Geyue Sun

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PROFILE

An accomplished researcher with a robust six-year track record in open macroeconomics, international finance, and capital flows. My academic pursuits are deeply rooted in international macroeconomics and monetary policy, where I have honed a proficiency in managing complex data sets, and quantitative modeling and have become adept across a variety of programming languages. I bring a proven ability to write effectively, communicate across cultures, and collaborate within diverse teams to drive project success. I am deeply committed to applying my analytical acumen and technical expertise toward pioneering research that shapes understanding of global economic trends and policies.

Research Field: International Macroeconomics, Monetary Policies, Applied Macroeconomics

EDUCATION

Ph.D. in Economics **Expected graduation: June 2026**
The George Washington University *Washington D.C., US*

- Honors and Awards: Graduate Merit Fellowship, John Whitefield Kendrick Graduate Fellowship
- GPA: 3.71/4

Master of International Economics **2021**
University of International Business and Economics (UIBE) *Beijing, China*

- Honors and Awards: Outstanding Freshman Scholarship (Distinction), Excellent Graduate Student Scholarship
- GPA: 3.82/4.0/ top 2%

International Exchange Program **2020**
University of California, Berkeley *California, US*

- Honors and Awards: International Exchange Student Scholarship
- GPA: 3.8/4.0

BEc Finance (Summa cum laude) **2018**
Jiangxi University of Finance and Economics (JUFE) *Jiangxi, China*

- Honors and Awards: Yinxing Hong Alumni Scholarship, Outstanding Graduates Awards, Outstanding College-Level Academic Project Award
- GPA: 4.05/5.0

COURSEWORKS & SKILLS

- Macroeconomics and Microeconomics Theory
- International Finance Theory and Application
- Machine Learning
- Computational Application of Macroeconomics
- Large Language Model
- Applied Microeconomics
- Research (DID, RDD)
- Large-Scale Data Processing
- Theory of Probability
- Optimization
- Game Theory
- Stochastic Dynamic Programming
- Statistical Learning and Data Mining

PUBLICATIONS

[1] G. Sun et al. RMB Carry Trade and the Theoretical Framework of "Impossible Trinity" Theory: An Empirical Analysis Based on TVP-SV-VAR Model *Finance Forum,* 2022.

- This paper evaluated China's capital account liberalization and exchange rate marketization by integrating carry trade into the Impossible Trinity framework. Built a theoretical model and using TVP-SV-VAR analysis to examine the short- and long-term impulse responses between carry trade, capital controls, exchange rate stability, and monetary policy independence. Findings revealed that carry trade significantly impacts the independence of monetary policy, supporting a phased approach to capital account liberalization, starting with Portfolio Investment, followed by Financial Derivatives and FDI accounts.

[2] G. Sun. Impact of the Opening of Shanghai Free Trade Area on the Port Economy in Hong Kong *China Circulation Economy,* 2017.

- Investigated the impact of the Shanghai Free Trade Area (FTA) on Hong Kong's port economy using a Difference-in-Differences (DID) approach and border analysis. The analysis revealed a crowding-out effect of the Shanghai FTA on Hong Kong's import-export market, attributed to Hong Kong's dependence on sales and import volume rather than production innovation and R&D capabilities.

SELECTED RESEARCH EXPERIENCE

Bypassing Capital Interventions: Carry Trades via Commodity Futures Market, 2024

- *Advisor: Prof.Tomas Williams*
- Conducted empirical research on commodity carry trade in developing countries, testing two key hypotheses: (1) Commodity liquidity risk significantly reduces carry trade returns (estimated impact: -0.226); (2) The negative impact of liquidity risk is amplified by capital controls.
- Utilized a Staggered-DID model to investigate bypass mechanisms in response to diverse capital control policies. The analysis was based on daily capital intervention data (4,000 events) from the Global Trade Alert (GTA) dataset.
- Built a Large Language Model (LLM) to extract regional information from 25,035 commodity contracts in the Refinitiv dataset. Merged with Bloomberg's daily carry trade returns to assess the influence of liquidity risk on carry trade returns and develop a quantitative model for the commodity-carry trade market equilibrium.
- Presented on 2024 Southern Economics Association (SEA) 94th Annual Meeting on Nov. 2024.

Daily Capital Control Index: Powered by Machine Learning, 2024-present

- *Joint-work with Prof.Roberto Samaniego*
- Developed a high-frequency daily Capital Control Index for 119 countries, spanning from January 1, 2000 till today, capturing six categories of capital account interventions. This dynamic index enables real-time tracking and analysis of global capital control policies.
- Utilized machine learning techniques, including Linear Regression and LASSO, to enhance the precision of the Capital Control Index, trained on the Ka-open Index based on IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).
- Built a new dataset and provided a website to enable real-time updates and dynamic access to the dataset.

Dumping the Dumps: A Quirky Dive into How the SUTA Act Shook Up Firm's locations, 2023

- Investigated how the State Unemployment Insurance Tax (SUTA) variations influence firm location decisions, particularly in labor-intensive industries post the 2004 SUTA Dumping Prevention Act.
- Conducted a DiD and DDD analysis using QCEW data (2000-2022), which initially comprised a substantial 739,968 observations across 53 states. Found a notable uptick in manufacturing within labor-intensive industries by using Stata.
- Examined the differential impact of the SUTA Dumping Prevention Act on firms of different sizes, uncovering that smaller firms were more substantially affected.

International Capital Flow and Open-End Funds, 2022-2024

- *Research Assistant with Prof. Tomas Williams*
- Collected and cleaned large dataset of 320,231 Open-End Funds data by countries and SECID from Morningstar Direct. Applied with Excel VBA and Python to automate the data downloading process.
- Analyzed the topics about international capital flow under different kinds of cooperation, combined the pecking order theory in cooperate finance, and wrote a literature review to conclude recent papers about investment theory.

Analysis on the Market Risk Model of China's Pension Management and Countermeasures, May 2016 – May 2017

- *Advisor: Prof. Jiahong Chen, JUFE*
- Led a 6-person team to assess whether China's pension funds should be listed and analyzed their market risk and interest rate risk after entering the asset market; studied pension management systems in the US and Japan to suggest improvements for China.
- Utilized a Risk Metric model to calculate the Value at Risk (VaR) of pension funds after their entry into the A-share market, and applied the Monte Carlo Simulation Method for robustness testing of the conclusions.
- Published research paper in JUFE Working Paper Series and received the Outstanding College-Level Academic Project Award

CONFERENCE PRESENTATIONS

- 2024 Southern Economics Association (SEA) 94th Annual Meeting
- George Washington University Macroeconomics Lunch Seminar
- Seminar on Big Data and Causal Inference
- IMI Forum at Renmin University of China (RUC)

INTERNSHIP

CCIR Summer Course, Cambridge Centre for International Research **Summer 2024**
Teaching Assistant *Washington D.C., US*

- Collaborated with Dr. Corneliu Bolbocean to design a comprehensive syllabus, reading list, and teaching plan, ensuring the course was both engaging and educational.
- Led personalized one-on-one supervision and group writing sessions, providing tailored feedback to support students in developing their research projects and academic papers.
- Successfully enhanced student engagement and understanding, resulting in an average improvement of 20% in final project scores and positive feedback from students on the depth of their learning and support received throughout the course.

George Washington University **Summer 2022**
Instructor & TA *Washington D.C., US*

- Delivered lectures independently, four days per week over the summer session, with 90-minute classes each day, effectively managing course content and student engagement.
- Created the syllabus, prepared learning materials, and conducted exams, ensuring a comprehensive and structured learning experience.
- Achieved a 100% student satisfaction rate, with students highlighting the clarity and engagement of lectures, as well as the effectiveness of the learning materials and support provided throughout the session.

Shenwan Hongyuan Securities **Summer 2019**
Equity Research Intern *Beijing, China*

- Assisted in gathering, analyzing, and synthesizing data on industry trends, competitive dynamics, and financial performance to support valuation models and forecasts.
- Collaborated with team members to produce timely research reports, enhancing my understanding of equity research processes and developing analytical skills in a professional finance environment.
- Authored an industry research report *The Rise of Electronic Currency: Market Dynamics and Future Outlook*, published on the IMI Forum.

EXTRACURRICULAR

Laboratory of Computational Social Science, Tsinghua University **Fall 2023**
Student Participant *Beijing, China*

- Participated in the "Seminar on Big Data and Causal Inference" as part of the Tsinghua University Interdisciplinary Research Capacity Enhancement Program. Under the guidance of Professor Qingguo Meng, focused on advanced methods in big data analysis and causal inference techniques.

Financial Investment Association, JUFE **2016 – 2018**
Office Director *Jiangxi, China*

- Oversaw daily operations of the association's office, ensuring efficient coordination across departments and seamless execution of administrative tasks.
- Organized and facilitated finance-related events and workshops, fostering engagement and professional development opportunities for members.
- Collaborated with external partners to build relationships and create networking opportunities, enhancing the association's visibility in the finance community.

CERTIFICATIONS

- JPMorgan Chase & Co.'s Quantitative Research
- CMA Piano Performance Certification (Level 10)

HONORS & AWARDS

2021-2026 Graduate Merit Fellowship, John Whitefield Kendrick Graduate Fellowship **(College-Wide Award)**
2022,2023,2024 John Whitefield Kendrick Graduate Fellowship in Economics **(College-Wide Award)**
2020 International Exchange Student Scholarship(**(College-Wide Award)**)
2017 the 8th Blue Bridge Cup National Software and Information Technology Professional Talent Competition Software Entrepreneurship Team National Selection, **(Country-Wide Award, 3rd Prize)**
2016 the 2nd National University Internet Finance Application Innovation Competition, **(Country-Wide Award, 3rd Prize)**

OTHERS

Programming Skills: MATLAB (Dynare), Python(numpy, pandas, scipy, matplotlib), R(fGarch, quantmod, stats, ggplot2), Stata, Excel VBA, Eviews, OxMetric, C, SAS, PowerPoint, LaTex

Other Skills: Piano, Guitar, Photograph, Chinese Calligraphy

Languages: Mandarin (native), English (advanced)