

Academic Employment

Aug 2024– **Postdoc in Finance**, Georgia Institute of Technology, GA, USA
Advisor: Sudheer Chava

Education

2017–2024 **Ph.D. in Finance**, Arizona State University, AZ, USA
Committee: Laura Lindsey (Chair), Oliver Boguth, Rawley Heimer
2014–2017 **Ph.D. in Finance (Transferred)**, Washington State University, WA, USA
2012–2014 **M.S. in Quantitative Finance**, Fordham University, NY, USA
2008–2012 **B.A. in Economics (Financial Engineering)**, Wuhan University, Hubei, China

Research Interest

- **Primary**: Real Estate Finance, Household Finance, and Banking Crisis
- **Secondary**: Business Cycle and Inequality
- [Link to Research Statement](#)

Publication

- [1] Chen, Ren-Raw, and Bo Li. "A Closed-Form Solution to the Liquidity Discount Problem: With an Application to the Liquidity Crisis." The Journal of Fixed Income 25, no. 2 (2015): 07-24. ([Publication Link](#))

Job Market Paper

Credit Expansion and Housing Cycle ([SSRN Link](#))

Abstract: During the 1999-2009 U.S. housing cycle, two opposing empirical facts present a puzzle: the correlation between income growth and mortgage growth is negative across ZIP codes within metropolitan areas (some argue for the "credit expansion" view) but positive across metropolitan areas (others argue for the "speculation" view). First, I show that the cross-metropolitan phenomenon, in fact, supports the "credit expansion" view: by an instrumental variable approach, I show that net export growth across metropolitan areas causes income growth and credit expansion in mortgage growth, which eventually leads to the housing cycle. I also design five tests to show that credit expansion rather than speculation plays the dominant role. Second, I build a simple model to illustrate how credit expansion can reconcile the two seemingly opposing empirical facts. Third, my model generates new predictions of "double differences": the differential stronger boom and bust cycle in mortgages (and house prices) in the low-income ZIP codes than in the high-income ZIP codes within the same metropolitan area is more pronounced in the high net-export-growth metropolitan areas. I provide empirical causal evidence for these predictions, further supporting the "credit expansion" view.

Working Paper

- [1] **Testing Business Cycle Theories: Evidence from the Great Recession** ([SSRN Link](#))
Abstract: Empirical business cycle studies using cross-country data usually cannot achieve causal relationships while within-country studies mostly focus on the bust period. We provide the first causal investigation into the boom period of the 1999-2010 U.S. cross-metropolitan business cycle. Using a novel research design, we show that credit expansion in private-label mortgages causes a differentially stronger boom (2000-2006) and bust (2007-2010) cycle in the house-related industries in the high net-export-growth areas. Thus, our results are consistent with the credit-driven household demand hypothesis. Most importantly, our unique research design enables us to perform the most comprehensive tests on theories (hypotheses) regarding the business cycle. We show that the following theories (hypotheses) cannot explain the cause of the 1999-2010 U.S. business cycle: the speculative euphoria hypothesis, the real business cycle theory, the collateral-driven credit cycle theory, the business uncertainty theory, and the extrapolative expectation theory.
- [2] **Household Leverage Cycle Around the Great Recession** ([SSRN Link](#))
Abstract: This paper provides the first causal evidence that credit supply expansion caused the 1999-2010 U.S. business cycle mainly through the channel of household leverage (debt-to-income ratio). Specifically, induced by net export growth, credit expansion in private-label mortgages, rather than government-sponsored enterprise mortgages, causes a much stronger boom (1999-2005) and bust (2008-2014) cycle in household leverage in the high net-export-growth metropolitan areas. In addition, such a stronger household leverage cycle creates a stronger boom and bust cycle in the local economy, including housing prices, residential construction investment, and house-related employment. Thus, our results are consistent with the credit-driven household demand channel (Mian and Sufi, 2018). Further, we show multiple pieces of evidence against the corporate channel, which is emphasized by other business cycle theories (hypotheses).
- [3] **Export Shocks and Corporate Innovation** ([SSRN Link](#))
Abstract: This paper establishes the causality between export growth and increased corporate innovation in US public firms by using a novel gravity model-based instrument from international economics. Strong empirical evidence shows up in various measures of innovation, including the number of patents, number of citations, scaled number of citations, and average number of citations. In addition, this paper uncovers three mechanisms through which export increases firm innovation: (1) export growth increases sales and Research & Development; (2) export growth induces experienced inventors to reallocate towards industries with more export growth and new-generation inventors to start their careers in these industries; (3) export growth also increase institutional ownership percentage and concentration.

Teaching

- **Interest:** FinTech, Corporate Finance, Asset Pricing (Investment & Derivatives), Banking & Crisis, Empirical Methods, Real Estate
- **Philosophy:** Cater to Diverse Needs, Student Participation, Real-World Application
- **Instructor Experience at Arizona State University:**
FIN 361 Advanced Managerial Finance (BA Finance Core) Summer 2021
Score: 6.4/7.0, Response: 29/47; [Link to Teaching Evaluation \(6.4/7.0\)](#)

- **Selected Students' Comments:**

- "Being a summer semester I think that Prof. Li developed a well structured class so that all his students can complete it successfully."
- "The study sessions and office hours most definitely should continue because they really helped me thoroughly understand the mathematical questions while applying the formulas we learn during lecture."
- "Professor Li is very intelligent and very knowledgeable. He did everything in his power to accommodate the classroom and help student succeed."
- "keep being attentive to students' needs. i think the professor does a good job at accommodating to everyone's needs and responds in short times."

- **Teaching Assistant Experience at Arizona State University:**

FIN 781 Theory of Finance (Ph.D. Asset Pricing)	Fall 2017
FIN 421 Security Analysis and Portfolio Management	Fall 2019, 2020
FIN 361 Advanced Managerial Finance	Fall 2017-2019, 2021, 2023

Design for Course Projects and Student Theses (Selected)

[Link to a sample version of my 21-page Design for Course Projects and Student Theses](#)

[1] **Investments and Financial Markets**

- HW1: Replication Fama-French Six Factors (Mkt, Size, Value, Inv, Prof, & Mom)
- HW4: Changes in Institutional Investors and Their Holdings across time.
- Thesis1: Global Risk Factor: Replication and Revision (based on HW1 & HW2)
- Thesis2: Mutual Funds: Are Past Winners Future Winners? (based on HW3 & HW4)
- Thesis4: Stocks: The Surprising Small Number of Long-Term Winners.

[2] **Real Estate, Banking, and Financial Crisis**

- HW1 & HW2: Mortgage and House Price across ZIPs within Metros and across Metros.
- Thesis1: Deregulation's impact on Mortgages and Housing. (based on HW1 & HW2)
- Thesis2: Rise of Mortgage Companies and Credit Unions. (based on HW1 & HW2)
- Thesis3: Pandemic-Induced Housing Changes: Metro Centers vs Outskirts.

Skills

- **Programming:** SAS, STATA, MATLAB, Python, R, C++, VBA, EViews, LaTeX
- **My Studies Notes:** STATA ([link](#)), SAS ([link](#)), Python ([link](#)), MATLAB ([link](#)), R Studio ([link](#)), Excel-VBA ([link](#)), and LaTeX ([link](#)).
- **Language:** English (professional), Chinese (Mandarin, native)

References

Sudheer Chava (Postdoc Advisor)
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