

## **GUANGZHI YE**

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### **EDUCATION**

Ph.D., Economics, Boston University, Boston MA, May 2022 (expected)  
Dissertation Title: *Essays on Firm Finances and Macroeconomics*  
Main advisor: Stephen J. Terry

M.A., Economics, Boston University, Boston MA, 2016

B.S., Mathematics and Economics, Hong Kong University of Science and Technology, Hong Kong, China 2014

### **FIELDS OF INTEREST**

Macroeconomics, Finance

### **WORKING PAPERS**

“[The Macro Impact of the Recovery Rate](#),” September 2021. Job Market paper.

### **WORK IN PROGRESS**

“Liquidation Value of Intangibles and Aggregate Efficiency”  
“Intangible Investment, Financial Heterogeneity and Monetary Policy”  
“Immigration and Entrepreneurship”

### **PRESENTATIONS**

Boston University Macro Dissertation Workshop, Boston, MA, 2019, 2020, 2021  
Graduate Student Research Conference, School of Global Studies, Boston University,  
Boston, MA, 2015

### **FELLOWSHIPS AND AWARDS**

Teaching Fellowship, Boston University, Fall 2017-Spring 2022  
Summer Research Grant, Boston University, Summer 2019, Summer 2020  
Dean’s Fellowships, Boston University, Fall 2016-Spring 2017  
Prize for Academic Excellence in the Economics Master’s Program, Boston University, 2015  
3rd prize of the Undergraduate Excellent Paper Award, Hong Kong University of Science  
and Technology, 2014  
School of Science Scholarship, Hong Kong University of Science and Technology, Fall  
2010-Spring 2011

### **WORK EXPERIENCE**

Research Assistant for Prof. Melissa Dell, Harvard University, Summer 2015  
Research Assistant for Prof. Albert Park, Hong Kong University of Science and Technology,  
Spring 2014

Research Assistant for Prof. Yong Wang, Hong Kong University of Science and Technology,  
Spring 2013-Fall 2013

**TEACHING EXPERIENCE**

Teaching Fellow, Faculty of Computing & Data Sciences, Boston University  
DS110 Introduction to Data Science with Python, Fall 2021  
Teaching Fellow, Department of Economics, Boston University  
EC502 Macroeconomic Theory (graduate-level), Fall 2020-Spring 2021  
EC102 Introductory Macroeconomic Analysis, Spring 2020, Summer 2021  
EC101 Introductory Microeconomic Analysis, Fall 2017  
Teaching Assistant, Department of Economics, Boston University  
EC542 Money and Financial Institutions (graduate-level), Fall 2019  
EC391 International Trade, Fall 2019  
EC341 Monetary and Banking Institutions, Fall 2018-Spring 2019  
EC342 Monetary and Banking Theory, Spring 2019  
EC445 Economics of Risk and Uncertainty, Fall 2018  
EC202 Intermediate Macroeconomic Analysis, Spring 2018

**LANGUAGES**

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

**COMPUTER SKILLS:** Fortran, MATLAB, STATA, Python, LaTeX, R, EViews, SQL,  
Mathematica

**CITIZENSHIP/VISA STATUS:** China/F1

**REFERENCES**

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## **The Macro Impact of the Recovery Rate (Job Market Paper)**

A classic question that has been studied in macroeconomics and finance is how financial frictions interact with firms' capital investment and financing decisions. Previous research indicates that the recovery rate of capital when firms default determines the extent of the generosity of lenders, and there are some recent debates that the recovery rate varies over time. By using CRSP/Compustat merged database, I find that industries with higher values in proxies for the recovery rate have more debts issued and higher values of distance to default in the long run. To match these facts and understand the aggregate implications, I build a canonical heterogeneous firm model that incorporates risky debt and capital accumulation within a general equilibrium framework, and I study the macro impacts of the recovery rate in stationary equilibrium. I estimate the recovery rate by matching the comovement of profit and debt, average spread, and average default rate in the data. The simulated method of moments (SMM) estimate of the recovery rate is about 60%. I discover that increasing the recovery rate increases aggregate welfare and output, and decreases investment wedge and macro TFP. Output goes up mainly as a result of less constrained high TFP firms, while macro TFP declines due to the increased credit risk in general.

## **Liquidation Value of Intangibles and Aggregate Efficiency**

Intangible capital has grown in importance as the US economy has evolved towards service-based and technology-based industries. Intangible capital spending is a type of capital expenditure that is not negligible compared to physical capital investment. Drawing on CRSP/Compustat merged dataset of US public firms, I evaluate financial positions of firms with high and low asset tangibility. The key finding of my empirical exercise is that industries and firms with lower average asset tangibility have lower average debt-to-sales ratios and higher average value of distance-to-default both in the long run and short run. To study the aggregate implications of rising intangibility, I extend the canonical discrete-time firm investment model with risky debt by incorporating firms' decisions about intangible investment and liquidation value of intangible capital in my pricing function of risky debts, and combine it into the general equilibrium framework. If the model parameters are externally calibrated to values in the literature, welfare and macro TFP increase when intangibles are liquidatable.

## **Intangible Investment, Financial Heterogeneity and Monetary Policy**

This paper examines how firms with different leverage levels react differently to a monetary policy shock in intangible investments in microdata. I use quarterly Compustat data spanning 1995-2014 and calculate intangible capital as the sum of knowledge and organization capital. I interpret R&D spending by firms as an investment in knowledge capital and interpret a constant fraction of SG&A spending as an investment in organization capital. The perpetual inventory method is used to calculate the replacement costs. I average the high-frequency monetary policy shocks from the macroeconomics literature to estimate the quarterly monetary shock. Following a positive monetary policy shock, firms with higher leverage invest less in knowledge capital and organization capital. The differential response of organization investment is generally persistent, while the differential response of knowledge investment comes with a lag and lasts for only two quarters following the shocks. These reduced-form micro-level findings imply a firm's intangible investment decisions are subject to capital adjustment costs and financing frictions.