

Zhou Zhou

Asian Institute of Digital Finance (AIDF), National University of Singapore (NUS)

Mobile No.: (65)90359696 Email: zhou.zhou@u.nus.edu

Website: <https://zhouzhou-research.github.io>

EDUCATION

National University of Singapore (NUS) Aug 2021 – Present

Ph.D. in Digital Financial Technology

Advisor:

Allaudeen Hameed, Tang Peng Yeu Professor in Finance, Department of Finance, NUS Business School

Nanyang Technological University (NTU)

Aug 2014 - Jun 2018

Bachelor of Science (Mathematics and Economics), First Class Honours

RESEARCH

Interests: Financial Markets, Generative AI, and Sustainable Finance

Working Papers

The Dark Side of Geographically Dispersed Information: Evidence from Lockdown of Subsidiaries

[Job Market Paper]

with Allaudeen Hameed, Massimo Massa, and Zhenghui Ni

R&R, *Journal of Accounting and Economics*

- **Presentation:** 2025 Midwest Finance Association Annual Meeting (MFA), 2025 China International Conference in Finance (CICF)*, University of Cincinnati*, RenMin Business School Summer Finance Forum*, University of Missouri*, Simon Fraser University*, 2025 Financial Management Association Asia/Pacific Conference (FMA Asia)

Through the Looking Glass: Leveraging Machine Learning to Price Corporate Carbon Footprints

with Haoxu Wang, Ahmed Syalabi Seet, and Johan Sulaeman

- **Presentation:** 2025 CICF*, NUS Finance Brown Bag Seminar*, 2025 Singapore Scholars Symposium*

Sea Level Rise Risk and Enterprise Dynamics: Evidence from Singapore

with Sumit Agarwal and Changwei Zhan

* denotes coauthor presentation

Work in Progress

Revisiting Sentiment Tone Measurement: Evidence from Large Language Models

- Analysis ongoing

Mobile App Usage, Retail Attention, and Stock Market Dynamics

with Allaudeen Hameed, Massimo Massa, and Jia Hui Woon

- Work in Progress (Preliminary Results)

TEACHING

2022 NUS: Undergraduate “Introduction to Quantitative Finance” (TA for Assoc. Prof. Zhang Lei)

2017 NTU: Undergraduate “Linear Algebra I” (Tutor)

HONORS & AWARDS

2021-2025 Asian Institute of Digital Finance Scholarship

2015-2018 NTU President Research Scholar

INDUSTRIAL EXPERIENCE

Research Analyst, Louis Dreyfus Company	Jun 2019 – Aug 2020
Research Analyst, Engelhart Commodities Trading Partners	Jul 2018 – May 2019
Corporate Governance Research Intern, Institutional Shareholder Services	May 2018 – Jun 2018
Summer Analyst, Citibank	May 2017 - Jul 2017

SKILLS

- IT: Python, R, Stata, SQL
- Language: Mandarin (Native), English(Fluent)

REFERENCES

Allaudeen Hameed (Chair)

Tang Peng Yeu Professor in Finance
 Department of Finance
 NUS Business School
 National University of Singapore
allaudeen@nus.edu.sg

Massimo Massa

The Rothschild Chaired Professor of Banking
 Department of Finance
 Singapore Campus
 INSEAD
massimo.massa@insead.edu

Johan Sulaeman

Dean's Chair
 Professor in Finance
 Department of Finance NUS Business School
 National University of Singapore
sulaeman@nus.edu.sg

Sumit Agarwal

Low Tuck Kwong Distinguished Professor of Finance
 Department of Finance
 NUS Business School
 National University of Singapore
bizagarw@nus.edu.sg

PAPER ABSTRACTS

The Dark Side of Geographically Dispersed Information: Evidence from Lockdown of Subsidiaries

Abstract: We study how geographically dispersed information shapes the firm's information environment using the natural experiment of pandemic-induced localized subsidiary lockdowns. Restricted access to local subsidiary-level information improves overall information efficiency. Using large language models to analyze analyst reports, we uncover a key mechanism: analysts shift attention away from local subsidiary details toward aggregate signals at the firm, industry, and macroeconomic level. This shift reduces proximity-driven biases, enhances the accuracy of firm-level forecasts, and strengthens stock price informativeness. Lockdowns also diminish insiders' informational advantage and improve liquidity. Contrary to the traditional view that geographic proximity benefits the information environment, our findings reveal how local focus can distort information processing, offering a new perspective on the role of dispersed information in financial markets.

Through the Looking Glass: Leveraging Machine Learning to Price Corporate Carbon Footprints

Abstract: We utilize an advanced machine learning based technique, gradient boosted regression trees (GBRT), to estimate the equity market pricing of corporate Greenhouse Gas (GHG) footprints. Our valuation model leverages a comprehensive global dataset constructed by Jensen, Kelly, and Pedersen (2023), which includes 250+ accounting-item-based corporate features of companies listed in 90+ exchanges around the world. The GBRT valuation model substantially outperforms conventional linear valuation models, yielding estimates of equity valuations that are reasonably close to the observed market data. Using this model, we perform valuation attributions of fundamental features, and particularly corporate carbon footprints. We observe time-series and cross-sectional variations of carbon pricing in the equity market. Emission information is incorporated more

significantly into stock prices following the Paris Agreement (2015). The model reveals heterogeneous pricing patterns across regions, industry sectors, and emission levels, and uncovers investors' distinct views on emissions generated directly by the firm (Scope 1) vs. indirectly via energy purchases (Scope 2). Our valuation framework generates equity-market-imputed prices of 60-80 USD per tonne of corporate Scope 1 emissions.

Sea Level Rise Risk and Enterprise Dynamics: Evidence from Singapore

Abstract: We exploit Singapore's 2019 disclosure of areas vulnerable to sea level rise as a natural experiment to study climate risk and entrepreneurship. Using firm registry and property data, we find no overall change in firm entry, but sharp increases in service-sector startups—especially smaller firms in residential buildings—coinciding with rising property transactions and lower prices. Results suggest that climate-risk awareness depresses real estate values and, in turn, stimulates entrepreneurial activity.