness can curtail excessive underreporting from banks, but it cannot not be so strict that the bank opts out of reporting entirely, which deprives the regulator of potentially valuable information.

Impacts of a Buyer of Last Resort in Equity Markets: Evidence from Japan

Abstract: Since December 2010, the Bank of Japan (BOJ) has unveiled an unprecedented form of quantitative easing, buying and holding large blocks of equity in domestic firms and in turn, becoming Japan's largest single owner of equities. This paper uncovers a novel mechanism stemming from

this policy: using the price-weighted nature of these purchases as a source of quasi-exogenous variation, I show that the BOJ reduces the downside volatility and increases the prices of equities, leading to an influx of actively managed institutional investors. I then establish that the BOJ-driven price changes that these investors react to deteriorate price informativeness, suggesting that informed investors actively capture, as opposed to correct, the non-informational price pressure exerted by the BOJ. These results question the efficient markets notion that informed investors lean against mispricing and stabilize prices.

Undervalued Seasoned Equity Offerings and Shareholder-Manager Disagreement

Abstract: Undervalued seasoned equity offerings (SEOs) represent an interesting source of disagreement, where the issuing firm's management is optimistic about future investment while shareholders are not. In particular, the management's optimism is revealed by their decision to proceed with an SEO despite expensive financing. Shareholders on the other hand are less enthused about the firm's plans and make their pessimism known by depressing the stock price. With this setting in mind, who is right in the end, management or shareholders? I first confirm the intuition of my motivating story by showing that management is indeed more optimistic the more undervalued share prices are upon issuance. I do this by establishing that undervalued firms increase post-SEO investment over their counterfactual non-issue investment levels to a much larger degree than overvalued firms. Having established the legitimacy of the story, I then turn to study the subsequent performance of undervalued SEOs by comparing the future abnormal returns of undervalued firms that perform SEOs with that of those that do not. My baseline results suggest that undervalued SEOs negatively affect abnormal returns going forward.

Positions

Research Assistant, David Thesmar, MIT, 2023

Description: Contributed to two projects. The first project examines the reasons behind the volatility in aggregate corporate investment in the US. We check whether there is a positive relationship between the pro-cyclicality of a firm's investment opportunities (i.e., Tobin's Q) and their investment-Q sensitivity. Such a relationship can amplify the effect of GDP shocks on firm-level investment relative to a benchmark world where such a relationship does not exist, hence offering a potential origin story for the volatility in aggregate investment.

The second project implements a neural network framework to solve infinite horizon dynamic programming problems. I apply the deep-learning solution technique used in Fernandez-Villaverde, Nuno, Sorg-Langhans, Volger (2020) to solve an infinite horizon, Q-theory model of corporate investment.

Research Assistant, Eben Lazarus, MIT, 2022–23

Description: Coauthor on a project that aims to estimate the price elasticity of demand in the stock market. In particular, we study the price impact resulting from a large fund's divestment from various stock positions. These divestments are spearheaded by an ESG committee whose mandate is independent from that of the investment committee, allowing us to plausibly interpret these divestments as uninformed flows. We document abnormal negative returns during the selling period and provide elasticity estimates with magnitudes largely consistent with those seen in other settings in the literature, for instance, via index inclusions or cash payments.

Research Assistant, Adi Sunderam, Harvard Business School, 2021

Description: Contributed to two projects. The first project studies the effect of earnings surprises on stock prices as a function of stocks' growth rates and the surrounding risk-free rate environment. The second project studies the effect of financial slack on the transmission of shocks between customers and suppliers.

Research Assistant, Andrei Shleifer and Robin Greenwood, Harvard Business School, 2020

Description: Set up infrastructure to scrape over 1 million posts on Twitter, Reddit, and various other news outlets related to the COVID-19 pandemic, cryptocurrency bubble, and dot-com bubble. The project uses various NLP techniques to extract sentiment and establishes stylized facts on how investors behaved during each episode.

Teaching

Teaching Assistant, Functional and Strategic Finance (MFin & MBA), Robert C. Merton, MIT, 2024

Teaching Assistant, Corporate Finance for Turbulence and Innovation (MBA), Chris Palmer, MIT, 2024

Course Assistant, Econometrics (undergraduate), Elie Tamer, Harvard University, 2021

Selected Honors & Fellowships

Sloan Ph.D. Fellowship, 2022–

Highest Honors in Applied Mathematics, Harvard College, 2022

John Harvard Scholarship, 2021

Harvard College Research Program Fellowship, 2021

Harvard Business School Program for Research in Markets and Organizations Fellowship, 2020

Other Honors & Activities

Mentor, Harvard/MIT Application Assistance and Mentoring Program, 2022

Canada's Top 30 Classical Musicians Under 30 of 2018, CBC/Radio-Canada (Canada's national radio)

Featured clarinet soloist on National Public Radio (January 2017)

Principal Clarinet, Harvard-Radcliffe Orchestra (2018–19 season)

Personal

Citizenship: Canada and Hong Kong

Languages: English (native), Cantonese (fluent), Mandarin (fluent)

Interests: Classical music (piano and clarinet), soccer

Last updated: March 7, 2024