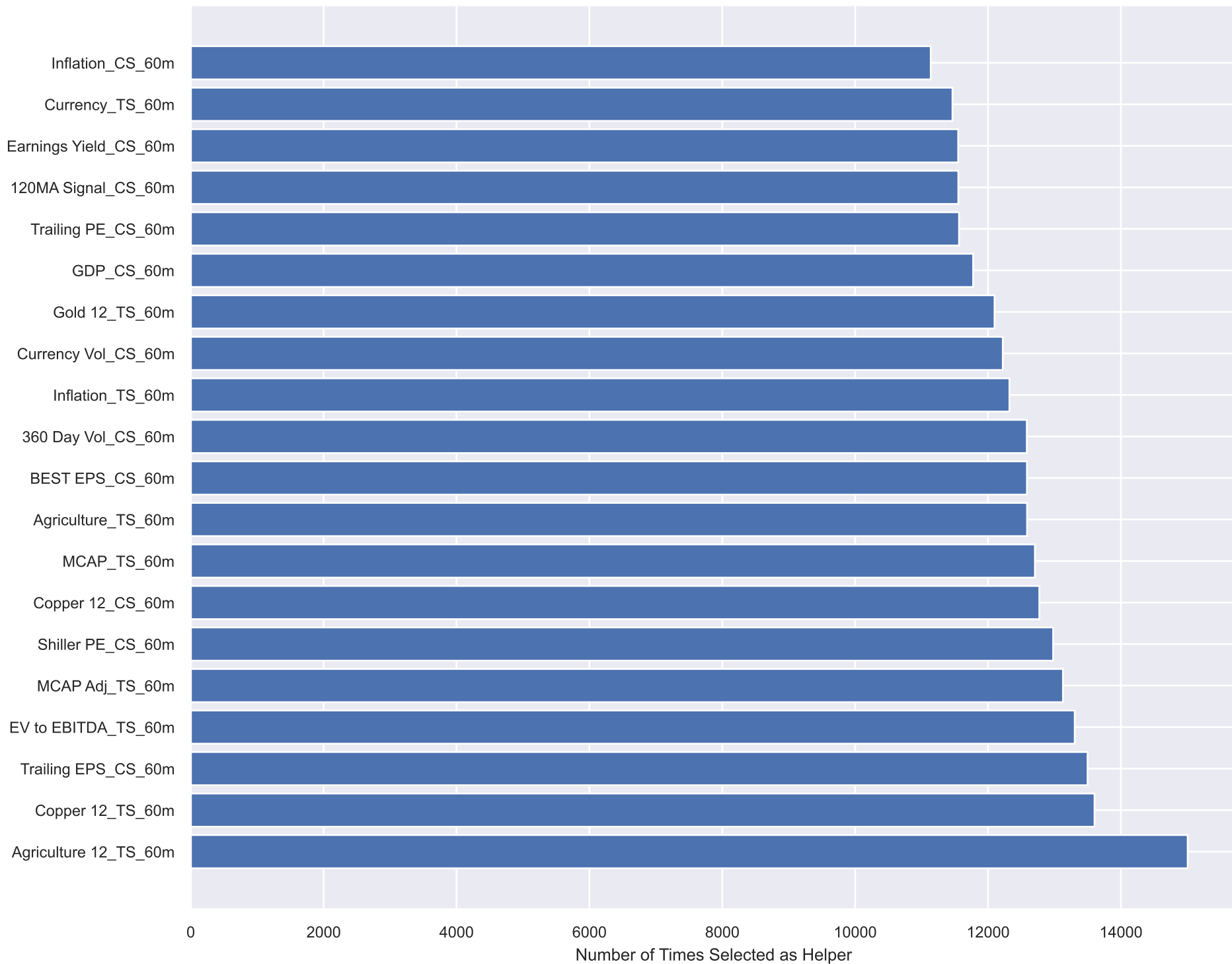


Helper Feature Selection Visualizations Factor Return Forecasting Project

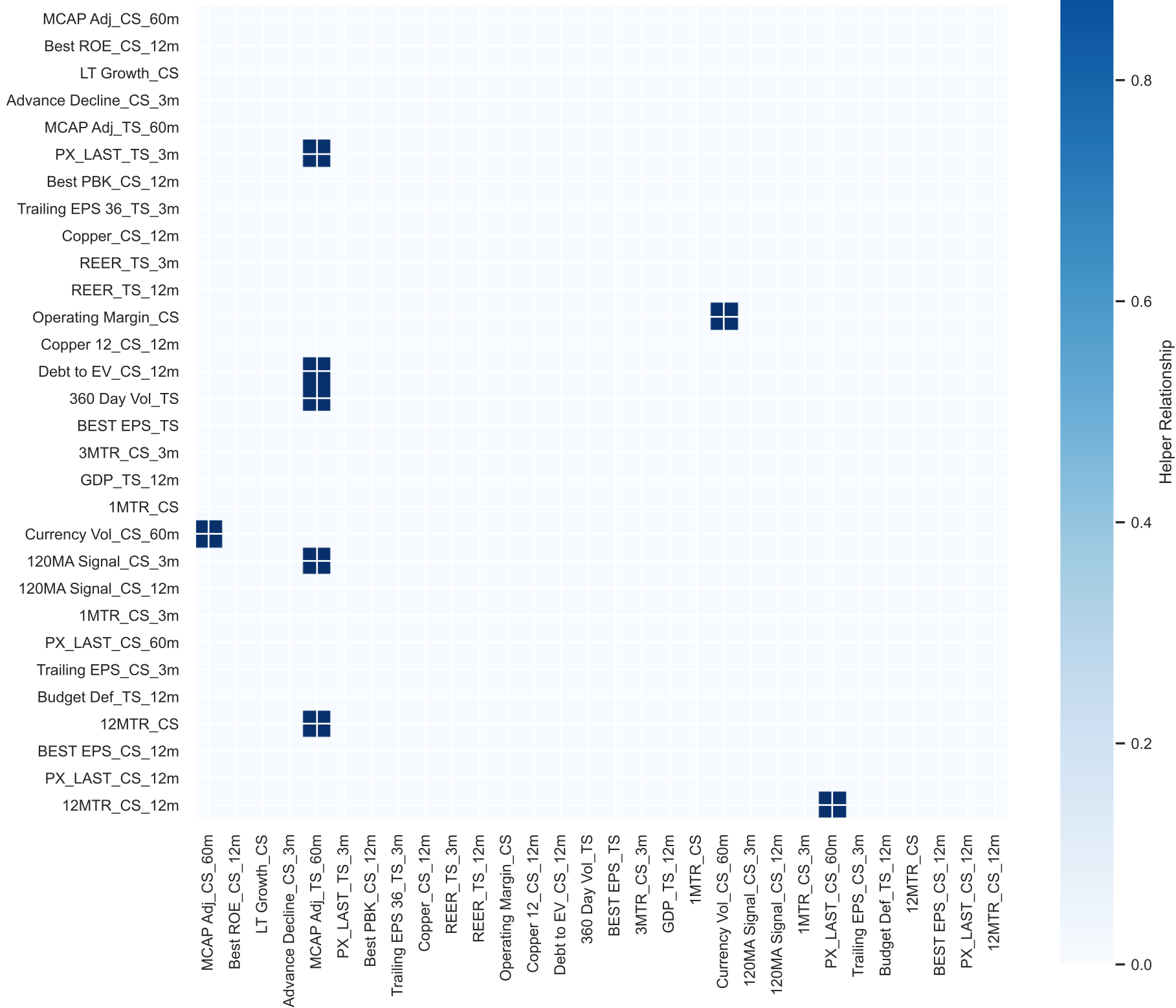
Generated: 2025-05-15 18:03:06

Total Windows: 236
Total Factors: 424

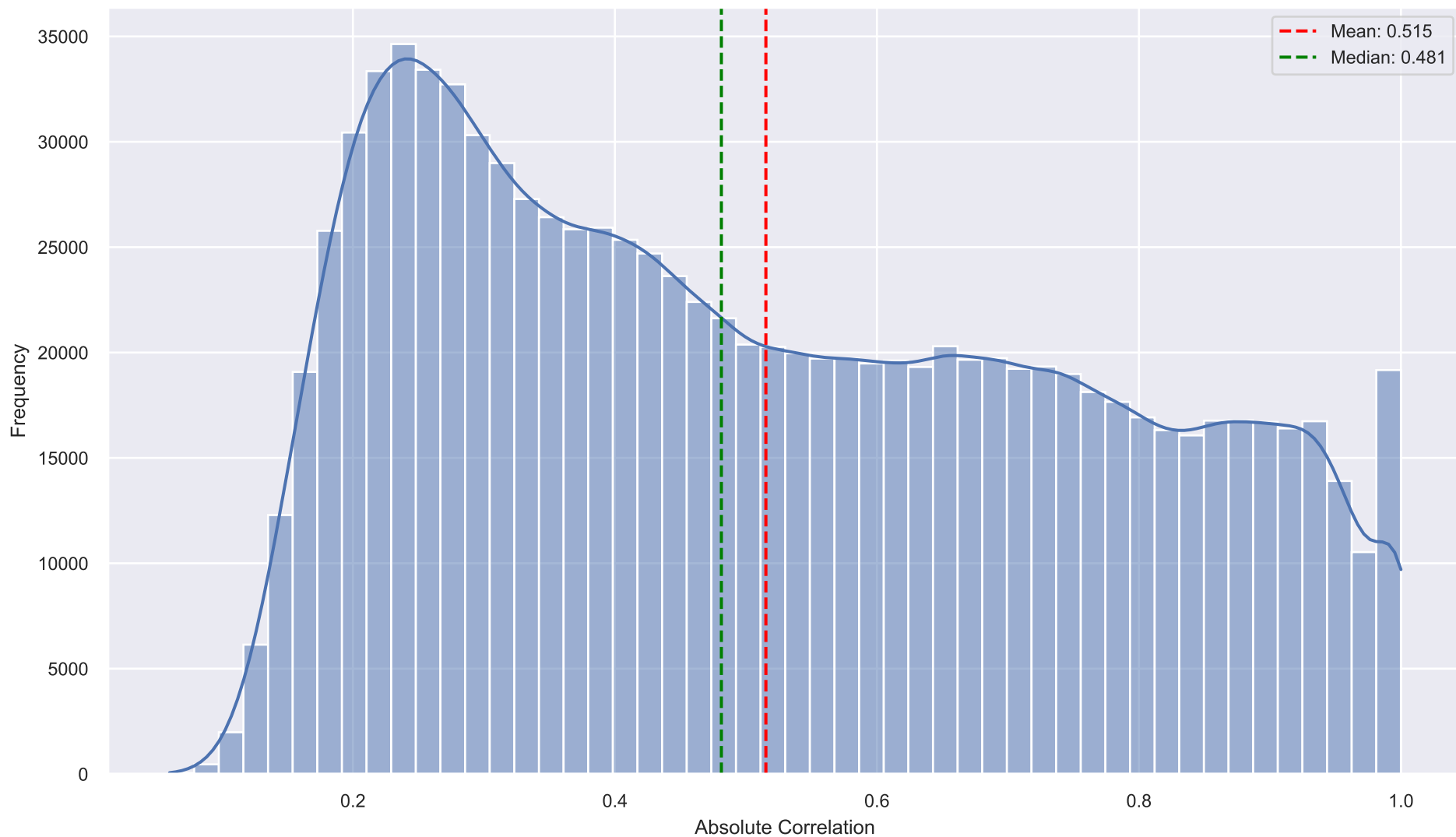
Top 20 Most Frequently Selected Helper Factors (Across All Windows)



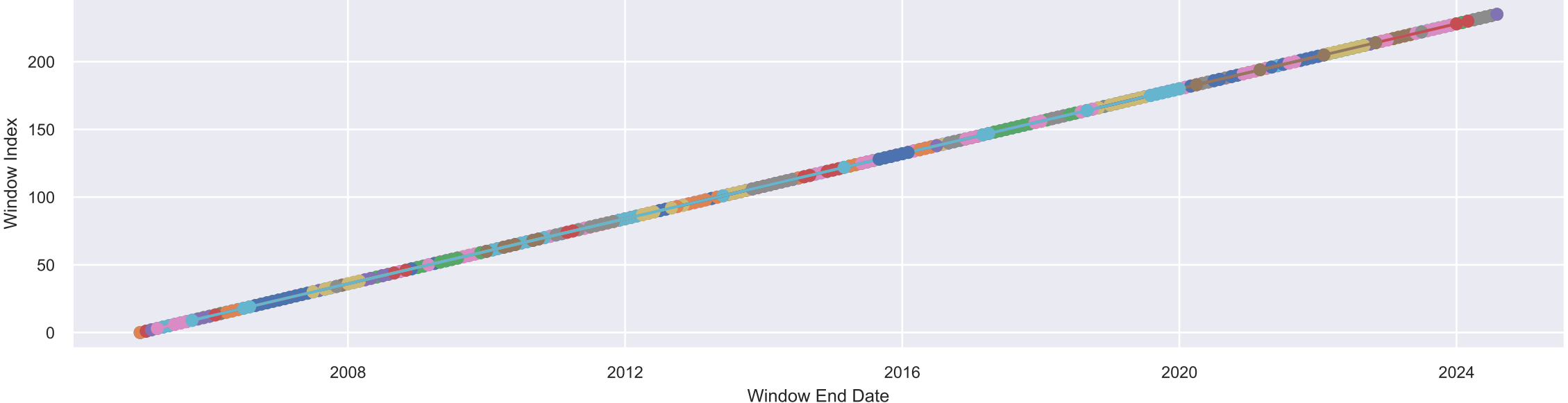
Helper Relationships for Window 119 (Sample of 30 Factors)



Distribution of Absolute Correlation Values for Selected Helper Features

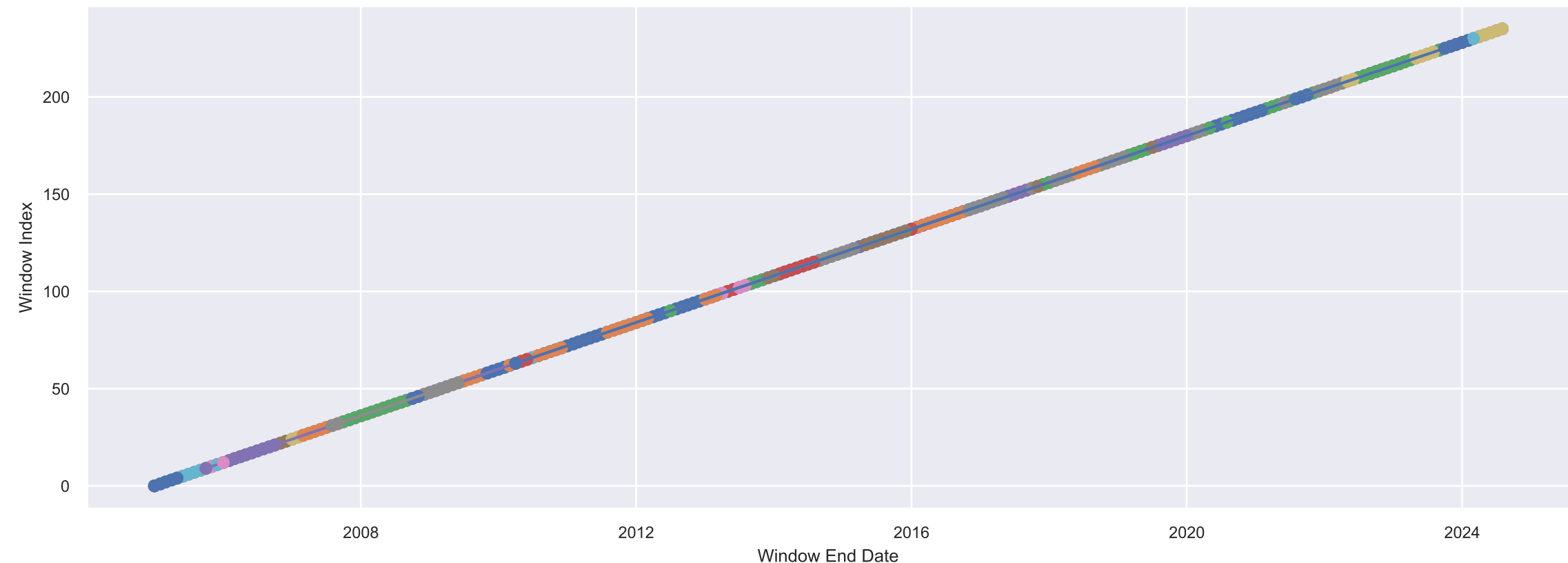


Helper Feature Stability for Target Factor: Currency_TS_3m



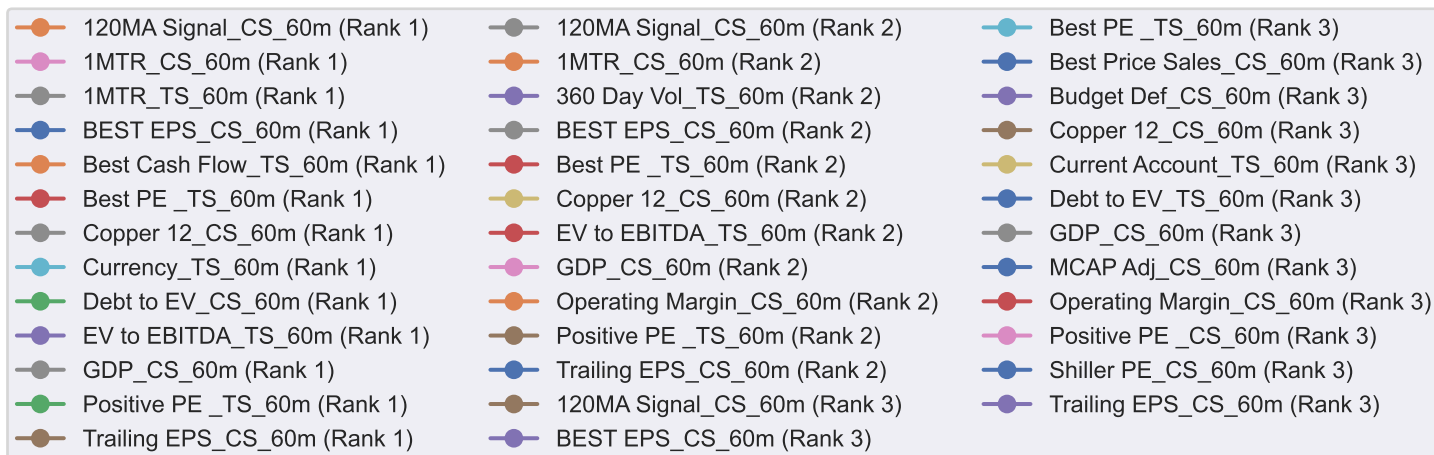
- | | | |
|----------------------------------|------------------------------------|------------------------------------|
| 10Yr Bond_CS_60m (Rank 1) | 1MTR_CS_60m (Rank 2) | BEST EPS_CS_60m (Rank 3) |
| 12-1MTR_TS_60m (Rank 1) | Agriculture 12_CS_60m (Rank 2) | Bloom Country Risk_CS_60m (Rank 3) |
| 1MTR_TS_60m (Rank 1) | BEST EPS_TS_60m (Rank 2) | Currency 12_TS_60m (Rank 3) |
| Agriculture 12_CS_60m (Rank 1) | Bloom Country Risk_CS_60m (Rank 2) | Currency_TS_60m (Rank 3) |
| Best PE_CS_60m (Rank 1) | Currency 12_CS_60m (Rank 2) | Current Account_CS_60m (Rank 3) |
| Currency 12_CS_60m (Rank 1) | Current Account_CS_60m (Rank 2) | Debt to GDP_CS_60m (Rank 3) |
| Currency_TS_60m (Rank 1) | Debt to GDP_CS_60m (Rank 2) | EV to EBITDA_TS_60m (Rank 3) |
| Current Account_CS_60m (Rank 1) | GDP_CS_60m (Rank 2) | GDP_CS_60m (Rank 3) |
| Inflation_TS_60m (Rank 1) | Inflation_CS_60m (Rank 2) | Inflation_TS_60m (Rank 3) |
| Oil_CS_60m (Rank 1) | Inflation_TS_60m (Rank 2) | Mcap Weights_CS_60m (Rank 3) |
| PX_LAST_CS_60m (Rank 1) | LT Growth_TS_60m (Rank 2) | Positive PE_TS_60m (Rank 3) |
| RSI14_TS_60m (Rank 1) | MCAP Adj_CS_60m (Rank 2) | REER_CS_60m (Rank 3) |
| Tot Return Index_CS_60m (Rank 1) | PX_LAST_CS_60m (Rank 2) | RSI14_TS_60m (Rank 3) |
| Trailing EPS 36_TS_60m (Rank 1) | RSI14_TS_60m (Rank 2) | Tot Return Index_CS_60m (Rank 3) |
| Trailing EPS_CS_60m (Rank 1) | Tot Return Index_CS_60m (Rank 2) | Trailing EPS 36_CS_60m (Rank 3) |
| 10Yr Bond 12_CS_60m (Rank 2) | 120MA_CS_60m (Rank 3) | Trailing EPS_CS_60m (Rank 3) |
| 10Yr Bond_CS_60m (Rank 2) | Agriculture 12_TS_60m (Rank 3) | Trailing EPS_TS_60m (Rank 3) |
| 120MA_CS_60m (Rank 2) | Agriculture_TS_60m (Rank 3) | |

Helper Feature Stability for Target Factor: PX_LAST_TS_60m

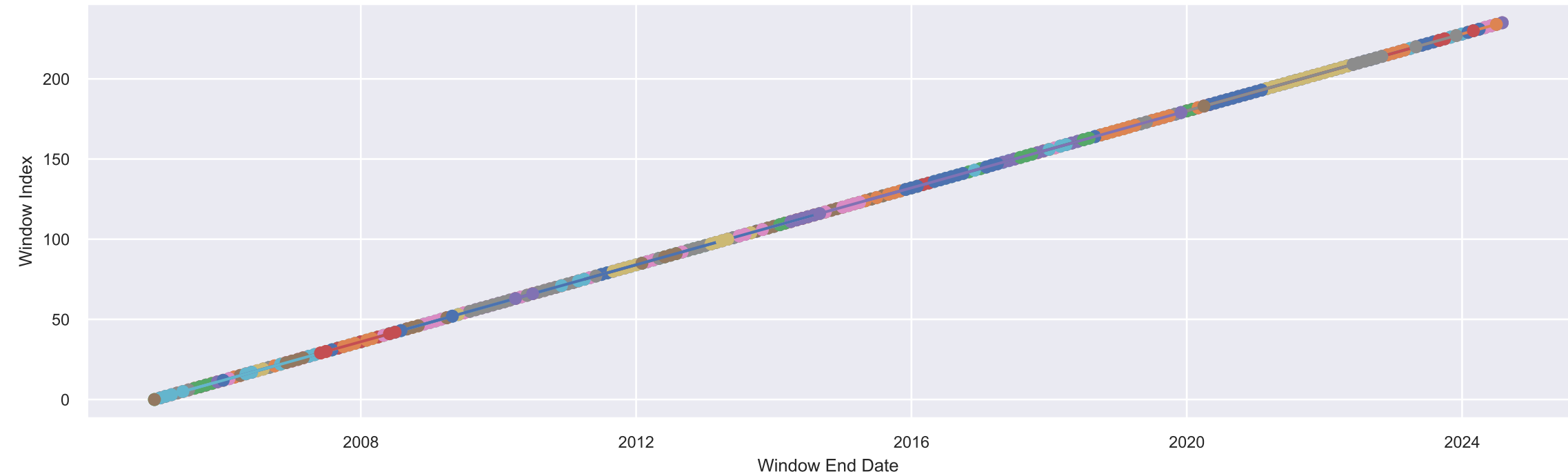


- | | | |
|----------------------------------|----------------------------------|----------------------------------|
| 120MA Signal_CS_60m (Rank 1) | Budget Def_CS_60m (Rank 2) | Best ROE_CS_60m (Rank 3) |
| Best Price Sales_TS_60m (Rank 1) | Currency_TS_60m (Rank 2) | Currency 12_CS_60m (Rank 3) |
| EV to EBITDA_CS_60m (Rank 1) | Debt to EV_TS_60m (Rank 2) | Currency_CS_60m (Rank 3) |
| LT Growth_CS_60m (Rank 1) | LT Growth_CS_60m (Rank 2) | Currency_TS_60m (Rank 3) |
| Tot Return Index_TS_60m (Rank 1) | MCAP Adj_TS_60m (Rank 2) | Debt to EV_TS_60m (Rank 3) |
| 120MA Signal_CS_60m (Rank 2) | REER_TS_60m (Rank 2) | MCAP Adj_TS_60m (Rank 3) |
| 120MA Signal_TS_60m (Rank 2) | Tot Return Index_TS_60m (Rank 2) | MCAP_TS_60m (Rank 3) |
| 12MTR_TS_60m (Rank 2) | 12-1MTR_TS_60m (Rank 3) | Operating Margin_CS_60m (Rank 3) |
| BEST EPS_TS_60m (Rank 2) | 120MA Signal_CS_60m (Rank 3) | REER_TS_60m (Rank 3) |
| Best PE_TS_60m (Rank 2) | BEST EPS_TS_60m (Rank 3) | RSI14_CS_60m (Rank 3) |
| Best Price Sales_TS_60m (Rank 2) | Best Price Sales_TS_60m (Rank 3) | Tot Return Index_TS_60m (Rank 3) |

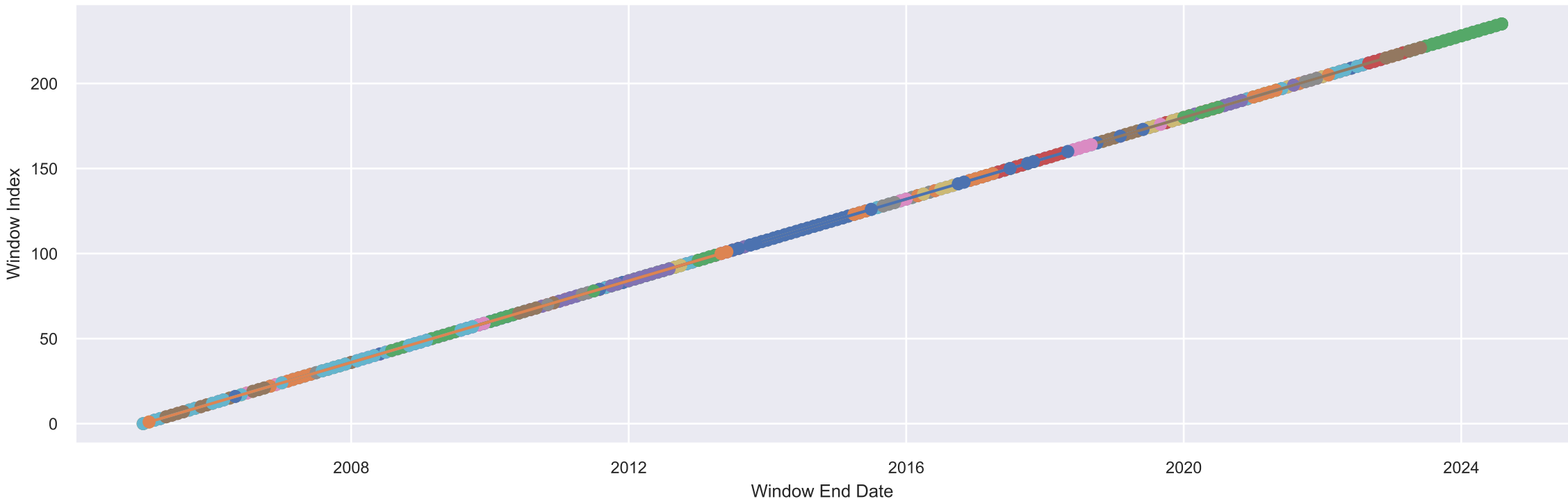
Helper Feature Stability for Target Factor: Best PE _TS



Helper Feature Stability for Target Factor: Copper_TS_12m



Helper Feature Stability for Target Factor: Budget Def_CS_12m



Average Strength of Helper Correlations Over Time



Summary of Helper Feature Analysis:

Total Windows: 236
Total Factors: 424
Helper Features per Factor: 10

Overall Correlation Statistics:
Mean Absolute Correlation: 0.515
Median Absolute Correlation: 0.481
Min Absolute Correlation: 0.060
Max Absolute Correlation: 1.000

Top 5 Most Frequently Selected Helper Factors:

1. Agriculture 12_TS_60m (15005 times)
2. Copper 12_TS_60m (13603 times)
3. Trailing EPS_CS_60m (13498 times)
4. EV to EBITDA_TS_60m (13305 times)
5. MCAP Adj_TS_60m (13128 times)