

## Self-Developed Quantitative Strategies (Live-Traded with Proprietary Capital)

- **BTC Perpetual Funding Rate Arbitrage:** Captured stable yield from perpetual contract funding rates by delta-hedging with spot BTC, forming a direction-neutral arbitrage structure.
- **BTC Cross-Exchange Arbitrage:** Monitored BTC prices across exchanges during major market events to identify and capture short-term price discrepancies, relying on low-latency execution.
- **Convertible Bond Rotation & Event-Driven Arbitrage (China A-shares):** Selected convertible bonds with low prices and premiums to build a weekly rotation portfolio, incorporating event-driven opportunities such as dividend entitlement and forced redemption.
- **Quantitative IPO Allocation Strategy (HK Market):** Analyzed prospectuses and pricing mechanisms to identify high-probability IPO candidates; allocated capital using the Kelly criterion to optimize expected return and fund utilization.
- **Volatility Arbitrage in U.S. Equity Options:** During VIX spikes, constructed structured positions (e.g., Sell Call) with positive Theta and negative Vega to profit from volatility mean reversion.
- **Delta-Neutral Alpha Strategy in Options:** Dynamically built delta-neutral, gamma-positive positions using iron condor or straddle structures, aiming to capture nonlinear returns from market volatility while maintaining low risk exposure.
- **CTA Trend Enhancement Strategy:** Applied the Vegas Tunnel strategy combined with volume filters to validate breakouts; backtested and deployed across multiple assets (gold, crude oil, USD index, Tesla) over various timeframes.
- **All-Weather + CTA Overlay Strategy:** Designed a cross-asset all-weather portfolio with risk-parity-inspired allocation based on asset correlations, enhanced by trend-following components to improve Sharpe ratio and portfolio resilience.