

Fred Houze Li

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PROFESSIONAL SUMMARY

Quantitative analyst and CFA Level III candidate (Aug 2026 sitting) with expertise in index implementation accuracy to 7 d.p. Built Python automation across index calculation, free-float ingestion, and equity-price deviation monitoring at STOXX scale. Quantified index rebalancing liquidity impact and implementation shortfall using minute-level market data.

WORK EXPERIENCE

STOXX Ltd. **Hong Kong**
Index Associate Jun 2025 – Present

- **Benchmark Pricing:** Sole owner of 7-d.p. index calculation accuracy for STOXX's Asia-open universe on HK morning shift, co-owner of European-open handover. Daily coverage spans 15,000+ flagship, customized and strategy indices (e.g., DAX, EURO STOXX 50), backing US\$100B+ linked AUM ETF Products, executed quantitative adjustments for corporate actions
- **Contingency Management:** Developed pricing protocols during systemic data outages, executed rapid machine-driven and manual index recalculations to prevent disruption, and ensured data dissemination to market makers
- **Python Automation:** Engineered a large-scale index recalculation system, a Japanese free-float web scraping tool and an automatic equity price deviation monitoring system, reducing daily validation time and minimizing manual operational risks
- **Technical Stakeholder Management:** Resolved ~20 institutional client enquiries per week – including escalations from STOXX's largest licensee BlackRock – on customized methodology, index adjustments, and historical recalculations
- **Incorporation of ECPI Ltd.:** Co-led workstream on ECPI ESG suite onboarding – migrated MATLAB index calculation templates, downstream reporting pipelines, expanded global investable universe to scale bespoke passive product offerings

Olin Business School, Washington University in St. Louis **St. Louis, MO, USA**
Research Assistant to Working Paper "Political Pressure and Central Banking" May 2024 – Dec 2024

- Fine-tuned BERT Topic Model and its sub-models to implement topic classification of U.S. 50-years' congressional hearings
- Built an anomaly detection model on sentiment trends to flag moments where sentiment sharply deviates from baseline
- Applied UK budget announcement shock with market data to visualize how certain political event statements or sentiment trends coincide with market price changes, supporting research project on fiscal shock omitted variable bias (OVBI)

Privium Fund Management **Hong Kong**
Assistant Portfolio Manager Apr 2022 – Nov 2022

- Supported PM on option-premium income strategy; sized positions, monitored macro overlay and breadth exposure
- Calibrated Heston for vol-surface pricing of overlay options; applied Barra for risk attribution; managed Greeks hedging
- Optimized strategies, utilized algorithmic trading to minimize slippage, enhance efficiency, and reduce risk exposure

EDUCATION

Washington University in St. Louis **St. Louis, MO, USA**
M.S. in Quantitative Finance Dec 2024

- **GPA:** 3.96/4.00, **Rank** 2/89, **Awarded** Beta Gamma Sigma Award, Charles F. Knight Scholar Award
- **Coursework:** Continuous Time Finance (Ph.D. Level), Bayesian Factor Search, Stochastic Calculus, SQL, Machine Learning

The University of Hong Kong **Hong Kong**
Bachelor of Economics and Finance May 2021

- 2:1 Distinction, C.V. Starr Scholarship recipient to exchange at Sciences Po Paris

PROJECTS

Index Rebalancing, Market Friction & Implementation Shortfall Dec 2025 – Present
Outputs: fredhli.com/projects/#index-rebalancing

- Built a Global Corporate Action engine classifying and adjusting splits, dividends, rights, spin-offs and M&A across 10-yr 3-phase data regimes into CA-consistent, reconciled cross-vendor currency, share and free-float discontinuities
- Event studied on 1,200+ SXXP rebalancing events: index additions earn a **+409bps** median abnormal run-up between selection cutoff and announcement – the market front-runs STOXX's rule-based list – then give back **-62bps** into the review effective date ($p < 0.05$), with measurable post-effective reversal
- Constructed a passive-AUM panel for SXXP-tracking ETFs (€4.7bn → €25bn, 2014 – 2026), and a Wurgler-Zhuravskaya arbitrage-risk measure to size and explain the replication demand behind the index rebalancing effect

Hull-White Model Calibration for At-the-Money (ATM) Caplets and Caps Mar 2024 – May 2024
Outputs: fredhli.com/projects/#hull-white-model-calibration

- Implemented closed-form caplet pricing solutions and Monte-Carlo price check, to optimize Hull-White model parameters against Caplet market data, achieving high accuracy in long-maturity cap pricing > 15 years with less than 3% value loss

SKILLS AND QUALIFICATIONS

Certificates	CFA Level III Candidate (Aug 2026), HKSFC Type 4 & 9: Advise on Securities & Asset Management
Languages	English (Fluent), Cantonese (Proficient & Working Level), Mandarin (Native)
Teaching	WashU TA for: <i>Options, Futures and Derivative Securities (UG)</i> ; <i>Behavioral Finance (Grad)</i>
Programming	Proficient in Python, R, SQL; Intermediate in VBA, MATLAB
Interests	Birdwatching, Formula 1, Tennis, CrossFit