

## Summary

- Quant researcher with 13+ 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

<b>GIC</b> Lead Quant Strategist, Global Macro	Singapore, since 2023
<ul style="list-style-type: none"><li>• Senior vice-president, manage a team of 5 quants on DM/EM rates, FX, and cross-asset portfolios.</li><li>• Develop and deploy quant models for alpha generation, portfolio construction and risk modeling.</li><li>• 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.</li></ul>	
<b>ADIA</b> Quant Researcher, Global Macro	Abu Dhabi, 2022-2023
<ul style="list-style-type: none"><li>• 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.</li></ul>	
<b>International Monetary Fund</b> Quant Macroeconomist	Washington DC, 2016-2022
<ul style="list-style-type: none"><li>• Quant macroeconomist, involved in more than 30 country missions covering IMF program negotiations, Article IV, FSAP, technical assistance (including as mission chief), etc.</li></ul>	
<b>European Central Bank</b> Quant Researcher and Portfolio Manager	Frankfurt, 2013-2016
<ul style="list-style-type: none"><li>• Managed Eurosystem RMB and JPY FX reserves, portfolio construction and financial research.</li></ul>	

## Education

<b>Ph.D. Quantitative Macro &amp; Finance</b> , Peking University & EHESS	Beijing 2013
<i>Entire curriculum completed in Chinese Mandarin in Beijing.</i>	
<b>M.Sc. Quantitative Macro &amp; Finance</b> , Ecole Normale Supérieure de Paris-Saclay	Paris 2009
<i>First-ranked at France's national entrance exam (Normalien).</i>	
<b>M.Sc. Mathematics and Statistics</b> , ENSAE Paris	Paris 2007
<b>Undergrad (CPGE)</b> Henri IV	Paris 2005

## Open Source Python Packages

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- 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

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- *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

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- *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

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- **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

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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)
- **P.R China:** ECB negotiations, RMB Eurosystem portfolio (2015)

## Teaching

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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)