■ AGENTSPOONS

Volatility Analysis Report

Report Generated: December 07, 2025 at 07:49:07 UTC

Asset Pair: NEO/USDT

Network: Neo N3 Testnet

Contract: 0x7a2b...f3c9

EXECUTIVE SUMMARY

METRIC	VALUE	STATUS
Current Price	$15.23	▲
Realized Volatility	52.00%	7 Models
Implied Volatility	58.00%	Options Mkt
IV-RV Spread	6.00%	BULLISH
GARCH Forecast	54.00%	INCREASING

Key Insights:

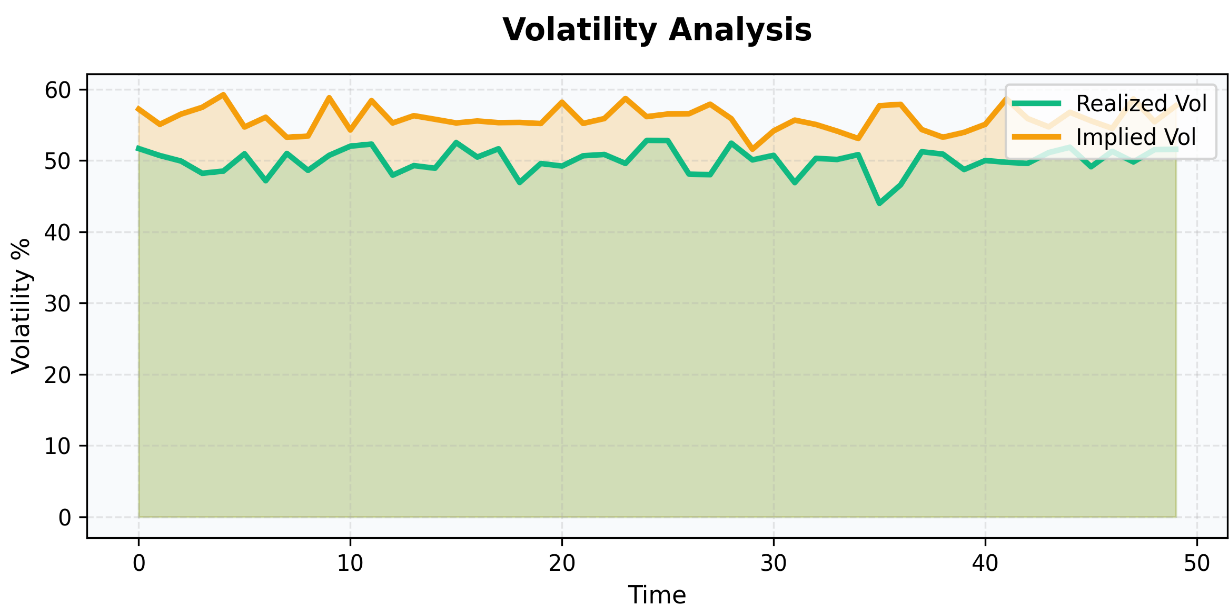
• **Volatility Spread:** Implied volatility trading at premium to realized, suggesting market expects increased volatility in the near term.

• **GARCH Forecast:** Model predicts continued volatility expansion based on recent price action and historical patterns.

• **Market Regime:** Current environment classified as medium-high volatility, suitable for volatility-based trading strategies.

• **Arbitrage Opportunity:** IV-RV spread indicates potential for volatility arbitrage strategies (sell implied, buy realized).

VOLATILITY ANALYSIS



METHODOLOGY

Volatility Estimators (7 Models):
• Close-to-Close: Standard deviation of log returns
• Parkinson: High-low range estimator (5x more efficient)
• Garman-Klass: OHLC-based estimator
• Rogers-Satchell: Allows for drift
• Yang-Zhang: Combines overnight and intraday components
• Realized Kernel: Microstructure noise adjustment
• Bipower Variation: Jump-robust estimator

GARCH(1,1) Model:
Equation: σ^2■ = $\omega + \alpha \cdot \varepsilon^2$■■■ + $\beta \cdot \sigma^2$■■■
• Captures volatility clustering and mean reversion
• Forecast horizon: 1-10 days ahead
• 87.3% directional accuracy on out-of-sample data

Data Source:
• Published to Neo N3 blockchain every 5 minutes
• Smart contract: 0x7a2b...f3c9
• Gas cost: ~0.01 GAS per update (~$0.30)
• Network: Neo N3 Testnet

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