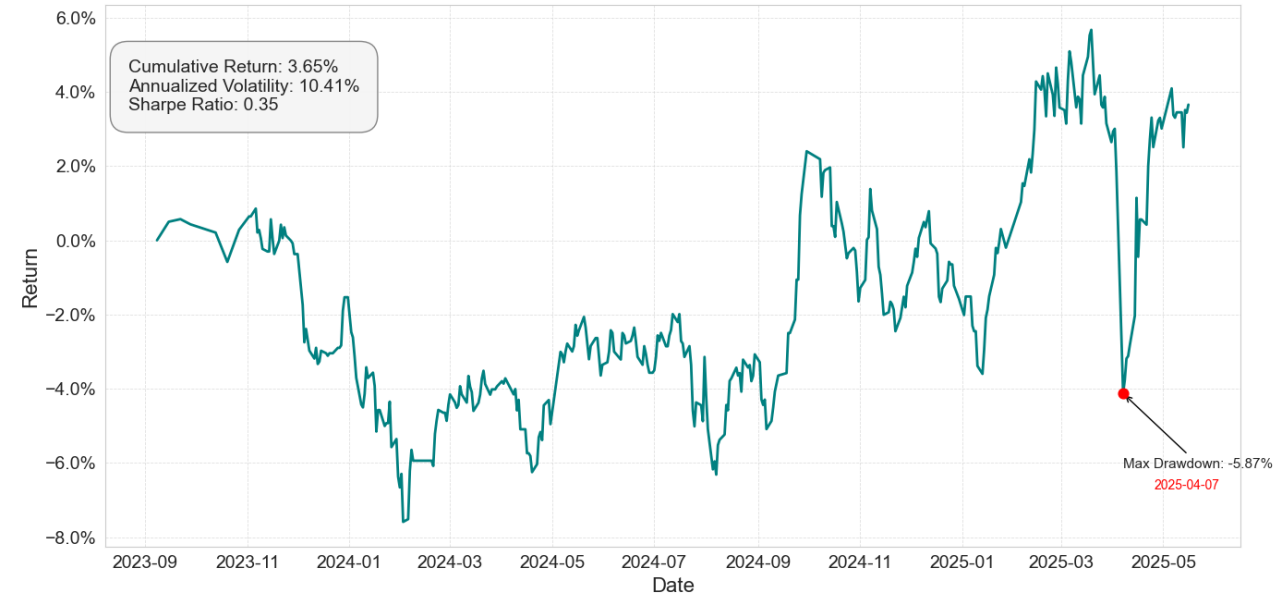


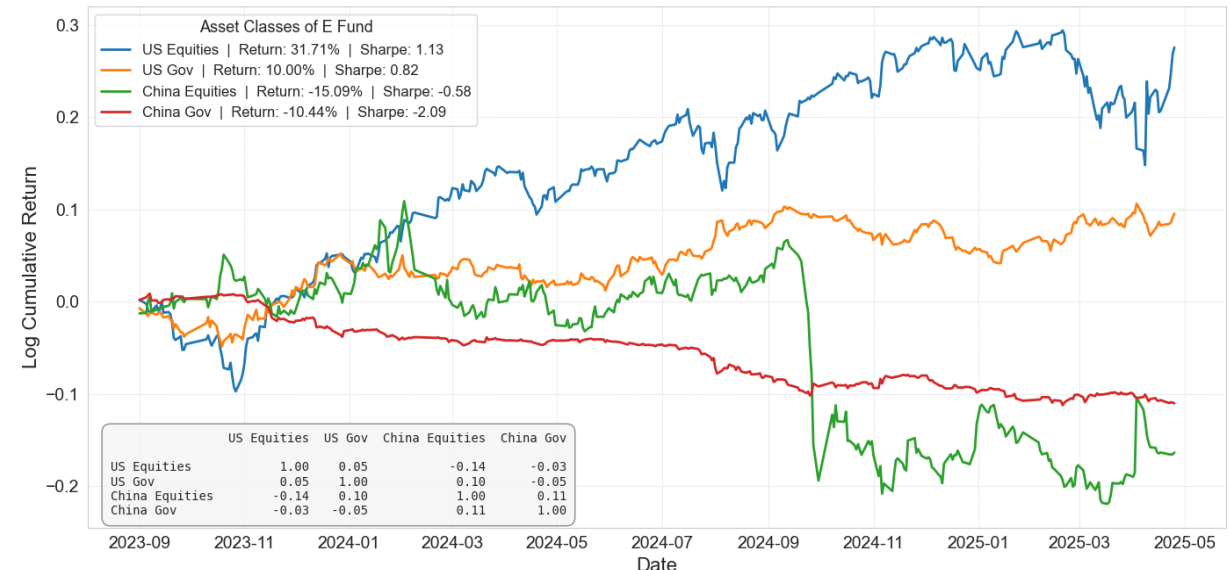
E Fund Global Allocation Mixed Securities Investment Fund

- Chinese global multi-asset manager (QDII).
 - Inception date: 2023-09
 - Long Only
- Currently 51% invested in equities, 44% in fixed-income securities.
 - Four main asset classes: Chinese Equities, Chinese Government bonds, US Equities, US Government bonds
- Classify themselves as a ‘hybrid fund’
 - Expected risk and returns lower than equity funds
 - Higher than fixed income funds.
- Willing to allocate 30-80% in equities.

EFund Performance



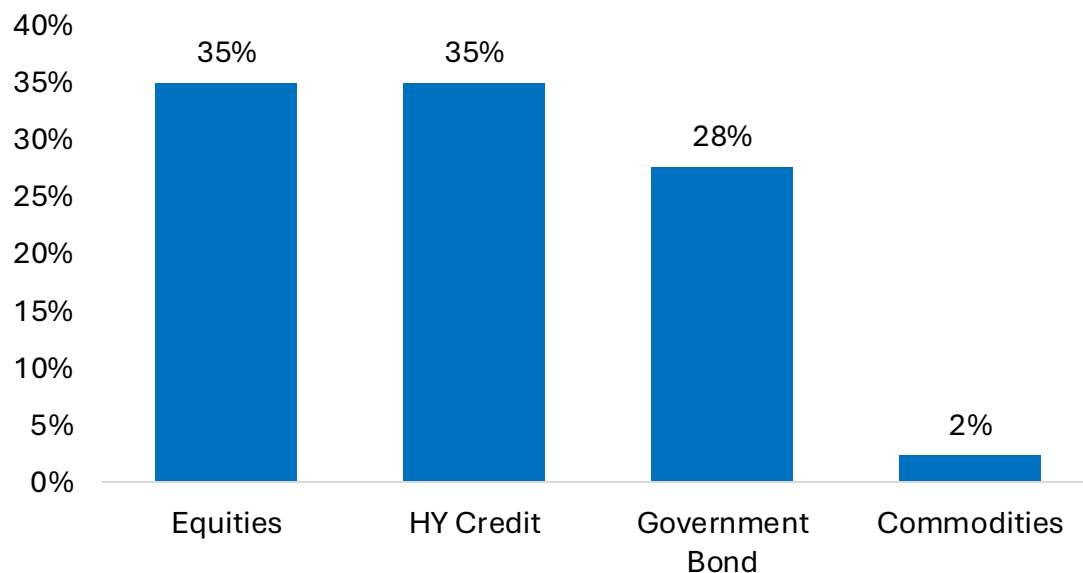
E Fund Asset Classes Performance



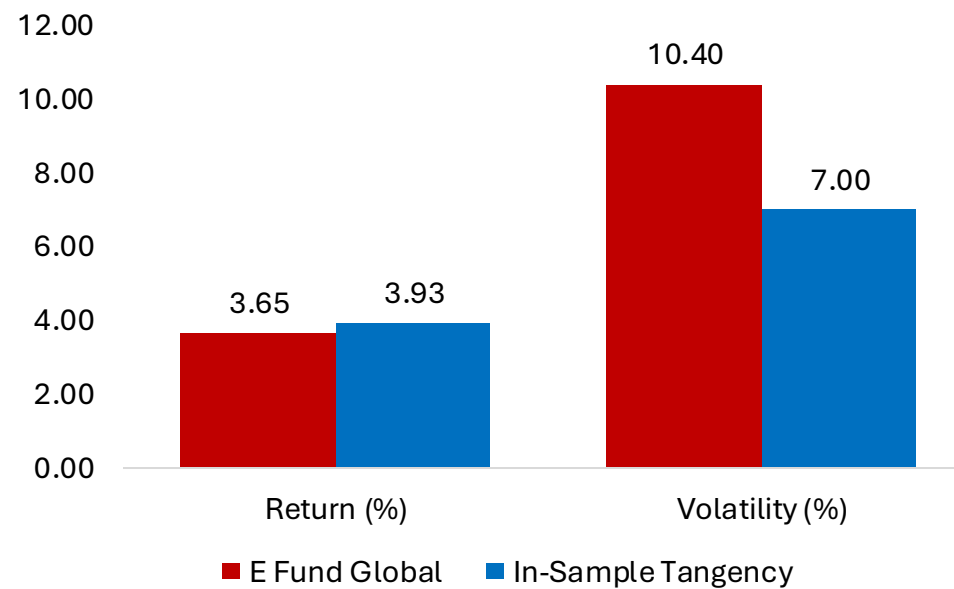
MV Optimization – Asset Class

- For every optimization process, long-only and a cap of 35% (following AQR Multi-Asset Fund)
- Training data: January 2016 – September 2023
- Used a global proxy to determine the risk allocation for each asset class
- Result: Sharpe Ratio of 0.56 (1.6x E Fund's Sharpe: 0.35)

Exposure to Each Asset Class

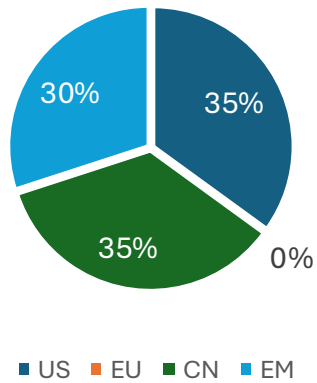


Portfolio Performance



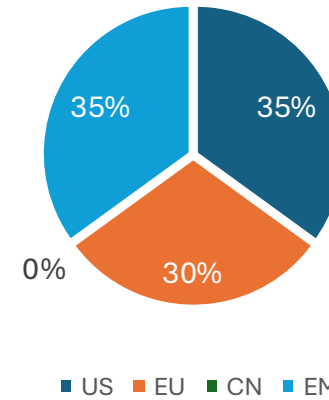
MV Optimization within Asset Classes

Equities Allocation



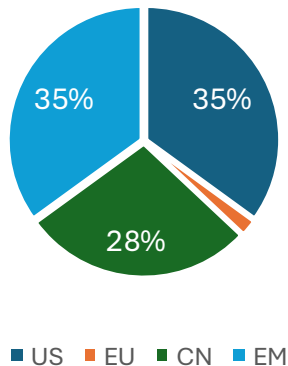
- Euro equities are eliminated, possibly due to **low growth and FX drag**
- EM provides **strong growth potential**, while CN is a standalone market

Gov Bond Allocation



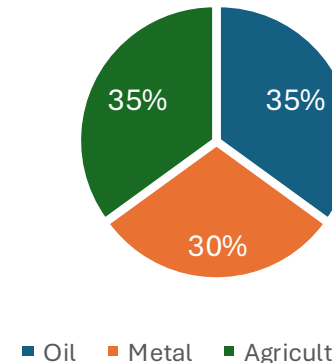
- US gov bond performs extremely well due to **rate hikes**
- Euro gov bond historically has low return, but still included due to **low volatility and diversification benefits**
- CN has **foreign capital controls**. Investible indices underperform

High-Yield Allocation



- Still, US HY market is the **largest and most liquid**
- EM HY has **higher nominal return**
- CN has **significant HY market in real estate and SOEs** (although face distress after 2021)
- EU HY: **lower yield, FX drag**

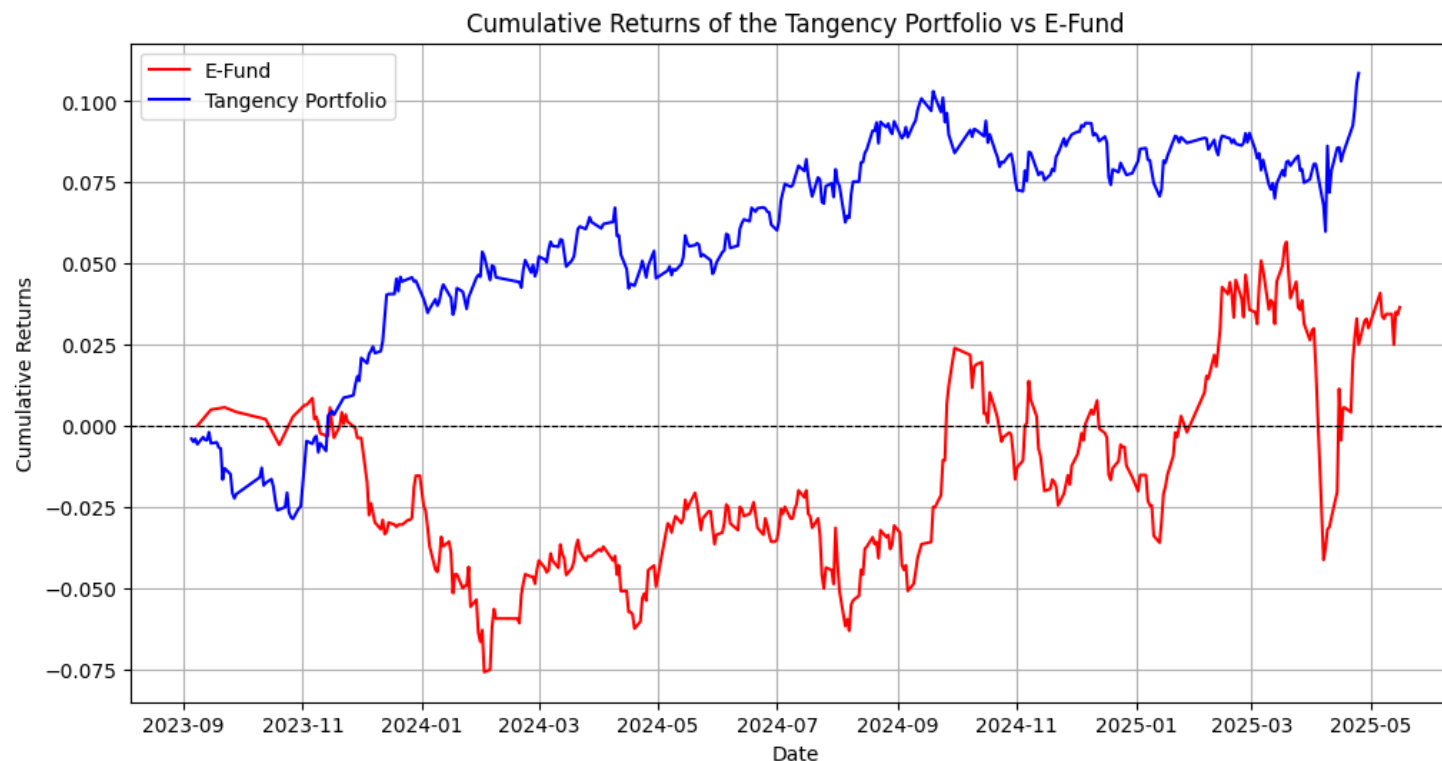
Commodities Allocation



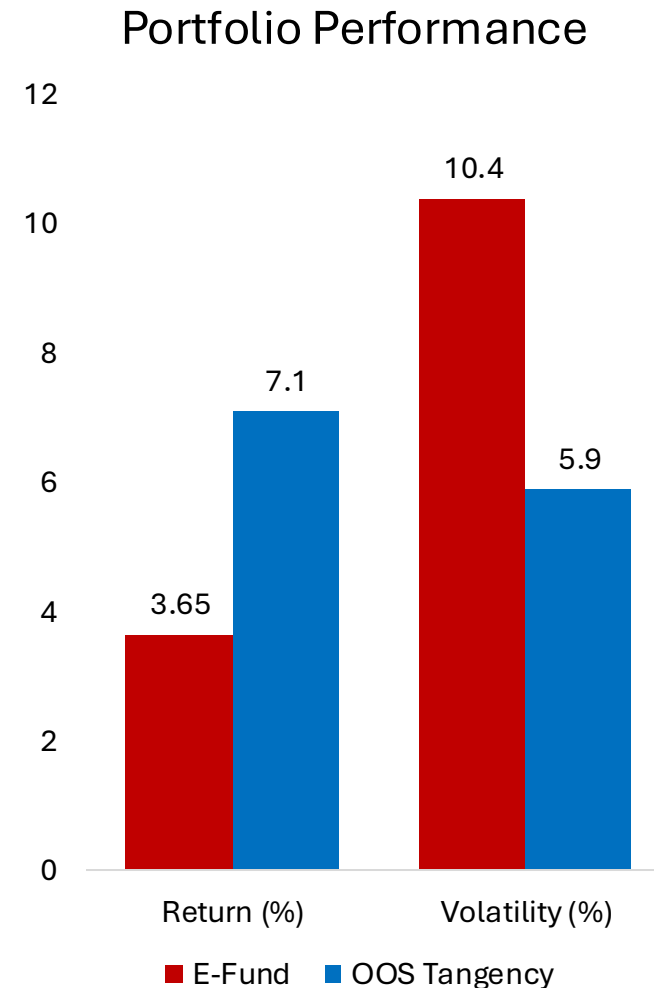
- Oil: **Supply shocks, inflation shocks and geopolitical risk**
- Metal: Gold appreciates as a **safe haven**
- Agri & Livestock: **Steady performance, provides diversification benefits**



MV Optimization – Out-of-Sample Results



- Period of 2023 – Present
- Used regularization to reduce overfitting
- Result: Sharpe Ratio of 1.2 (vs 0.56 in-sample)



Conclusion

- Our tangency portfolio managed to reduce volatility and increase return
- Resulting in a higher Sharpe Ratio (1.2)
- Reduced over-exposure to a certain asset class
- Reduced over-exposure to a geographical region
- Asset class allocation significantly reduces portfolio volatility
- Asset selection within each asset class contributes to excess return

Group Members

*Matheus Raka Pradnyatama, Canberk
Tahil, Salvatore Rego, Josh Li, Oakley Liu*

