

Summary

- Quant researcher with 12+ years of experience across sovereign wealth funds (GIC, ADIA), international financial institutions (IMF, ECB), and global macro portfolio managers teams.
- Focus on rates and FX mostly, signal and portfolio construction, risk models.
- Skills: machine learning, time series & density models, generative AI, convex optimization, Python

Professional Experience

GIC Lead Quant, Global Macro Singapore, since 2023

- Senior vice-president, manage a team of 5 quants on DM/EM rates, FX, and cross-asset portfolios.
- Develop and deploy quant models for alpha generation, portfolio construction and risk modeling.
- Research: technical, fundamental, valuation and flows signals, synthetic data generation via generative AI, macro nowcasting with high-frequency alternative data, FX and curve models, macro regimes, etc.

ADIA Quant Researcher, Global Macro Abu Dhabi, 2022-2023

- Developed systematic macro signals and models for the Quant team ("Q") covering forecasting, nowcasting, and risk management. Supported ADIA CIO on asset allocation and portfolio construction.

International Monetary Fund Quant Macroeconomist Washington DC, 2016-2022

- Quant macroeconomist, involved in more than 30 country missions covering IMF program negotiations, Article IV, FSAP, technical assistance (including as mission chief), etc.

European Central Bank Quant Researcher and Portfolio Manager Frankfurt, 2013-2016

- Managed Eurosystem RMB and JPY FX reserves, portfolio construction and financial research.

Education

Ph.D. Quantitative Macro & Finance, Peking University & EHESS Beijing 2013

Entire curriculum completed in Chinese Mandarin in Beijing.

M.Sc. Quantitative Macro & Finance, Ecole Normale Supérieure de Paris-Saclay Paris 2009

First-ranked at France's national entrance exam (Normalien).

M.Sc. Mathematics and Statistics, ENSAE Paris Paris 2007

Undergrad (CPGE) Henri IV Paris 2005

Open Source Python Packages

- Distributional GARCH model to design VaR-based FX Interventions for Central Banks, [varfxi repo](#)
- Density Forecasting for Macro Variables, [gar repo](#)
- Conditional Density Projection via Quantile Regressions, Resampling and Multifit Models, [quantproj repo](#)
- Robust Density Estimation via Over-Parametrized Gaussian Skewed Models, [robustdensity repo](#)
- Partial Least Squares Wrapper for Data Reduction based on Scikit, [plswrapper repo](#)
- Quantile Spacing - solving for quantile crossing, from Schmidt and Zhu (2016), [quantilespacing repo](#)
- Quantile Local Projections, [quantileproj repo](#)
- Granular Instrumental Variables - from Gabaix and Koijen (2020), [granulariv repo](#)
- Cluster Analysis Wrapper with Performance Metrics and Visualization Tools, [clusterwrapper repo](#)

Academic Research

- *Financial Conditions in Europe: Dynamics, Drivers, and Macroeconomic Implications*, [IMF WP \(2024\)](#)
- *Technology and the Geography of FX Markets*, [Journal of International Money and Finance \(2023\)](#)
- *FX Interventions: A Risk-Based Framework*, [IMF WP \(2020\)](#)
- *Predictive Density for Global Growth*, [IMF WP \(2020\)](#)
- *Growth at Risk: Applications in IMF Surveillance*, [IMF WP \(2019\)](#)
- *Can Countries Manage Their Financial Conditions Amid Globalization?*, [IMF WP \(2018\)](#)
- *Trading Without a View: Fast Trading, Entropy and Underreaction in the FX Market*, [ECB WP \(2018\)](#)
- *Thick vs. Thin-Skinned: Technology, News, and Financial Market Reaction*, [IMF WP \(2016\)](#)
- *Household Savings in China : The Role of the Housing Market and Borrowing Constraints*, [BdF WP \(2014\)](#)

Policy Publications

- *United Arab Emirates: TA Report - Liquidity Management and Forecasting*: [IMF TA report \(2022\)](#)
- *Jordan: TA Report - Forecasting Framework for Currency in Circulation*: [IMF TA Report \(2022\)](#)
- *House Price Synchronization: What Role for Financial Factors?*: [IMF GFSR \(2018\)](#)
- *Financial Conditions and Growth at Risk*: [IMF GFSR \(2017\)](#)
- *High-Frequency Trading, Information and Market Volatility: the Role of Dark Pools*: [ECB FSR \(2017\)](#)
- *The Role of Currency Invoicing for the Transmission of Exchange Rate Movements*: [ECB IRE \(2015\)](#)

Skills

- **Languages:** Chinese Mandarin (fluent), English (fluent), French (native)
- **Programming:** Python (CI/CD, packaging, deployment), SQL, R, Git, AWS
- **Databases:** Bloomberg, Macrobond, Haver, CEIC, Wind, etc.

IMF Country Missions

I have been sent to more than 30 countries to contribute to IMF program negotiations, Article IV, FSAP, technical assistance missions, etc.

- **Mauritania:** monetary operations (2023)
- **Bosnia:** FX management (mission chief, 2022)
- **Burundi:** monetary operations (2022)
- **Algeria:** monetary operations (mission chief, 2022)
- **United Arab Emirates:** monetary operations (co-mission chief, 2021)
- **Namibia:** liquidity forecasting (mission chief, 2021)
- **Jordan:** liquidity forecasting (mission chief, 2021)
- **Djibouti:** liquidity forecasting (mission chief, 2021)
- **Hong Kong SAR:** FSAP, systemic liquidity and stress-testing (2021)
- **WAEMU:** FSAP, stress-testing (2021)
- **D.R Congo:** IMF program negotiations (2020)
- **Tunisia:** liquidity forecasting (2020)
- **South Korea:** FX reserves management (2020)
- **Morocco:** FX interventions (2020)
- **P.R China:** Risk modeling (mission chief, 2019)
- **India:** Financial modeling (2019)
- **Philippines:** Financial modeling (2019)
- **Malaysia:** Financial modeling (2019)
- **Singapore:** Financial modeling (2019)
- **Israel:** IMF Article IV, external sector (2019)
- **Albania:** IMF Article IV and post-program (2018, 2019)
- **Peru:** FSAP, systemic liquidity and stress-testing (2017, 2018)
- **PR China:** ECB negotiations, RMB Eurosystem portfolio (2015)

Teaching

I taught financial modeling and financial operations to countries officials and central bankers around the world, often via IMF technical assistance centers.

- **Singapore:** [FX Intervention Rules](#) (2023)
- **Singapore:** liquidity forecasting (2022)
- **Ghana:** liquidity forecasting (2022)
- **Kuwait:** liquidity forecasting (2021, 2022)
- **Slovenia:** liquidity forecasting (2022)
- **IMF Washington DC:** density modeling (2021)
- **Kazakhstan:** liquidity forecasting (2021)
- **Guatemala:** liquidity forecasting (2021)
- **Austria:** density modeling (2021)
- **Malaysia:** density modeling (2020)
- **IMF Washington DC:** Python (2019)
- **Sciences Po and ENSAE Paris:** Econometrics and macroeconomics (2010-2012)