

Romain Lafarguette (Luo Zhewen)  
[romain.lafarguette@gmail.com](mailto:romain.lafarguette@gmail.com)  
<https://romainlafarguette.github.io/>

## Summary

---

- Lead macro quant researcher with 13+ years of experience across GIC, ADIA, IMF & ECB
- Quant research: stats, ML, GenAI, portfolio construction & optimization, factors and risk models
- Quant development: signal productionalization, CI/CD, cloud computing, portfolio analytics

## Professional Experience

---

**GIC** Lead Quant Researcher, Global Macro, Senior Vice President Singapore, since 2023

- Systematic alpha signals for rates, FX, and commodities using statistics, ML & LLM
- Fundamental macro quant models for inflation, yield curve, FX valuation and sovereign risk
- Macro-factor signal aggregation framework with convex optimization and regularized objective function
- Develop risk-factor platform (Barra + PCA) for real-time stress-testing and tail-risk monitoring
- Production: CI/CD, cloud platforms (AWS & Databricks) and data management (SQL, Polars)

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

- Designed systematic macro signals for the "Q" team, focusing on rates, FX, and commodities
- Optimized portfolio construction frameworks with non-linear constraints and factors exposures limits

**International Monetary Fund** Quant Macroeconomist Washington DC, 2016-2022

- Analytics: sovereign risk, macro stress-tests, nowcasting, inflation forecasting, debt projections
- Large EM coverage (China, India, Korea, Malaysia, Israel, Peru, etc.)

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

- Managed RMB and JPY reserve portfolios, QE implementation & Greek banks emergency liquidity
- Global FX and rates models (inflation forecasting, FX fair value, curve and term premium)

## Education

---

**Ph.D. Quantitative Finance**, Peking University 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 Mathematics (CPGE)** Henri IV Paris 2005

## Skills

---

- **Analytics:** Statistics & machine learning, AI & LLM, convex optimization, bootstrapping, density models
- **Tech stack:** Python, Github CI/CD, cloud computing (AWS & Databricks), Airflow schedulers, polars
- **Data:** Bloomberg, Macrobond, Haver, CEIC, Wind, Factset, alternative datasets
- **Risk models:** VaR/CVaR, stress-test, early-warning signals, rates & FX risk, sovereign risk, FSI
- **Risk factors systems:** Blackrock BRS, MSCI Barra, Axioma, PCA-custom risk factors
- **Languages:** English (fluent), Chinese (conversational), French (native)

## Python Packages

---

- Distributional GARCH model to design VaR-based FX Interventions for Central Banks, [varfxi repo](#)
- Density Forecasting and Risk Modeling for Macro Series, [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 Seikit, [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 \(2018\)](#)
- *Household Savings in China : The Role of the Housing Market and Borrowing Constraints*, [BdF WP \(2014\)](#)

## Policy Research

---

- *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 \(2015\)](#)