Bitcoin Sentiment Trader Analysis

PDF report generated from the executed notebook outputs, CSV tables, and exported figures.

Executive Summary

- Coverage: 211,218 matched trades, 32 accounts, 246 symbols, and 480 trading dates.

- Main Fear vs Greed closed-PnL test: Mann-Whitney p-value 1.305e-68, rank-biserial effect size 0.0565.

- Win-rate comparison: Fear 42.08% vs Greed 38.48%, chi-square p-value 3.555e-34.

- Tail-risk result: Extreme Fear has the highest severe-loss rate at 2.86%.

- Regression result: sentiment value coefficient 0.000194, p-value 2.333e-110, on winsorized PnL-to-size.

Regime Performance

classification	n_trades	win_rate	tail_loss_rate	median_trade_size_usd	total_closed_pnl
Extreme Fear	21,400	37.06%	2.86%	$766.15	$739,110.25
Fear	61,837	42.08%	0.74%	$735.96	$3,357,155.44
Neutral	37,686	39.70%	0.85%	$547.65	$1,292,920.68
Greed	50,303	38.48%	1.03%	$555.00	$2,150,129.27
Extreme Greed	39,992	46.49%	0.52%	$500.05	$2,715,171.31

Core Figures

Figure 1. Regime performance dashboard.

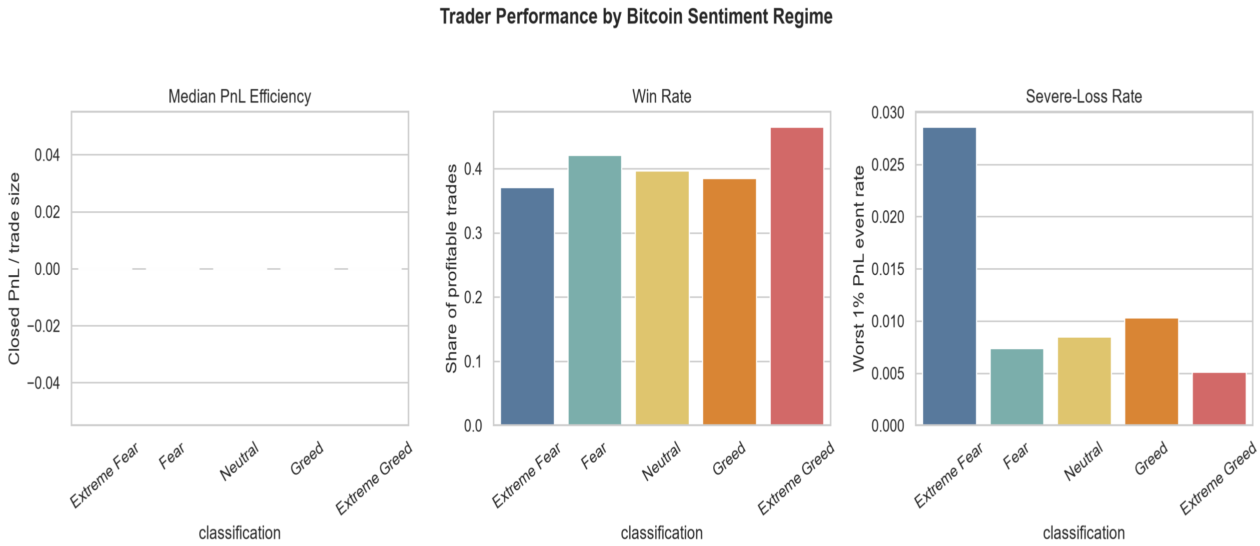


Figure 2. Trade size by sentiment regime.

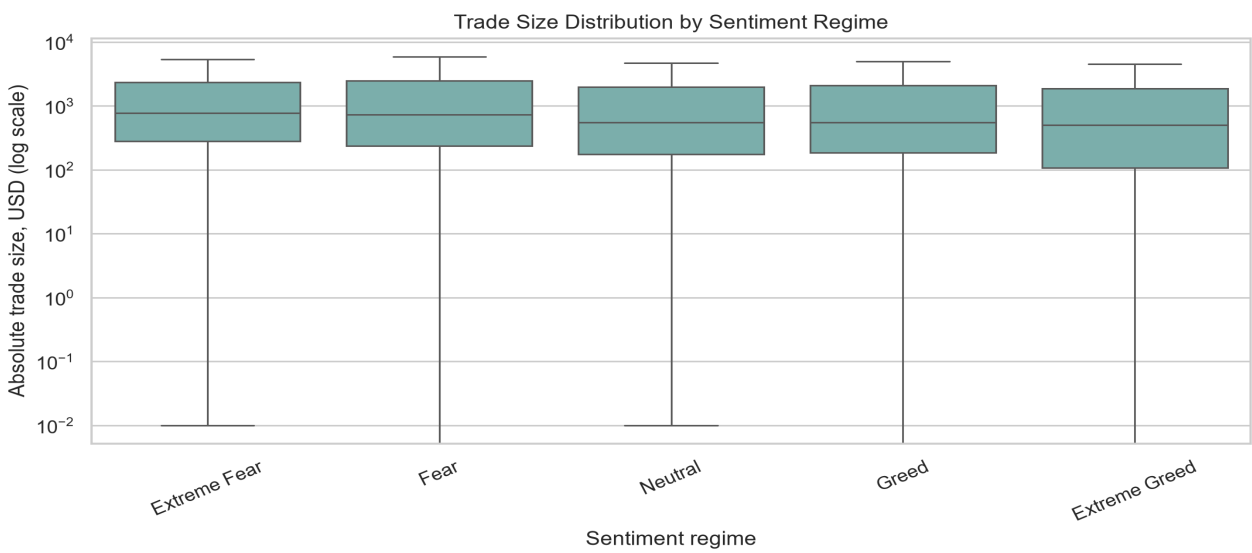
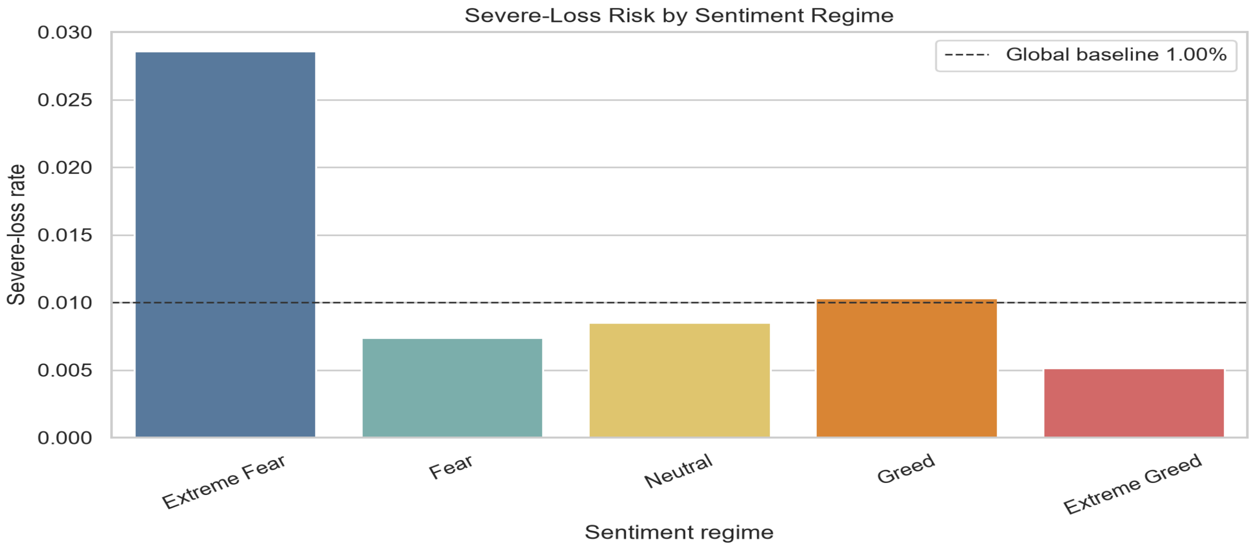


Figure 3. Severe-loss risk by sentiment regime.


Severe-Loss Risk by Sentiment Regime
Global baseline 1.00%
Severe-loss rate
0.030
0.025
0.020
0.015
0.010
0.005
0.000
Extreme Fear
Fear
Neutral
Greed
Extreme Greed
Sentiment regime

Additional Figures

Figure 4. Daily PnL by sentiment-change direction.

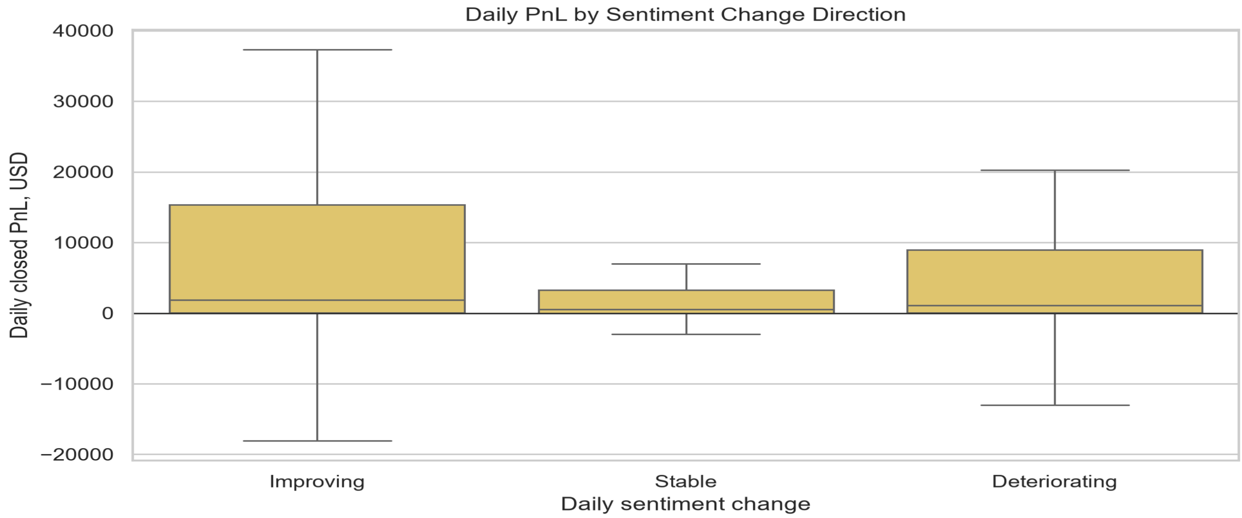


Figure 5. Top versus bottom trader groups.

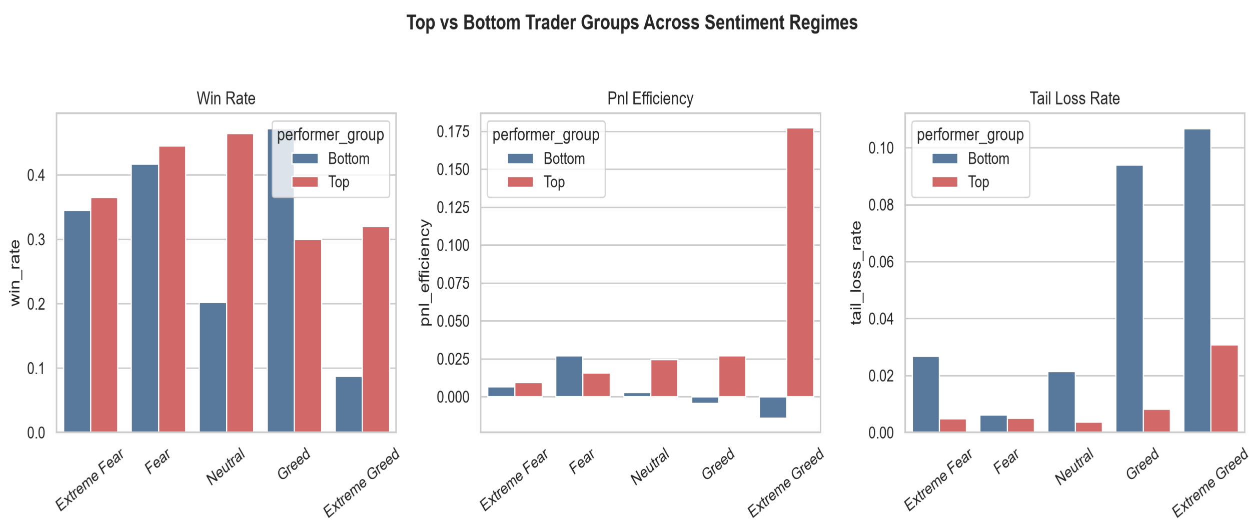


Figure 6. Regression coefficients with confidence intervals.

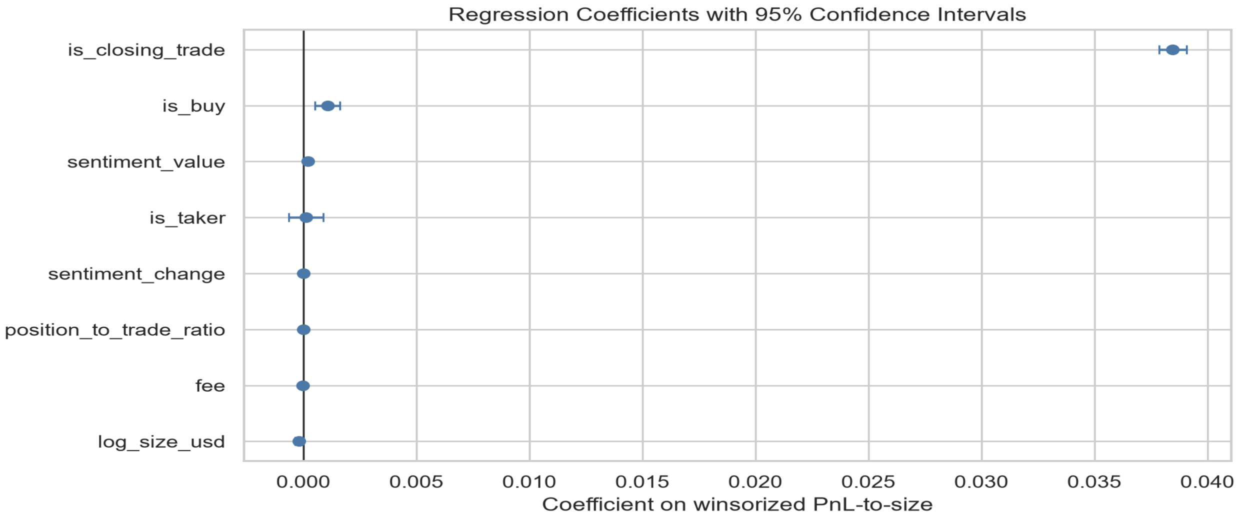
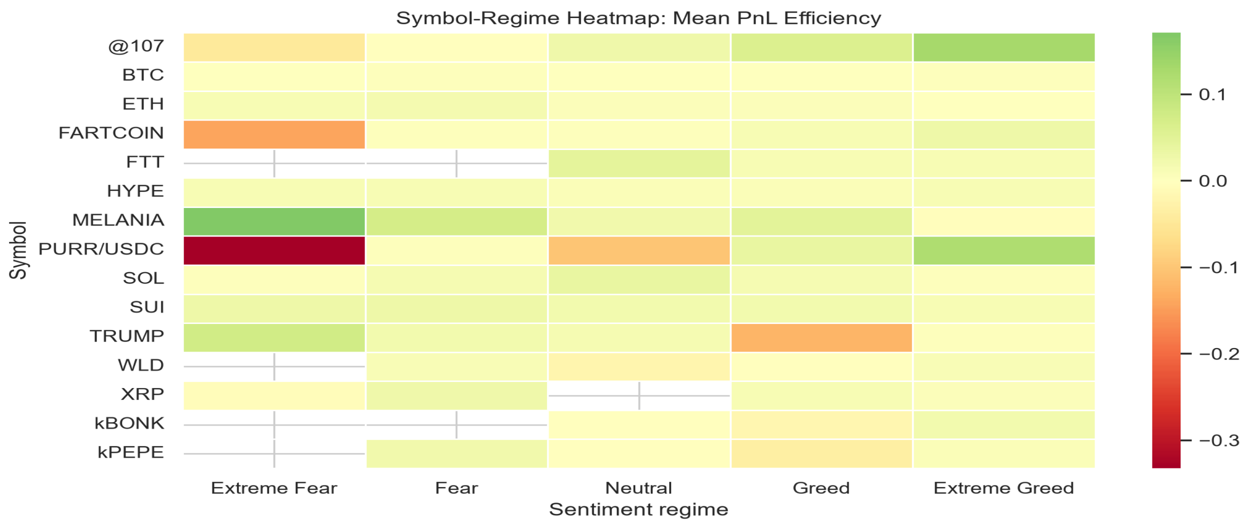


Figure 7. Symbol-regime heatmap.



Business Recommendations

finding	recommended_action	confidence_leve
Extreme Fear has the highest severe-loss rate.	Apply tighter risk review and position-size caps during Extreme Fear.	Medium
Fear and Greed trade-level PnL distributions differ statistically.	Monitor sentiment regime as a risk-context variable rather than a standalone trading signal.	High
Median PnL efficiency is strongest in Extreme Fear.	Use this regime as a candidate context for strategy allocation review.	Medium
Median trade size is largest in Extreme Fear.	Review whether larger sizing coincides with weaker efficiency or higher tail risk.	Medium
Regression controls show sentiment is an association, not a causal estimate.	Use regression output for monitoring and hypothesis generation, not direct automation.	Medium

Limitations: this is observational historical analysis, not causal inference. Closed PnL may only be recorded on closing or reducing trades, account rows are repeated observations, Bitcoin sentiment may not represent every traded symbol, and leverage is not present in the dataset.