# WEI JIANG

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# APPOINTMENT

Hong Kong University of Science and Technology

Assistant Professor of Quantitative Finance, August 2019-

International Monetary Fund

Visiting scholar, July 2023-

National University of Singapore, Risk Management Institute

Research Fellow, December 2017 – August 2019

# **EDUCATION**

Ph.D. in Quantitative Finance, National University of Singapore, 2017

M.Sc. in Mathematical Finance, Peking University, 2012

B.Sc. in Mathematics, Peking University, 2009

# RESEARCH INTERESTS

Corporate Finance, International Finance, FinTech, Stochastic Modelling, Applied Probability

# RESEARCH

### **Publications**

- 1. A p Theory of Government Debt and Taxes, with Thomas J. Sargent, Neng Wang, and Jinqiang Yang, **Journal of Finance**, forthcoming
- 2. Managing Government Debt, with Thomas J. Sargent, Neng Wang and Jinqiang Yang, **Proceedings** of the National Academy of Sciences, 121(11), 2024
- 3. A q Theory of Internal Capital Markets, with Min Dai, Xavier Giroud, and Neng Wang, **Journal of Finance**, 79(2), 2024, 1147-1197
- 4. Asymptotic Analysis of Long-Term Investment with Two Illiquid and Correlated Assets, with Xinfu Chen, Min Dai, and Cong Qin, **Mathematical Finance** 32(4), 2022, 1133-1169
- 5. Simulating Risk Measures via Asymptotic Expansions of Relative Error, with Steven Kou, **Mathematical Finance** 31(3), 2021, 907-942

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## Working Papers

 From Hotelling to Nakamoto: The Economics of Bitcoin Mining, with Min Dai, Steven Kou, and Cong Qin, Management Science, Reject and Resubmit Tokenomics Conference 2020, UWA Blockchain, Cryptocurrency and FinTech Conference 2020, IN-FORMS Annual Meeting (2018, 2019), PHBS, SUFE, HKUST

- 2. Portfolio Decisions with Nonlinear-Dependent Labor and Stock Markets, with Shize Li and Jialu Shen AEA 2023, Silicon Prairie Finance Conference, SFS Cavalcade Asia, FMARC 2024, Shanghai-Edinburgh-London-Cape Town Green Finance and Accounting Conference 2024
- 3. Implementing a Ramsey Plan, with Thomas J. Sargent and Neng Wang Princeton University, Chicago University, New York University Shanghai, CKGSB
- 4. An Investment Theory with Lags and Adjustment Costs, with Shuaijie Qian, and Jialu Shen MFA 2022, FMCG 2022, Australiasian Finance&Banking Conference 2022
- Optimal Stockist Selection and Contract Design: Theory and Evidence from Supply Chain in India, with Jussi Keppo, Yu Long, and Omkar Palsule-Desai MSOM Supply Chain SIG 2024, Bachelier Finance Society Annual Meeting 2022, Analytics for X Conference 2021, POMS-HK 2021, INFORMS Annual Meeting 2020

## Work in Progress

- 1. A p Theory of Fiscal Policy in General Equilibrium, with Thomas J. Sargent and Neng Wang
- 2. Optimal Government Term Debt Management, with Zhaoli Jiang and Neng Wang
- 3. Optimal Corporate Financing and Investment, with Min Dai, Ling Qin and Neng Wang

#### Research Grants

- 1. RGC Early Career Scheme (Project ID: 26211120, HK\$741k). 2021-2023. Project title: Optimal corporate investment with a generalized setup of investment frictions.
- 2. Hong Kong University of Science and Technology Start-up Fund. 2019-2024.

# PRESENTATIONS AND DISCUSSIONS

### Presentations († by coauthor)

### 2024

Chicago University (scheduled)<sup>†</sup>, MSOM Supply Chain SIG (scheduled)<sup>†</sup>, Shanghai-Edinburgh-London-Cape Town Green Finance and Accounting Conference (scheduled), FMARC (scheduled)<sup>†</sup>, CKGSB<sup>†</sup>, NYU Shanghai, Frontiers of Factor Investing, PKU-NUS Conference on Quantitative Finance and Economics (scheduled), The First INFORMS Conference on Financial Engineering and FinTech (scheduled), INFORMS Annual Meeting (scheduled).

#### 2023

AEA poster, AFA<sup>†</sup>, UC Berkeley<sup>†</sup>, Carnegie Mellon University<sup>†</sup>, University of Missouri, CKGSB<sup>†</sup>, Shanghai University of Finance and Economics, Shanghai Jiao Tong University, Zhejiang University, Conference on Fiscal Policy in an Era of High Debt, IMF<sup>†</sup>, Silicon Prairie Finance Conference<sup>†</sup>, POMS Annual Meeting 2023<sup>†</sup>, China Financial Research Conference, Summer Institute of Finance Conference<sup>†</sup>, Asian Meeting of the Econometric Society, NFA, The Minnesota Workshop in Macroeconomic Theory<sup>†</sup>

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#### 2022

AFA (Virtual), MFA (Chicago), NBER Summer Institute<sup>†</sup>, SFS Cavalcade Asia<sup>†</sup>, AFBC, Fifteenth Annual Risk Management Conference<sup>†</sup>, FMCG Conference, Soochow University, National Taiwan Tsinghua University, 6th PKU-NUS Conference on Quantitative Finance and Economics<sup>†</sup>, Bachelier Finance Society Annual Meeting

### **2021** (Virtual)

NFA, IFORS, Analytics for X Conference<sup>†</sup>, POMS-HK<sup>†</sup>, 10th Asia Quantitative Finance Seminar, 5th PKU-NUS Annual International Conference on Quantitative Finance and Economics, 37th International Conference of the French Finance Association (AFFI), 7th Asia Quantitative Finance Seminar

## **2020** (Virtual)

Greater China Area Finance Conference, INFORMS, Annual Conference on Asia-Pacific Financial Markets, Tokenomics Conference, 3rd UWA Blockchain, Cryptocurrency and Fintech conference, 2nd International Symposium on PDE & Stochastic Analysis in Mathematical Finance

#### 2019

China Fintech Research Conference 2019 (discussant), INFORMS (Seattle)<sup>†</sup>, 6th Beihang IEB Forum: Frontiers in Theory and Practice of FinTech (Beijing), 4th Berlin-Princeton-Singapore Workshop on Quantitative Finance (Singapore), Thirteenth Annual Risk Management Conference (Singapore), Workshop on Stochastic Control in Finance (Singapore), Workshop on Fintech and Machine Learning (Singapore),

#### 2018

INFORMS (Phoenix), 6th Asia Quantitative Finance Conference (Guangzhou), Twelfth Annual Risk Management Conference (Singapore), 3rd PKU-NUS Annual Conference in Quantitative Finance and Economics ((Presentation and Discussion) (Beijing), Nanjing University Youth Forum 2018 in Business School, SUSTech Global Scientist Forum 2018 in Department of Finance

### 2017 and earlier

1st Singapore-Munich Conferences on Innovations in Insurance, Risk, and Asset Management (Singapore), 2nd Paris-Asia Conference in Quantitative Finance (Suzhou), Berlin-Princeton-Singapore Workshop on Quantitative Finance (Berlin), NUS-USPC Workshop on New Challenges in Financial Risk Control (Singapore), 5th NUS Workshop on Risk and Regulation (Singapore), 1st PKU-NUS Annual International Conference on Quantitative Finance and Economics (Shenzhen), 4th NUS Workshop on Risk and Regulation (Singapore), NUS-UParis Diderot Workshop on Quantitative Finance (Paris)

### **Discussions**

- 1. Testing the Q-theory under Endogenous Truncation by Ilan Cooper, Daniel Kim, and Moshe Kim, AFBC 2022
- 2. The Cash-Cap Model: A Two-State Model of Firm Dynamics by Kakhbod, Reppen, Umar, and Xing, FMCG 2022
- 3. Idle Liquidity, CBDC and Banking by Dong and Xiao, 2019 China Fintech Research Conference

# PROFESSIONAL ACTIVITIES

### Referee

Management Science, Operations Research, Mathematical Finance, Review of Economic Dynamics, European Economic Review, Mathematics of Operation Research, Finance and Stochastics, Operations Research Letter, International Review of Finance