Impact of Market Sentiment on Trader Behavior and Profitability

Ultimate Internship-Selection Analytical Report

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1. Executive Summary

This analysis evaluates how trader profitability and behavioral risk exposure vary across market sentiment regimes (Fear, Greed, Neutral). Trade-level data was merged with daily sentiment classification to examine performance dispersion, regime amplification effects, and segment-level profitability dynamics.

- Greed regimes generate the highest average profitability (53.88), followed by Fear (49.21) and Neutral (34.31).
- Win rate improves marginally during Greed (42.03%) compared to Fear (40.79%) and Neutral (39.70%).
- High position-size traders dramatically outperform, especially during Greed (108.03 average PnL).
- Sentiment acts as a performance amplifier, particularly for aggressive trading segments.

2. Data Overview

Sentiment	Observations
Greed	90,295
Fear	83,237
Neutral	37,686

The dataset contains a balanced distribution of Fear and Greed regimes, enabling statistically meaningful comparative analysis.

3. Performance by Sentiment

Sentiment	Mean PnL	Win Rate
Greed	53.88	42.03%
Fear	49.21	40.79%
Neutral	34.31	39.70%

Interpretation: Profitability is highest during Greed regimes, with statistically significant improvement relative to Fear ($p < 0.05$). While the win rate increases modestly, average PnL expansion suggests larger payoff magnitudes during optimistic environments.

4. Segment-Level Performance Amplification

Size Bucket	Fear	Greed	Neutral
Low	2.97	6.39	2.19
High	87.65	108.03	69.58

Interpretation: High position-size traders outperform substantially across all regimes, with peak profitability during Greed (108.03). This indicates sentiment-driven performance amplification, where aggressive capital deployment benefits disproportionately from momentum-driven environments. However, this also implies elevated volatility and drawdown risk.

5. Strategic Implications

- Adopt regime-based capital allocation to expand exposure during Greed regimes.
- Implement leverage caps during Fear to control downside risk.
- Prioritize high-performing segments while incorporating volatility-adjusted controls.

6. Conclusion

Market sentiment materially influences trader profitability and behavioral risk-taking. Greed regimes amplify performance, particularly for high-risk trading segments. Integrating sentiment signals into capital allocation frameworks can enhance risk-adjusted performance and improve regime adaptability.