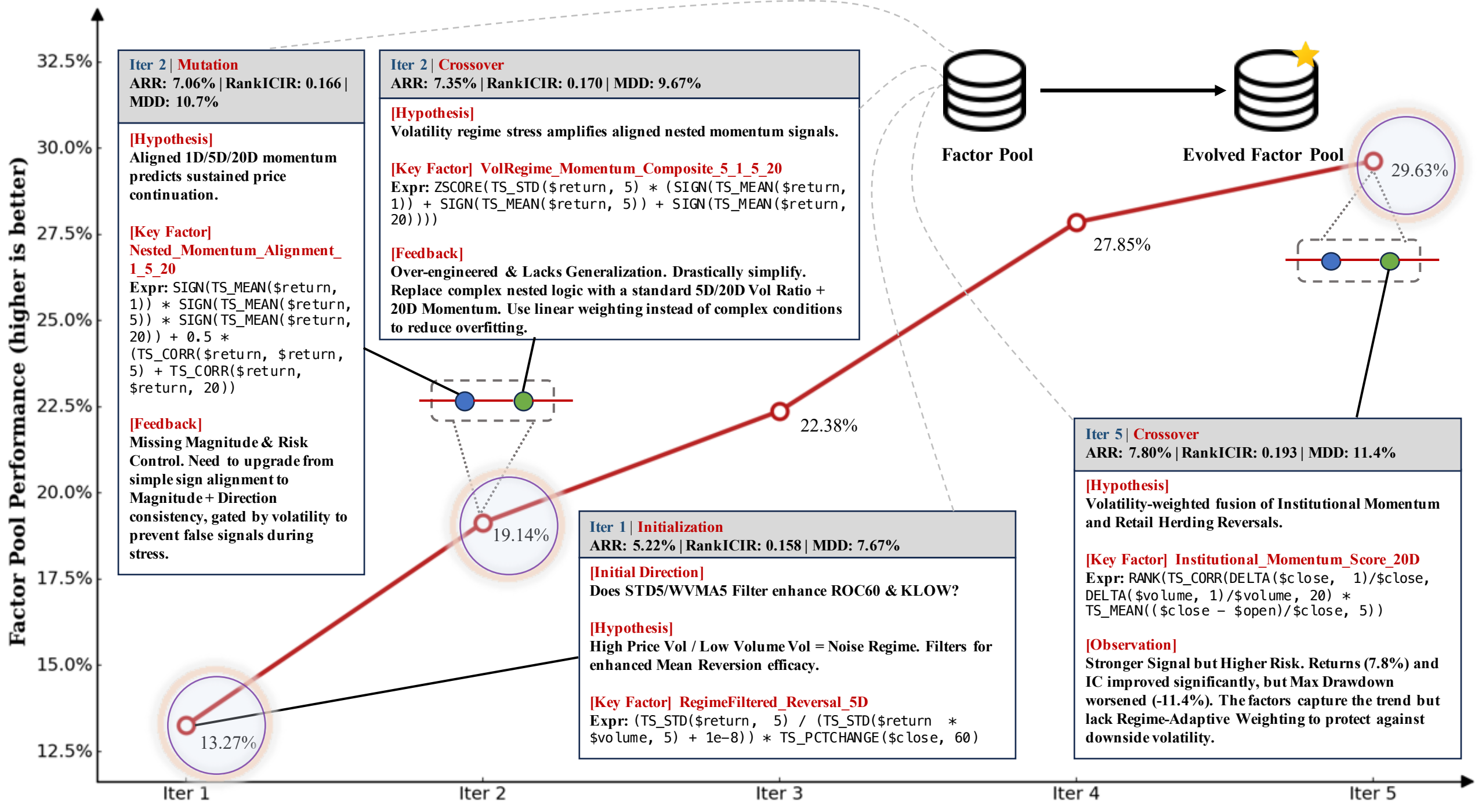
Factor Pool Performance (higher is better)
32.5%
30.0%
27.5%
25.0%
22.5%
20.0%
17.5%
15.0%
12.5%
Iter 1
Iter 2
Iter 3
Iter 4
Iter 5
13.27%
19.14%
22.38%
27.85%
29.63%
Factor Pool
Evolved Factor Pool
Iter 2 | Mutation
ARR: 7.06% | RankICIR: 0.166 | MDD: 10.7%
[Hypothesis]
Aligned 1D/5D/20D momentum predicts sustained price continuation.
[Key Factor]
Nested_Momentum_Alignment_1_5_20
Expr: SIGN(TS_MEAN($return, 1)) * SIGN(TS_MEAN($return, 5)) * SIGN(TS_MEAN($return, 20)) + 0.5 * (TS_CORR($return, $return, 5) + TS_CORR($return, $return, 20))
[Feedback]
Missing Magnitude & Risk Control. Need to upgrade from simple sign alignment to Magnitude + Direction consistency, gated by volatility to prevent false signals during stress.
Iter 2 | Crossover
ARR: 7.35% | RankICIR: 0.170 | MDD: 9.67%
[Hypothesis]
Volatility regime stress amplifies aligned nested momentum signals.
[Key Factor] VolRegime_Momentum_Composite_5_1_5_20
Expr: ZSCORE(TS_STD($return, 5) * (SIGN(TS_MEAN($return, 1)) + SIGN(TS_MEAN($return, 5)) + SIGN(TS_MEAN($return, 20))))
[Feedback]
Over-engineered & Lacks Generalization. Drastically simplify. Replace complex nested logic with a standard 5D/20D Vol Ratio + 20D Momentum. Use linear weighting instead of complex conditions to reduce overfitting.
Iter 1 | Initialization
ARR: 5.22% | RankICIR: 0.158 | MDD: 7.67%
[Initial Direction]
Does STD5/WVMA5 Filter enhance ROC60 & KLOW?
[Hypothesis]
High Price Vol / Low Volume Vol = Noise Regime. Filters for enhanced Mean Reversion efficacy.
[Key Factor] RegimeFiltered_Reversal_5D
Expr: (TS_STD($return, 5) / (TS_STD($return * $volume, 5) + 1e-8)) * TS_PCTCHANGE($close, 60)
Iter 5 | Crossover
ARR: 7.80% | RankICIR: 0.193 | MDD: 11.4%
[Hypothesis]
Volatility-weighted fusion of Institutional Momentum and Retail Herding Reversals.
[Key Factor] Institutional_Momentum_Score_20D
Expr: RANK(TS_CORR(DELTA($close, 1)/$close, DELTA($volume, 1)/$volume, 20) * TS_MEAN(($close - $open)/$close, 5))
[Observation]
Stronger Signal but Higher Risk. Returns (7.8%) and IC improved significantly, but Max Drawdown worsened (-11.4%). The factors capture the trend but lack Regime-Adaptive Weighting to protect against downside volatility.