# YANG (JOY) JIAO

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## RESEARCH FIELDS

Primary: Sovereign Debt, Sustainable Finance
Secondary: Exchange Rates

## EDUCATION

**Geneva Graduate Institute (IHEID), Geneva, Switzerland** 2021 - 2027 (anticipated)
*International Economics Department*

· PhD Candidate in International Economics, Macro track

**Renmin University of China (RUC), Beijing, China** 2018 - 2021
*Hanqing Advanced Institute of Economics and Finance*

· MPhil in Finance
· GPA: 3.63/4.0 (ranking 4/19)

**Nankai University (NKU), Tianjin, China** 2014 - 2018
*School of Finance*

· Bachelor of Economics
· GPA: 90.3/100 (ranking 2/77)

## JOB MARKET PAPER

**Greening the Successor: A Quantitative Model of Sovereign Debt Instruments under Government Turnover**

· *Presented at: Brown Bag Lunch Seminar, Geneva Graduate Institute (2026); Fifth PhD Workshop in Money and Finance, Sveriges Riksbank, Stockholm (2026).*

· **Research question:**
Green transitions require sustained investment over decades, while the governments that finance them alternate in power. Can a green government design its sovereign debt to constrain the environmental choices of a future brown successor, and can sustainability-linked bonds serve as a cross-government commitment device that ordinary climate legislation cannot?

· **Methodology:**
Develops a sovereign default model building on Eaton–Gersovitz and Arellano with Hatchondo–Martinez perpetuity bonds, adding two-type government turnover between green and brown governments and endogenous green capital with type-dependent emissions disutility. Calibrated to standard sovereign debt targets, global solar and wind investment data, and Chile's 2022 sustainability-linked bond. Compares three simulated economies, with conventional bonds only, with an added sustainability-linked bond, and with an added green bond.

· **Contribution:**
Provides a unified sovereign-default framework in which the government jointly chooses repayment and green investment under each debt instrument.
Characterizes the contractual incentive channel unique to sustainability-linked bonds, through which environmental performance shifts future borrowing costs via the KPI coupon step-up, and studies whether this channel survives government turnover when environmental preferences differ across governments.

· **Main findings:**
With the terms of Chile's 2022 sustainability-linked bond, the bond barely changes government behavior, since its step-up is small and its target out of reach.
A larger step-up or an easier target raises green investment and lowers emissions. Most of the increase comes from brown governments, and up to half of theirs occurs when they inherit the bond from a green predecessor without issuing one themselves. A larger step-up slightly raises default risk, while an easier target lets a smaller step-up

do the same job without that cost.
Testing emissions every year rather than once a term makes the bond more effective. An inherited green bond does not raise a brown successor's green investment.

- **Policy relevance:**
A sovereign sustainability-linked bond is a credible climate commitment only if it is designed correctly, and its step-up is contingent debt service that debt sustainability analysis should account for.

## RESEARCH PROJECTS

**Green Finance Policy, Firm Environmental Responsibility, and Stock Market Performance**

- Use the implementation of the China 2017 Green Finance Pilot Zone policy as a quasi-natural experiment, to investigate the impacts of a green finance boosting policy on green and brown firms.
- This study finds that in the GFPZ regions, green firms will experience an increase in their market values upon the implementation of the GFPZ policy, while brown firms will experience a decline in their market values. This is probably because this policy is viewed by investors as a promise to provide stable financial support for green firms in the pilot zones.

**Salience Theory and Currency Returns**

- Investigate the role of salience theory from behavioral finance in explaining cross-sectional variations of future currency return: high salience theory value currencies will earn relatively lower returns in the future.

**Trade Costs of Uncertainty**

- Investigated how trade policy uncertainty affects trade costs (based on the methodology by Egger, Larch, Nigai and Yotov, 2021) from the importer's and the exporter's side.

**Other projects**

- Busy Analysts and Firm Earnings Management
- Difference between Short Sellers and Analysts' Opinions on Stocks
- Changes of Short Interest around Irregular Dividend Events
- Evidence of Firm Cash Holdings in China

## PROFESSIONAL EXPERIENCE

**World Trade Organization** Jan. 2023 - Jul. 2023
*PhD intern at the Economic Research and Statistics Division*

- Contributed to the World Trade Report 2023, including data analysis, literature review, and drafting of analytical sections.
- Estimated bilateral and sectoral trade costs for African economies using structural gravity methods (Egger et al., 2021), producing aggregates used to analyze the evolution of global trade frictions.
- Translated complex econometric results into policy-relevant insights for internal research discussions.

**Chinese Academy of International Trade and Economic Cooperation (CAITEC), Ministry of Commerce, People's Republic of China** May 2021 - Aug. 2021
*Institute of Industry Development and Strategy Center for Strategic Trade and Security (Research Centre of Free Trade Port and the Pilot Free Trade Zone Development)*

- Produced policy analysis on China's Pilot Free Trade Zones by synthesizing academic research, government documents, and industry data.
- Supported drafting of policy recommendations for trade and industrial development.
- Coordinated with external research providers to obtain proprietary industry reports efficiently.

**TianFeng Securities** Sep. 2020 - Oct. 2020
*Media and Internet Team (New Fortune No.1 Team in 2017)*

- Collected data and wrote industry analysis reports (intellectual property rights, ByteDance, short video).

· Constructed dataset containing livestreaming sales of internet influencers.

## RESEARCH EXPERIENCE

**Research Assistant** 2019
*Yi Huang, BIS, Professor of Finance, Fudan University*

· Processed and structured international fund flow data from Morningstar and FactSet for empirical finance research.
· Supported empirical analysis and manuscript preparation.

**Research Assistant** 2018 - 2020
*Xin Liu, Assistant Professor, School of Management, University of Bath*

· Replicated empirical asset pricing results and implemented SAS programs for portfolio construction and return analysis.
· Conducted large-scale data cleaning, database merging, and factor-adjusted abnormal stock return calculations.

**Analysis of China's Capital Market** 2017 - 2018
*Hanqing China Financial Market Investment Management Research Center*

· Replicated main results of literature on asset pricing using SAS programs and data from WRDS.
Main contents: January and size effect, Momentum, FF-3 factors, IVOL, BAB and other stock market anomalies.
· Mapped empirical specifications from U.S. literature to China market data sources.

## TEACHING EXPERIENCE

**Teaching Assistant, Sole Instructor: Mathematics and Statistics for Economists** 2023 - Present
*Economics Department, the Geneva Graduate Institute*

· Designed and delivered a Master-level quantitative course covering mathematical analysis, optimization, statistics, LaTeX, Stata, and R.
· Responsible for course structure, lecture materials, problem sets, student assessment and academic support activities for new student integration.

**Teaching Assistant** 2023 - Present
*Economics Department, Geneva Graduate Institute*

· Courses supported: International Trade; Financial Integration and Crises.
· Led problem set review sessions and held office hours for Master students.
· Provided guidance on quantitative and empirical assignments.

**Teaching Assistant** 2019 - 2020
*Joint master program by Renmin University of China and Queen's University Canada*

· Courses supported: Equity Markets and Analysis.
· Translated 400+ pages of technical course materials under tight deadlines.
· Supported grading and student consultation.

**Teaching Volunteer** Jul. - Aug. 2016
*Primary and secondary schools in Sing Buri, Thailand*

· Taught English.

## HONORS AND AWARDS

- Excellence Scholarship (Bourse d'excellence) of the Geneva Graduate Institute 2023
- First Prize Graduates Scholarship of Renmin University of China 2018, 2020
- Merit Student of Hanqing Institute, Renmin University of China 2020
- Full award overseas exchange program, funded by China Scholarship Council Feb. - Jun. 2018

- First Prize Scholarship of Nankai University 2015, 2016, 2017
- Meritorious Winner of Interdisciplinary Contest In Modeling (ICM) 2016

## SKILLS

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|---|---|
| **Programming Languages** | SAS, Stata, R, Matlab, Mathematica, LaTeX (Advanced)<br>C++, C, Python, Julia (Basic knowledge) |
| **Database** | CRSP, Compustat, Comtrade, I/B/E/S, Markit, Morningstar, Wind, CSMAR |
| **Languages** | Chinese (Native), English (Fluent), French (A2) |
| **Profession** | Passed CFA Level I |

## REFERENCES


**Ugo Panizza** (Dissertation Advisor)

*Professor of International Economics and Pictet Chair in Finance and Development*

*Director, International Centre for Monetary and Banking Studies*

Geneva Graduate Institute (IHEID)

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**Nathan Sussman** (Second Reader)

*Professor of International Economics and Pictet Chair in Finance and Development*

*Director, Centre for Finance and Development*

Geneva Graduate Institute (IHEID)

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