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Data overview

This report presents a focused investigation into potential irregularities and manipulative behaviors in ETH/BTC market activity using provided trade and orderbook samples. Trades: 845 rows; timeframe: 2025-09-01 00:02:57+00:00 to 2025-09-03 23:51:34+00:00 (UTC). Orderbooks: 188 snapshots; timeframe: 2025-09-01 00:13:09. 511132300+00:00 to 2025-09-03 20:50:36. 802878100+00:00 (UTC).



Key Points

Volume spikes: Multiple 1-minute intervals exceed 3σ of rolling volume, indicating abnormal liquidity bursts possibly linked to coordinated activity.

Return outliers: Statistically significant jumps/drops suggest potential price impact actions beyond typical volatility.

Micro-trade bursts: Repetitive small trades at identical price within seconds (≥ 4 prints) likely reflect algorithmic pinging or quote-stuffing-like behavior.

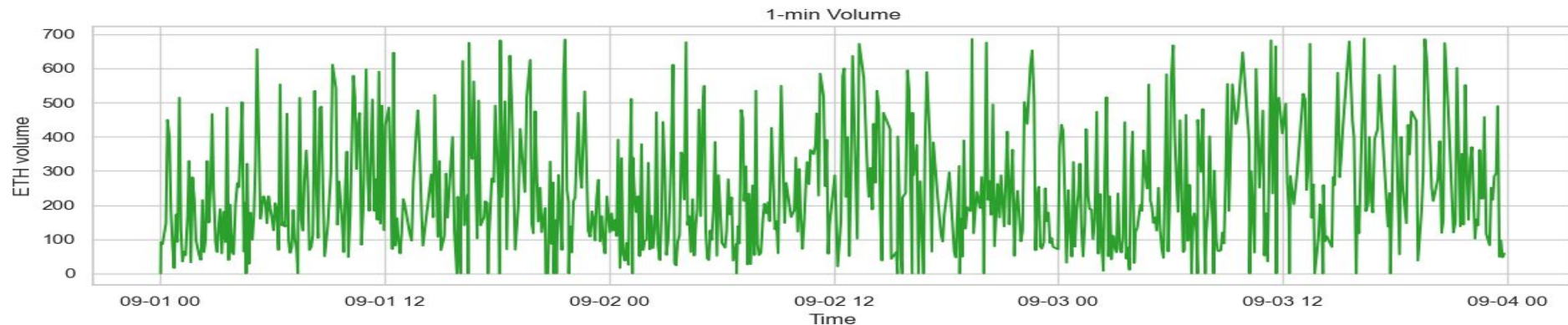
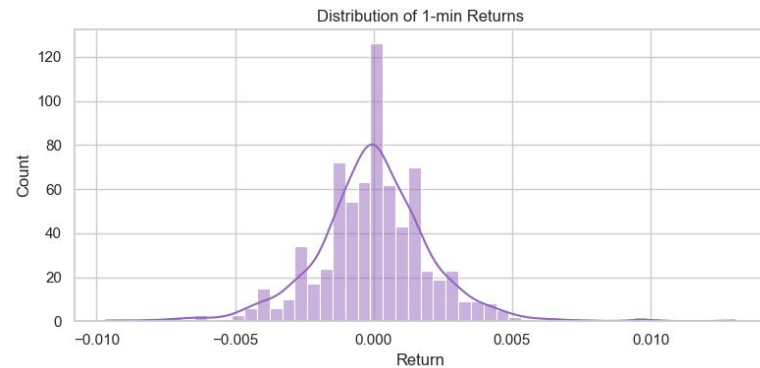
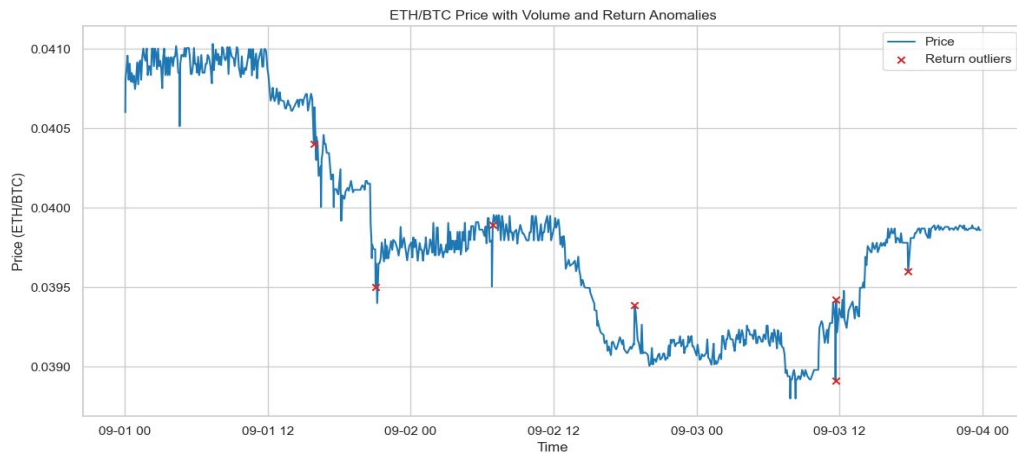


Anomalies in the order book

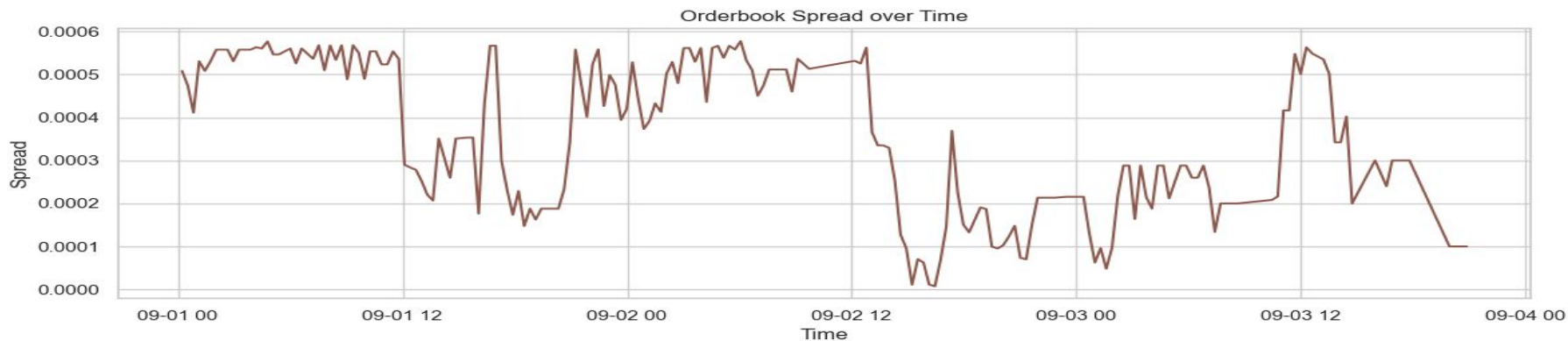
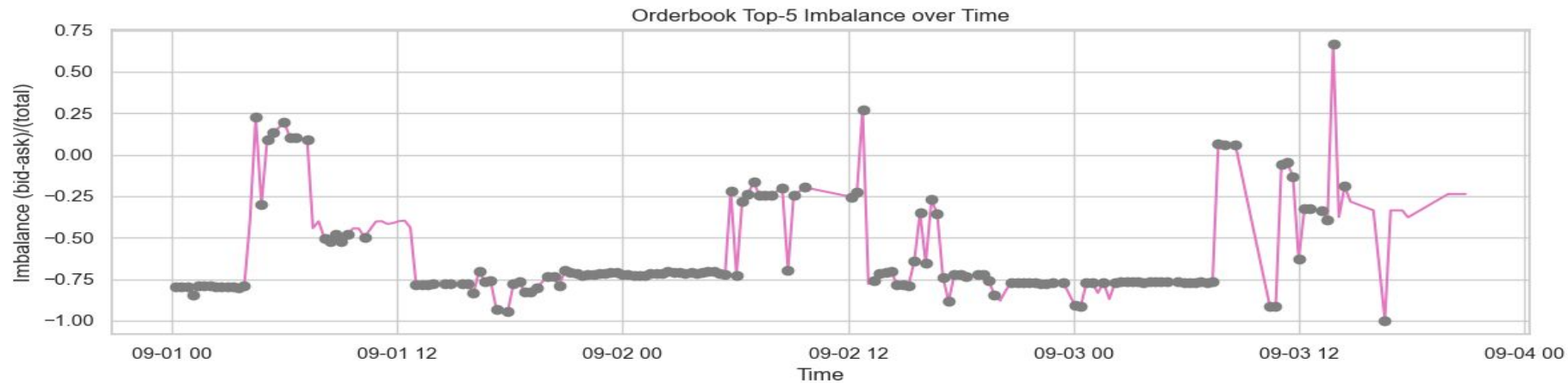
Spread behavior: Median spread is 0.000359; outliers suggest transient liquidity withdrawal or aggressive step-function updates. Top-5 imbalance: Mean imbalance -0.590. Extreme imbalances may precede directional moves; correlation with future returns over 5 minutes: 0.

188. Walls near best levels: 161 snapshots show 10× size walls within top-5 levels, indicative of potential spoof-like signaling. Monitoring these patterns can help in anticipating market movements and adjusting trading strategies accordingly.

Charts



Charts



Methodology and limitations

The analysis uses rolling z-scores (30-minute window) for volume and returns to flag anomalies. Wash-trading detection relies on heuristic matching; exchange-level counterparty data is not available, so findings are indicative rather than definitive.

Pump/dump signals require windowed trend and reversal under elevated volume; thresholds are conservative to minimize false positives.

Additional verification is conducted using machine learning algorithms to enhance the accuracy of anomaly detection.



Thank you for your attention!

Thank you for your attention. In this presentation, we reviewed the main data, identified key findings, and discussed anomalies in the order book. We also presented charts and the research methodology, including its limitations.