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Summary

- Quant strategist and researcher with 12+ years of experience across sovereign wealth funds (GIC, ADIA), international financial institutions (IMF, ECB), and global macro portfolio managers teams.
- Lead a team of 5 quant researchers on rates and FX models, portfolio construction, alpha generation, and risk modeling.
- Support a dozen of macro portfolio managers as well as the CIO for asset allocation cross-department and the management of the central books.

Professional Experience

GIC, Lead Quant Strategist Global Macro, Senior Vice-President — Singapore, since 2023

- Manage a team of 5 quantitative strategists focused on DM/EM rates, FX, and multi-asset allocation.
- Develop and deploy quant models for alpha generation, asset allocation, and portfolio risk management.
- Lead projects on macro nowcasting with high-frequency alternative data, counterfactual scenario analysis, FX fair value modeling, curve dislocation identification, macro regimes classification, and cross-assets arbitrage.

ADIA, Quant Researcher, Macro and Asset Allocation — Abu Dhabi, 2022-2023

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

International Monetary Fund, Macro Quant — Washington DC, 2016-2022

- Led quant support missions to 25+ countries on macro-financial policy, FX interventions, and liquidity forecasting.
- Headed quantitative technical assistance teams (3–7 members) supporting central banks on foreign reserve management, liquidity forecasting, and monetary policy frameworks.

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

- Managed Eurosystem FX reserves (Asian currencies portfolio), designed and implemented optimization strategies for tactical allocation.

Education

Ph.D. Quantitative Finance, Peking University

Entire 6-year curriculum completed in Chinese Mandarin in Beijing.

M.Sc. Quantitative Finance and Economics, Ecole Normale Supérieure de Paris-Saclay

First-ranked national entrance exam (Normalien).

M.Sc. in Mathematics and Statistics, ENSAE Paris

Density modeling, numerical simulations, resampling and bootstrapping

Undergrad - Mathematics, Henri IV Paris

Teaching

FX Intervention Rules: A Risk-Based Framework , IMF Singapore Training Institute (STI) (2023)

29 participants from 14 central banks; 1-week training in Singapore

Modeling under Python, with a package we developped with Amine Raboun: pypi link. Link to the course

Forecasting Framework Central Bank Systemic Liquidity IMF Singapore Training Institute (STI) (2022)

16 participants from 12 central banks; 1-week training in Singapore

Advanced Statistical Methods to Forecast Systemic Liquidity (2022)
IMF Technical Assistance Center in West Africa, AFRITAC West, Accra

Advanced Statistical Methods to Forecast Systemic Liquidity (2022)
IMF Center of Excellence in Finance, Kuwait

Advanced Statistical Methods to Forecast Systemic Liquidity (2022)
IMF Center of Excellence in Finance, Ljubljana

Advanced Statistical Methods to Forecast Systemic Liquidity (2022)
Caucasus, Central Asia, and Mongolia IMF Regional Capacity Development Center, Almaty

Density Forecasting and Modeling (2021)
IMF Institute of Capacity and Development, Washington D.C.

Advanced Statistical Methods to Forecast Systemic Liquidity (2021)
IMF Technical Assistance Center in Central America, Guatemala

Liquidity Forecasting for Central Banks Operating Fixed Exchange Rate Arrangements (2021)
IMF Middle East Center for Economics and Finance, Kuwait

Foreign Exchange Interventions Strategies for Central Banks (2021)
IMF Joint Vienna Institute (Caucasus, Central Asia, Belarus, Moldova and Mongolia Practionners), Vienna

Forecasting with Quantile Regressions (2020)
South East Asian Central Banks (SEACEN) Research and Training Centre, Kuala Lumpur

Density Forecasting and Modeling (2019)
IMF Institute of Capacity and Development, Washington D.C.

Python for Macroeconomists (2019)
IMF, European Department, Washington D.C.

Linear and Non-Linear Econometrics, Statistics, Macroeconomics (2010-2012)
ENSAE and Sciences Po, Paris

Country Missions

Mauritania Team of three people (2023)

Technical assistance to the central bank on liquidity forecasting and monetary operations

Bosnia and Herzegovina Mission chief, team of six people (2022)

Technical assistance to the central bank on foreign reserves and risk management, risk modeling

Burundi (2022)

Technical assistance to the central bank on liquidity forecasting, monetary framework, monetary operations

Algeria Mission chief, team of five people (2022)

Technical assistance to the central bank on liquidity forecasting

United Arab Emirates Co-mission chief, team of seven people (2021)

Technical assistance on the calibration of monetary operations, financial modeling and liquidity forecasting

Namibia Mission chief, team of four people (2021)

Technical assistance to the central bank on liquidity forecasting

Jordan Mission chief, team of four people (2021)

Technical assistance to the central bank on liquidity forecasting

Djibouti Mission chief, team of four people (2021)

Technical assistance to the central bank on liquidity forecasting

Hong-Kong SAR (2021)

Financial Sector Assessment Program: systemic liquidity modeling and stress-testing

West African Economic and Monetary Union (2021)

Financial Sector Assessment Program: scenario design, solvency stress-tests, etc.

Tunisia (2020)

Technical assistance to the central bank on liquidity forecasting

South Korea (2020)

Technical assistance to the central bank on foreign reserves management and portfolio management

Morocco (2020)

Technical assistance to the central bank on foreign exchange interventions and FX modeling

Democratic Republic of Congo (2020)

IMF program negotiations: monetary economist for the Rapid Credit Facility (RCF) program

People's Republic of China, mission chief (2019)

Technical assistance to the PBoC on financial modeling and risk analysis

India, Philippines, Malaysia, Singapore (2019)

Teaching density modeling to staff of central banks and the Asian Development Bank

Israel (2019)

IMF Article IV, dealing with the balance of payments and teaching density modeling to the Bank of Israel

Albania (2018-2019)

IMF Post-Program Monitoring and Article IV, dealing with the monetary, financial and real sectors

Peru (2018)

Financial Sector Assessment Program: systemic liquidity modeling, stress-testing and financial modeling

People's Republic of China (2015)

ECB negotiations with the People's Bank of China to build the RMB portfolio of the Eurosystem

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
- *Understanding Household Savings in China : The Role of the Housing Market and Borrowing Constraints*, Banque de France WP, 2014

Policy Publications

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

Open Source Projects (Python)

Full description: https://romainlafarguette.github.io/software/

Distributional GaRCH model to design VaR-based FX Interventions for Central Banks
https://github.com/romainlafarguette/varfxi Package available on pypi

Density Forecasting Using Growth At Risk: Python Codes and Excel Interface
https://github.com/IMFGAR/GaR. With technical appendix and documentation

Conditional Density Projection via Quantile Regressions, Resampling and Multifit Models
https://github.com/romainlafarguette/gar

Robust Density Estimation via Over-Parametrized Gaussian Skewed Models
https://github.com/romainlafarguette/robustdensity

Partial Least Squares Wrapper for Data Reduction based on Scikit
https://github.com/romainlafarguette/plswrapper

Quantile Spacing - from Schmidt and Zhu (2016)
https://github.com/romainlafarguette/quantilespacing

Quantile Local Projections
https://github.com/romainlafarguette/quantileproj

Granular Instrumental Variables - from Gabaix and Koijen (2020)
https://github.com/romainlafarguette/granulariv

Cluster Analysis Wrapper with Performance Metrics and Visualization Tools
https://github.com/romainlafarguette/clusterwrapper

Skills

Languages: Chinese Mandarin (fluent), English (fluent), French (native)

Programming: Python (CI/CD, packaging, deployment), SQL, R, Matlab, Git, AWS

Financial Platforms and Databases: Bloomberg, Macrobond, Haver, JPMaQS, CEIC, Wind, Refinitive, GFD, Oxford Economics