YUQIAN (TRUDY) LI

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EDUCATION

Expected 12/24 **NEW YORK UNIVERSITY** New York, NY
Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance

- ***Coursework:*** stochastic calculus, dynamic asset pricing, machine learning, time series analysis, risk & portfolio management, interest rate & FX models, market microstructure, cryptocurrency
- ***Teaching Assistant:*** calculus, linear algebra, ODE, and math modeling

09/19 - 06/23 **NANKAI UNIVERSITY** Tianjin, China
B.S. in Mathematics and Applied Mathematics, Concentration: Mathematical Finance

- ***Coursework:*** mathematical analysis, advanced algebra, probability, statistics, ODE, operations research, data structure & algorithms, financial engineering, actuarial science, investments
- ***Honors & Fellowships:*** Graduate with Honors (top 3%), 5 fellowships in 3 years (top 5%)

EXPERIENCE

06/24 - 08/24 **SINOLINK SECURITIES** (Asset management firm with $17B AUM) Shanghai, China
Quantitative Developer Intern (Python, SQL)

- Computed 10+ metrics for ~3,000 funds with convertible bonds; improved code efficiency by 4x
- Developed 9 dataframes to evaluate performance and traits of swing trading strategies, strategy groups, and market on multiple levels (individual securities, pairs, etc.), dimensions (styles, sectors, index components, etc.), and time intervals (monthly, rolling monthly, since launch, etc.)
- Measured fund’s duration by bond indices’ based on relationship between 3-day rolling sum of fund's NAV and indices’ close found by stepwise regression and K-means clustering algorithm
- Designed program to price vanilla options (European, American, vertical spread) and exotic options (digital, Asian, knock-in, shark fin, snowball, phoenix, airbag) and calculate Greeks

CINDA SECURITIES (Asset management firm with $10B AUM) Beijing, China

03/23 - 05/23 **Quantitative Analyst Intern (Python, MATLAB)**

- Investigated trends of ~700 convertible bonds from 2017 to 2022; weighted their implied volatility (IV) to monitor market IV; updated it daily for department’s decision-making
- Drew and updated IV surface of SSE 50 ETF options daily; designed timing strategies based on volatility risk premium, in collaboration with managers

01/22 - 03/22 **Investment Management Intern (Python, VBA)**

- Researched ~250 bonds and REITs and wrote reports on them; co-developed system to calculate trading performance; completed multiple data processing, analysis, and visualization work

PROJECTS

09/21 - 05/24 **Projects in Quantitative Finance (Python)** New York, NY

- FX Volatility Curve Construction: Used SABR model to construct vol curves, given ATM vol, 25d RR, 25d Mkt Strangle quotes; calculated everyday vols considering weekend effect
- Down-and-out Barrier Call Pricing: Used Monte Carlo simulation, Finite Difference, and PDE analytical method to price down-and-out call; reached same result; compared accuracy and speed
- Snowball Structured Product Pricing: Used binomial model with 3,000 layers to price snowball VWO issued by Barclays Bank; co-authored and published paper; improved algorithm with GARCH vol and Monte Carlo simulation; analyzed return scenarios, sensitivity, and Greeks
- Option Hedging with Historical Data: Hedged Apple’s 6M options considering dividends; back-tested P&L; rolled by 1 day for 2 years and repeated; researched break-even volatility and skew
- Trinomial Model Construction: Hedged trinomial model by minimizing quadratic risk; compared its P&L with binomial models under equal initial endowment and equal delta conditions
- Data Analysis of Indices, Currency Pairs & Interest Rates: Computed time series and distribution of correlation and volatility; compared VIX and vol indicators modeled in EWMA and GARCH

COMPUTATIONAL SKILLS / OTHER

Programming Languages & Software: Python, SQL, C++, MATLAB, VBA, SPSS, Stata, EViews, LaTeX, MS Office
Certificates & Awards: CFA Level II candidate, NCRE Level II, MCM Finalist (top 2% globally)