

# SILIANG WEI

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## **Education:**

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<b>The University of Manchester</b>	09/2020-03/2025 (expected)
PhD in Finance (Supervised by Prof. Ser-Huang Poon and Dr. Yoichi Otsubo)	
<b>The University of Manchester</b>	09/2018-11/2019
MSc in Quantitative Finance	Distinction
<b>Shandong University</b>	09/2014-06/2018
BA in Economics (Finance)	GPA: 85.81

## **Research Interests:**

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Empirical Asset Pricing, ESG (Corporate Social Responsibility), Machine Learning, Natural Language Processing, Behavioural Finance.

## **Job Market Paper:**

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### **Intensity Bursts in WallStreetBets Discussion and Stock Markets Trading (with Yoichi Otsubo and Ser-Huang Poon)**

- Abstract: Our study introduces the concept of WallStreetBets (WSB) submission intensity bursts (IB), offering a novel perspective by distinguishing varying levels of social media activity. Using a Difference-in-Differences approach, we establish a causal link between IBs and key market outcomes, including trading turnover, daily and overnight abnormal returns. We further find that IBs during regular trading hours (RTH) have a stronger and more lasting impact on stock returns compared to those outside RTH, with swift reversals observed on a half-day basis. Additionally, stocks targeted by WSB users typically exhibit a decrease in short interest ratios following an IB, suggesting the WSB users may anticipate short squeeze opportunities, adding strategic nuance to social media's market influence.
- Presentations (\*by co-author): Financial Econometrics Conference to mark Stephen Taylor's Retirement, Sofia University\*, 2023 Nippon Finance Association Annual Conference\*, 12th International Conference of the Financial Engineering and Banking Society (FEBS), 2024 British Accounting and Finance Association (BAFA) Annual Conference

## **Publication:**

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### **Hayakawa, K., Otsubo, Y., Poon, S. H., & Wei, S. (2024), 'Vocabulary Herfindahl Index (Vocahin): Linguistic dominance and collective effervescence in WallStreetBets, Economics Letters 244, 112027.**

- Abstract: Our analysis of over 150,000 WallStreetBets comments reveals dominant phrases when members of the community experience collective excitement and solidarity (Collective Effervescence). Using the novel Vocabulary Herfindahl Index (VocaHIn), we find that stock returns volatility increases after CE, and vice versa.

## **Work in Progress:**

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### **LLM and Transparency in Supply Chains (with Ser-Huang Poon)**

- In this paper, we apply a state-of-art Large Language Model to evaluate Social reports related to business supply chains. We also explore a number of factors that are crucial for evaluating corporate disclosure quality.
- Presentations: 2022 British Academy of Management (BAM)

### **User Patterns in Financial Social Media (with Yoichi Otsubo and Ser-Huang Poon)**

- In this paper, we implement Prompt Engineering, the process of structuring an instruction that can be interpreted and understood by a generative AI model, in specific financial social media text data. We also find an intriguing behavioural pattern that shows how the users on financial social media interact with each other.

## **Teaching Experience:**

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### **Teaching assistant**

Financial Derivatives (UG)	2021-2024
<ul style="list-style-type: none"><li>○ Received 2022 AMBS Teaching Excellence with 4.9/5</li><li>○ Deliver workshops in both hybrid and in-person formats (Up to 4 hours/times a week)</li><li>○ Held office hours and answered questions via online forum and email</li></ul>	
Interest Rate Derivatives (PGT)	2021-2022
<ul style="list-style-type: none"><li>○ Prepared course materials for the lecturer</li></ul>	

## **Key Achievements:**

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2023 AFA PhD Student Travel Grant.	09/2022
Alliance MBS PhD Studentship.	09/2020
Represented the dissertation group to present the work in Santander, London.	07/2019
Excellent Graduation Thesis for Undergraduate.	06/2018
Third Prize Scholarship for Outstanding Students.	09/2017

## **Professional Experience:**

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### **Quant Assistant, Everbright Securities** 05/2020-09/2020

- Researched on stock index options volatility strategies (including applying Gurobi as the optimisation tool).
- Backtested R-Breaker strategy in the Chinese index futures market and constructed an automatization connection between the strategy and the programming trading system.
- Assisted to build sentiment factor in the Chinese stock market by applying BERT from Google.
- Implemented Factor Mimicking Portfolio from BlackRock on economic growing risk and inflation risk.

### **Intern, East Area Management Dept., Ping An Medical Technology of Ping An Insurance Company of China, Head Office** 01/2018-03/2018

- Organised and updated the information of business opportunities and projects from eight branch offices.

### **Intern, Risk Management Dept., Zhejiang Chouzhou Commercial Bank, Shanghai Branch** 01/2017-02/2017

- Data update in the post loan management system.
- In charge of the routine examinations and approvals of loans.

## **Skills:**

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- Python, Matlab, Stata, R, C++, HTML, SQL, Latex, SPSS, Eviews
- Machine learning, Natural language processing, Deep learning

## **Languages:**

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- English (Advanced), Mandarin (Native), German (Beginner)

## **Other Studies (selected):**

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- Built up a web portal for labelling text data by Python and Flask.
- Gave internal presentations and held workshops to explain machine learning and neural network to colleagues from different background.
- Experienced with a large range of Machine Learning models including artificial neural network (FNN, RNN and LSTM), k-nearest neighbours (KNN), RBF kernel SVM, VGG net, etc.

## **Contact of Referees:**

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