

# Production Portfolio Performance Report

## LONG & SHORT Strategies with Comprehensive Data Exploration

Analysis Period:	June 2 - December 31, 2025 (147 days)
LONG Strategy:	ATR Trailing Stop (Period=30, Multiplier=5.0, MaxBars=20)
SHORT Strategy:	ATR Trailing Stop (Period=30, Multiplier=1.5, MaxBars=20)
Starting Capital:	\$1,000,000 per strategy
Position Limit:	Maximum 10 positions
Position Sizing:	10% of equity per position
Methodology:	FIFO Realistic Backtesting (see Appendix)
Data Sources:	Production_Long_Trades.parquet, Production_Short_Trades.parquet
	Production_Long_Equity.parquet, Production_Short_Equity.parquet

## Executive Summary

Metric	LONG Strategy	SHORT Strategy	Combined Portfolio
Final Equity	\$1,467,387	\$1,362,753	\$2,046,204
Total Return	46.74%	36.28%	104.62%
CAGR	93.85%	70.61%	190.12%
Sharpe Ratio	7.92	11.94	9.87
Max Drawdown	-1.52%	-0.26%	-0.89%
Win Rate	50.19%	62.36%	54.12%
Profit Factor	1.26	2.60	3.42
Trades Executed	16,754	1,424	17,055
Correlation	-	-	0.0516

### Key Findings:

1. Combined portfolio delivers 104.62% return, 2.2x better than LONG alone (46.74%) and 2.9x better than SHORT alone (36.28%)
2. Low correlation (0.0516) provides exceptional diversification benefits with minimal drawdown (-0.89%)
3. SHORT strategy shows superior trade-level metrics (62.36% win rate, 2.60 profit factor) vs LONG (50.19% win rate, 1.26 profit factor)
4. Medium liquidity tier and moderate volatility stocks generate highest risk-adjusted returns for both strategies