

Fractal Volatility Index for MSFT : 0.513. Market Wide FVI:0.478

(0 - 0.33: Stable, 0.33 - 0.66: Moderate Volatility, 0.66 - 1: High Volatility)

Red: High Risk FVI zone, Orange: Medium Risk FVI zone, Green: Low Risk FVI zone



Verv Stock Analysis Report: Microsoft Corporation MSFT FVI 0.513

Analysis Period: 2021-10-02 to 2026-10-02

The Fractal Volatility Index (FVI) is scaled between 0 and 1 reflecting the stock's overall volatility. A higher score indicates greater unpredictability and market instability.

Unlike traditional volatility indicators like VIX or Beta, FVI does not track short-term fluctuations—it detects hidden instability before it manifests in price swings.

FVI is a composite score that incorporates Lyapunov Exponent, Hurst Exponent, and Detrended Fluctuation Analysis (DFA).

Breakout Probability

Breakout Probability Score (BPS): 0.758

Breakout Probability Score (BPS) quantifies price momentum likelihood: BPS > 1.5 suggests high breakout potential, while BPS < 0.5 indicates consolidation.

(BPS > 1.5 High breakout potential - Strong momentum, watch for confirmation.)

(BPS 0.5 - 1.5 Moderate breakout likelihood - Possible move, monitor closely.)

(BPS < 0.5 Low breakout probability - Likely consolidation or range-bound.)

Request ID: FVI

Account ID: WeeklyReport

Fractal & Statistical Analysis

FVI Score: 0.513 (Fractal Volatility Index FVI)

DFA Result: 0.5213 (Detrended Fluctuation Analysis)

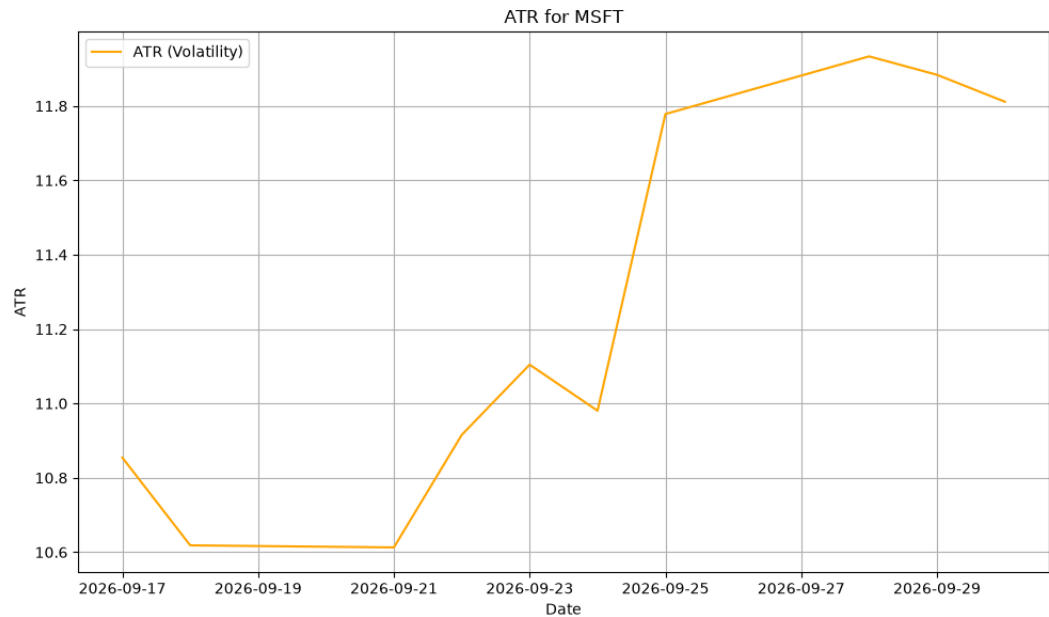
Lyapunov Exponent: 0.0157 (Measures chaos and predictability)

Hurst Exponent: 0.5161 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 512.90 is within the Bollinger Bands range (485.87 - 515.13).
Latest ATR: 11.8115

Average True Range (ATR)



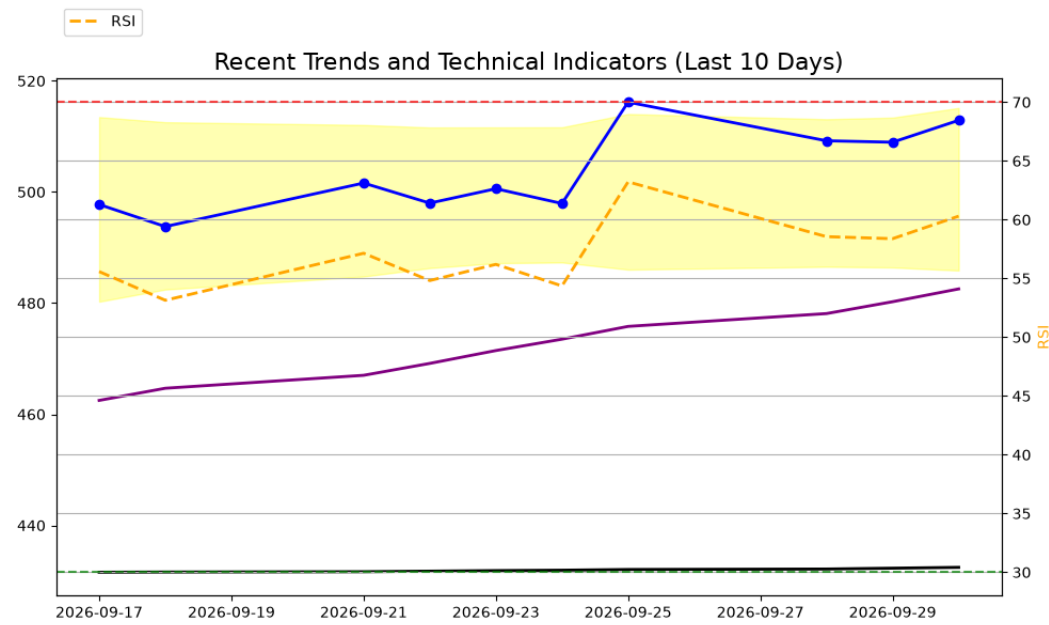
The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

Low ATR (below 2): Stable stock, Moderate ATR (2-5): Mild volatility, High ATR (above 5): Highly volatile stock

Technical Indicators

Technical indicators are based on historical price and volume data used in technical analysis to forecast financial market direction. They help identify trends, momentum, volatility, and potential entry and exit points in the market.

Technical Indicators



Left y axis - Stock Price. Right y axis - RSI range values (30 - 70)

Close Price(blue line with circles) - Key indicator of the stock's price action and is often used to identify trends or patterns. A rising close price generally indicates an upward trend, while a falling close price shows a downward trend.

SMA_50 and SMA_200 - (purple line SMA_50, black line SMA_200) Simple Moving Averages (SMA) calculated over 50 and 200 periods. Helps identify the direction of stock price trend.

Bollinger Bands - (shaded in yellow): Bollinger Bands consists of upper, middle and lower prices. The middle line is the moving average. Price reaching the upper band can indicate an overbought condition, suggesting the stock might be due for a pullback. Price touching the lower band could indicate an oversold condition, suggesting a potential buying opportunity. When the price moves outside the bands, it may indicate extreme conditions.

Relative Strength Index RSI - (orange dotted line): The RSI is a momentum oscillator that measures the speed and change of price movements. An RSI above 70 suggests the stock is overbought and might be due for a pullback. An RSI below 30 suggests the stock is oversold and might be due for a rebound. An RSI in between indicates a more neutral market condition.

AI Executive Assessment

1. Volatility Structure

The Fractal Volatility Index (FVI) for Microsoft Corporation (MSFT) is 0.513, which is slightly above the market-wide FVI of 0.478, indicating a relatively higher structural instability for MSFT. The Lyapunov Exponent at 0.0157 suggests a certain degree of sensitivity and divergence within the system, while the DFA at 0.521 indicates a scale-dependent correlation structure. The Hurst Exponent, slightly above 0.5, suggests a weak evidence of persistence over the measured series.

2. Breakout Evidence

The Breakout Probability Score (BPS) for MSFT is 0.7579, which suggests a somewhat strong evidence of a potential breakout. However, no strong breakout signal has been detected as the latest closing price of 512.90 is within the Bollinger Bands range (485.87 - 515.13). Therefore, the direction of a potential breakout is not determined.

3. Participation and Technical Context

The volume change for MSFT is 39.99%, and the latest Average True Range (ATR) is 11.81. These values indicate a significant change in trading volume and a moderate average price movement, respectively. However, without historical or price-normalised comparison, it is difficult to draw stronger conclusions from these values.

4. Macro and Sector Context

Comparing the FVIs for Gold (0.593), FX (0.434), and TWI (0.469), we observe varying degrees of structural instability in their respective series. The GHG sector sensitivity score for MSFT is 0.04825, indicating a low greenhouse gas impact for the Technology sector.

5. Risk Interpretation

The above evidence suggests a state of moderate uncertainty for MSFT, with a slightly elevated structural instability as indicated by its FVI. However, the breakout potential is somewhat strong as shown by the BPS, although no definitive breakout direction has been established.

6. Monitoring Implications

The indicators that merit continued observation include the FVI, BPS, volume change, and ATR. These metrics can provide important insights into the stock's volatility structure, potential breakout, and trading activity.

FINAL TAKEAWAY

MSFT displays moderate uncertainty with a slightly elevated structural instability, coupled with a somewhat strong potential for a breakout, although the direction is not determined. The key uncertainties to monitor include the stock's FVI and BPS, which can provide further insights into its volatility structure and breakout potential, respectively.

Stock Information

Market Capitalization: 3808562512000, Industry: SOFTWARE - INFRASTRUCTURE, Latest Volume: 27223264, Description: Microsoft Corporation, Sector: TECHNOLOGY, Price to Book: 8.36, Trailing PE: 28.32, Forward PE: 25.13, Enterprise to Ebitda: 17.72, Enterprise to Revenue: 11.08, Profit Margins: 0.403

The trading volume has changed by 40.00% over the past week, indicating potential shifts in market sentiment. Please factor this into the volatility and risk analysis.

Beta measures stock volatility relative to the overall market: 1.11

Beta of 1.11 suggests high volatility compared to the market.

Stock Investment Character Report

Analysis based on supplied stock characteristics and market context.

Investment Character: Operationally Resilient

Resilience: 68%

Momentum: 38%

Structural Stress: 42%

Narrative Dependence: 20%

Confidence: 62%

Calculated Metrics:

- Price-Volume Divergence: 0.000

- Volatility Dissonance Index: -0.890

Evidence:

- Structural volatility is in the moderate range and slightly above the market-wide level.

Indicators: Fractal Volatility Index=0.513, Market-wide FVI=0.478

Supports: Structural Stress

- Market-relative sensitivity is above 1 and recent absolute trading-range volatility is classified as high under the supplied ATR thresholds.

Indicators: Beta=1.108, Latest ATR=11.811451095892636

Supports: Structural Stress

- Elevated breakout probability is present, but no current breakout is detected.

Indicators: Breakout Probability Score=0.757928972651345, Breakout statement=No strong breakout signal detected; price within Bollinger Bands (485.87 - 515.13)

Supports: Momentum

- Strong reported profitability is accompanied by substantial valuation metrics, without evidence that price action is detached from operating performance.

Indicators: Profit margin=0.403, Trailing P/E=28.32, Forward P/E=25.13, EV/EBITDA=17.72, EV/Revenue=11.08, Price-to-book=8.36

Supports: Resilience

Assessment:

The stock shows moderate structural volatility and above-market sensitivity, yet it pairs this with strong operating profitability, indicating operational resilience. Momentum signals are mixed: a high breakout probability contrasts with the absence of a confirmed breakout. Valuation metrics are substantial but, given the profitability evidence, do not on their own indicate narrative dependence. Overall, resilience outweighs instability, while momentum remains unconfirmed.

Limitations:

- No price trend or historical context beyond current indicators limits confirmation of persistence or regime shifts.

- Earnings detail beyond profit margin (e.g., growth rates, cash flow, balance sheet strength) is not supplied.

- Breakout assessment is constrained to the stated Bollinger Band observation without bandwidth or trend context.

Medium-Term Fit:

Potential fit for a thesis prioritizing durable software-infrastructure profitability and tolerance for market-relative volatility while waiting for independently identified catalysts rather than relying on immediate breakout

confirmation.

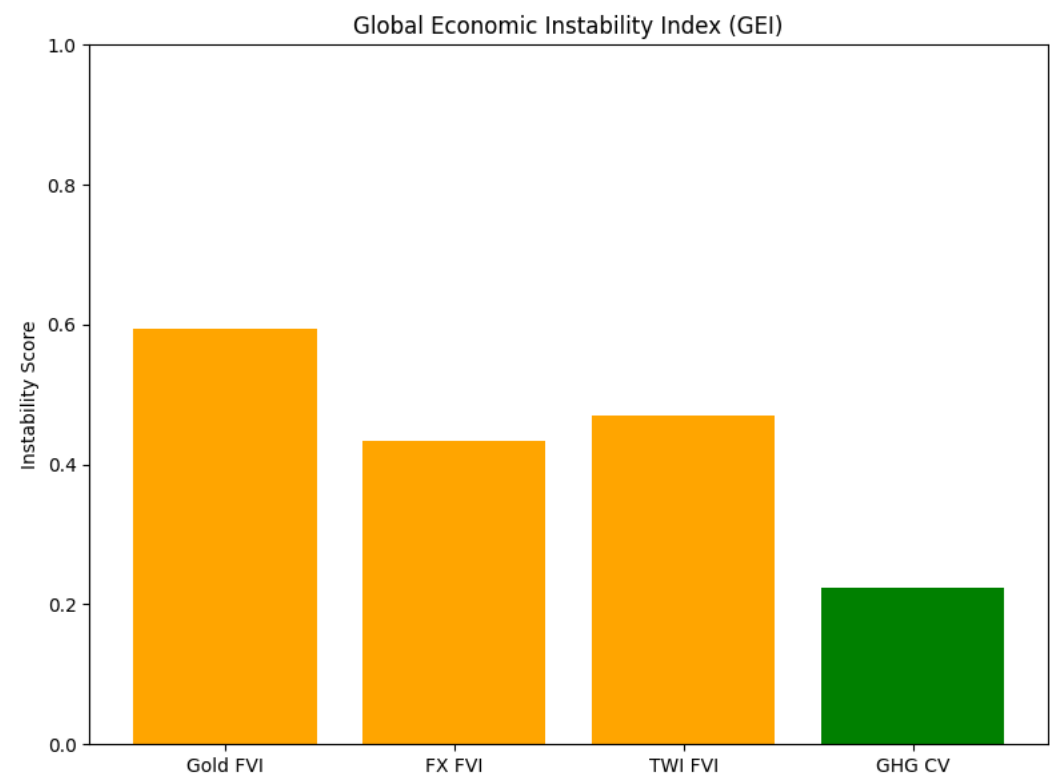
Fractal Volatility Indices

Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)

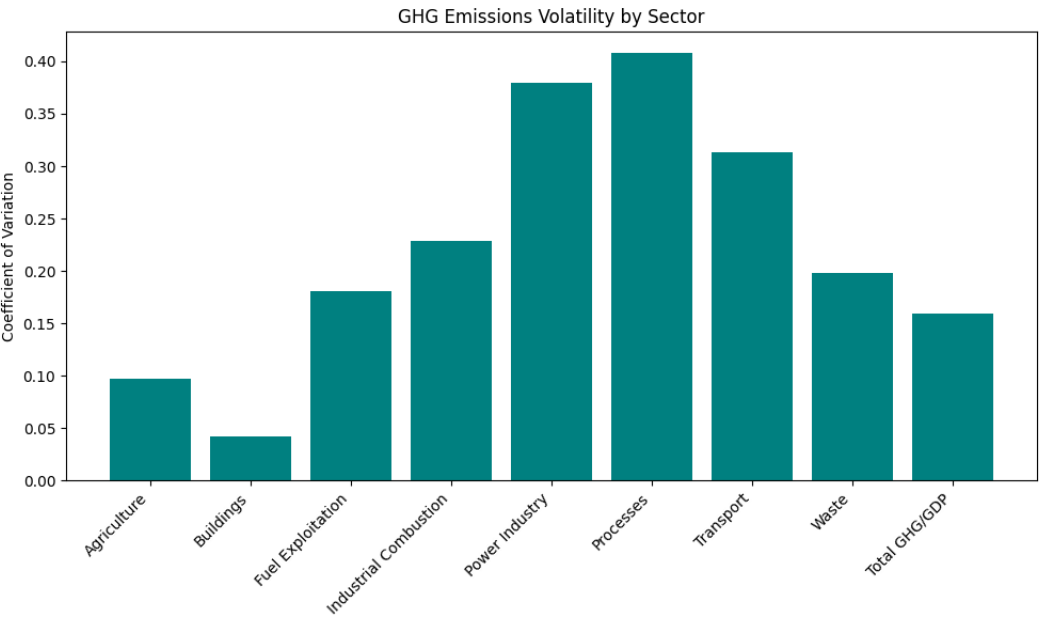
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted volatility indicates some external-sector adjustment
GHG_CV: 0.223036 => Moderate GHG sector variability indicates some sector-level carbon-risk dispersion

Primary Risk Driver: Gold volatility is a good proxy for global geopolitical risk. 0.593608.

Global Geopolitical Volatility



Volatility Indicators of GHG Emissions by Industry and GDP



Low GHG impact (0.048) for the Technology sector.

Disclaimer: The Fractal Volatility Index (FVI) measures structural market instability, not short-term price direction. High FVI (red dot) does not necessarily indicate a price breakout—rather, it signals unpredictable price behavior and potential structural shifts. While market instability can precede significant moves in either direction, Verv Stock Reports do not predict price trends but offer insight into underlying volatility patterns. Investors should interpret FVI alongside fundamental and technical analysis before making decisions.

_____END OF REPORT_____