

Fractal Volatility Index for XOM : 0.574. 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: Exxon Mobil Corp XOM FVI 0.574

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): -1.082

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: 0.574 (Fractal Volatility Index FVI)

DFA Result: 0.4991 (Detrended Fluctuation Analysis)

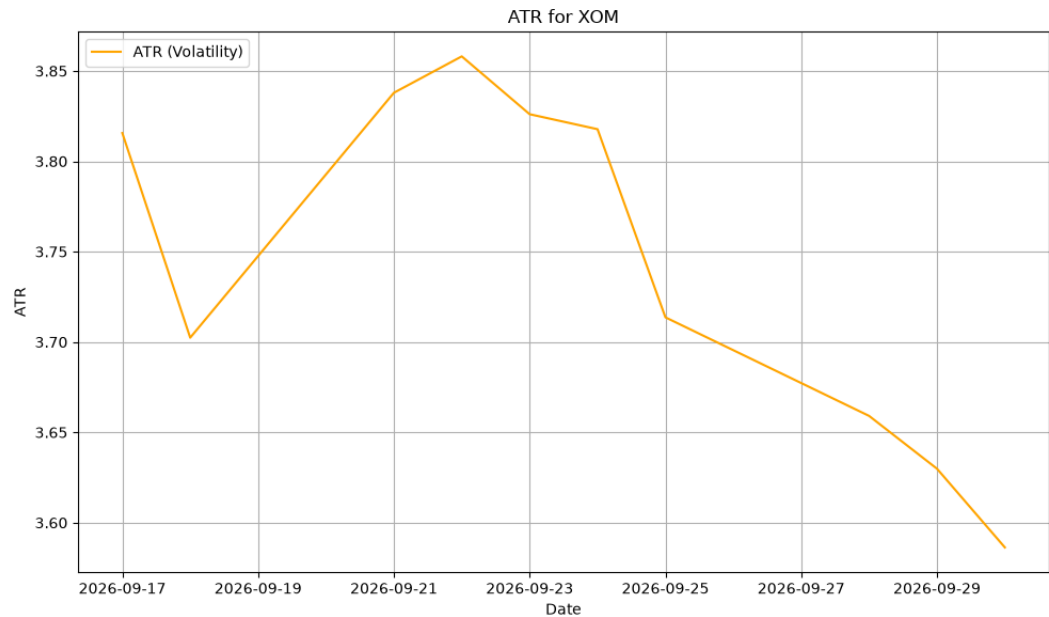
Lyapunov Exponent: 0.0169 (Measures chaos and predictability)

Hurst Exponent: 0.4836 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 162.75 is within the Bollinger Bands range (157.58 - 167.83).
Latest ATR: 3.5863

Average True Range (ATR)



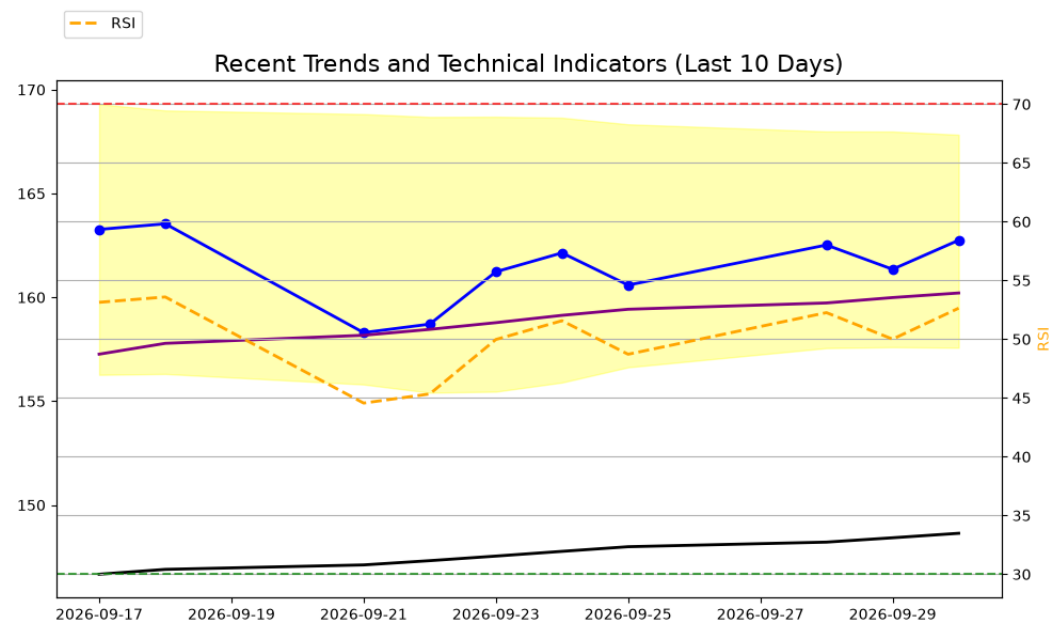
The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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 Exxon Mobil Corp (XOM) stands at 0.5739, which is higher than the market-wide FVI of 0.478. This indicates a relative structural instability in the stock compared to the overall market. The Lyapunov Exponent of 0.0169 suggests some sensitivity and divergence within the system, but without a supplied threshold or historical comparison, it's difficult to assess its significance. The Hurst Exponent at 0.4836 is slightly below 0.5, suggesting possible anti-persistence over the measured series, while the DFA at 0.4991 indicates a scale-dependent correlation structure.

2. Breakout Evidence

The Breakout Probability Score (BPS) of -1.0816 and the absence of a strong breakout signal within the Bollinger Bands range suggest that current breakout evidence is weak. The direction of any potential breakout is not determined by the supplied data.

3. Participation and Technical Context

There has been a 4.1587% change in volume, and the latest Average True Range (ATR) is 3.5863. Without historical or price-normalised comparison, these values are merely factual and do not suggest any specific investor behavior or imminent price move.

4. Macro and Sector Context

The FVI for Gold, FX, and TWI stand at 0.5936, 0.4343, and 0.4694 respectively, indicating varying degrees of structural instability across these markets. The company's GHG sector sensitivity score is low at 0.0416, suggesting low emissions-related variability within the Energy sector.

5. Risk Interpretation

The higher FVI for XOM compared to the market-wide FVI, coupled with the weak breakout evidence, suggests a state of elevated instability for the stock. However, this does not imply any specific price direction.

6. Monitoring Implications

Given the current state of elevated instability, it would be prudent to continue monitoring the FVI, BPS, and ATR. Changes in these indicators could provide valuable insights into the stock's volatility structure and breakout potential.

FINAL TAKEAWAY

The strongest supported conclusion from the available data is that Exxon Mobil Corp (XOM) is experiencing elevated structural instability compared to the overall market, although there is no strong evidence of an imminent breakout. The most important uncertainty lies in the stock's Lyapunov Exponent and Hurst Exponent, whose implications would become clearer with additional thresholds or historical comparisons.

Stock Information

Market Capitalization: 669213655000, Industry: OIL & GAS INTEGRATED, Latest Volume: 13100423, Description: Exxon Mobil Corp, Sector: ENERGY, Price to Book: 2.556, Trailing PE: 20.76, Forward PE: 14.77, Enterprise to Ebitda: 9.28, Enterprise to Revenue: 1.947, Profit Margins: 0.0907

The trading volume has changed by 4.16% 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: 0.17

Beta of 0.17 suggests low volatility compared to the market.

Stock Investment Character Report

Analysis based on supplied stock characteristics and market context.

Investment Character: Steady Operator

Resilience: 68%

Momentum: 15%

Structural Stress: 32%

Narrative Dependence: 20%

Confidence: 64%

Calculated Metrics:

- Price-Volume Divergence: 0.000

- Volatility Dissonance Index: -0.023

Evidence:

- Structural volatility is moderate and somewhat above the market average; market sensitivity is low and recent trading-range volatility is in the moderate band.

Indicators: FVI=0.574, Market-wide FVI=0.478, Beta=0.175, Latest ATR=3.5863018915092253

Supports: Resilience

- No strong breakout signal is detected and price remains within the stated Bollinger range.

Indicators: Breakout Probability Score=-1.0816411827888839, Bollinger Bands=157.58-167.83, Latest close=162.75

Supports: Momentum

- Price dynamics are close to a random-walk profile with no strong persistence or anti-persistence indicated.

Indicators: Hurst Exponent=0.4835727339540756, DFA Result=0.4991157812081849, Lyapunov Exponent=0.016936080305029556

Supports: Momentum

- The company is profitable and carries mainstream valuation multiples without extremes.

Indicators: Profit margin=0.0907, Trailing P/E=20.76, Forward P/E=14.77, EV/EBITDA=9.28, EV/Revenue=1.947, Price-to-book=2.556

Supports: Resilience

Assessment:

Low beta and moderate ATR, alongside moderate structural volatility, point to a steady trading profile rather than a high-risk posture. Absent breakout evidence and near-random walk statistics indicate limited confirmed momentum at present. Profitability and non-stretched valuation metrics suggest the profile is grounded in operating evidence rather than narrative.

Limitations:

- No growth, cash flow or balance sheet detail is supplied; trailing and forward EPS are listed as 0, limiting earnings-quality assessment.

- ATR lacks historical or price-normalized context beyond the provided threshold bands.

- No macro or commodity-price context is provided to condition cyclical exposure.

Medium-Term Fit:

Potential fit for a thesis seeking exposure to integrated energy with an emphasis on steadier, lower-beta characteristics and mainstream valuations where operational durability is preferred over breakout momentum.

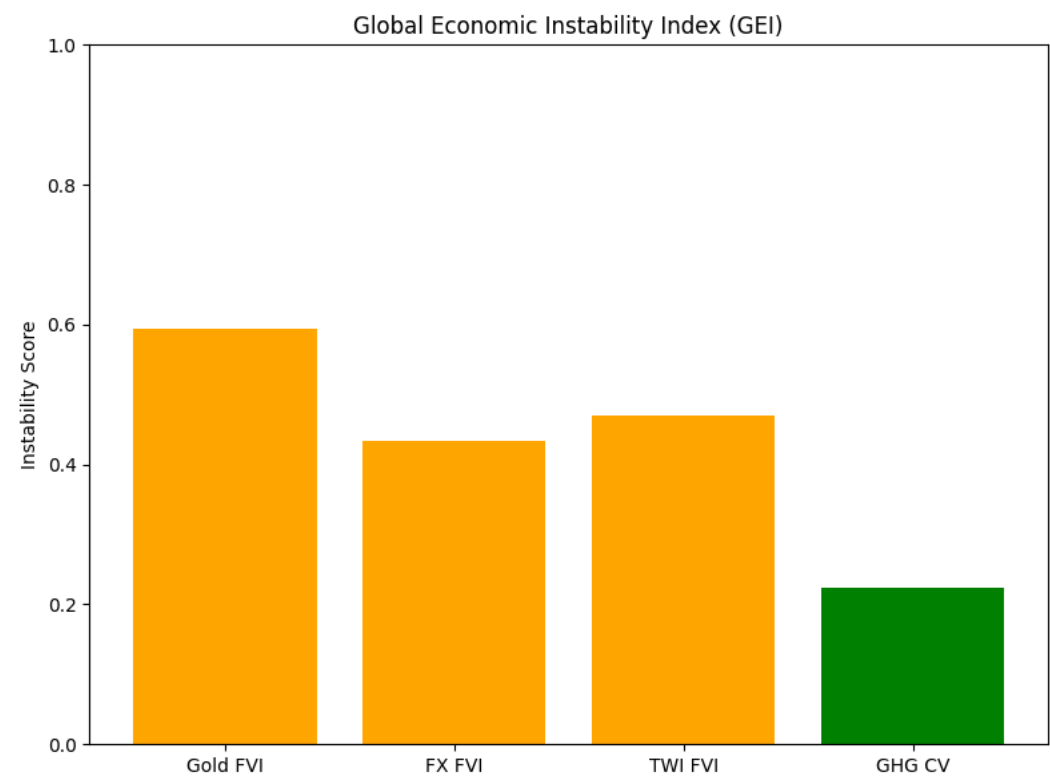
Fractal Volatility Indices

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

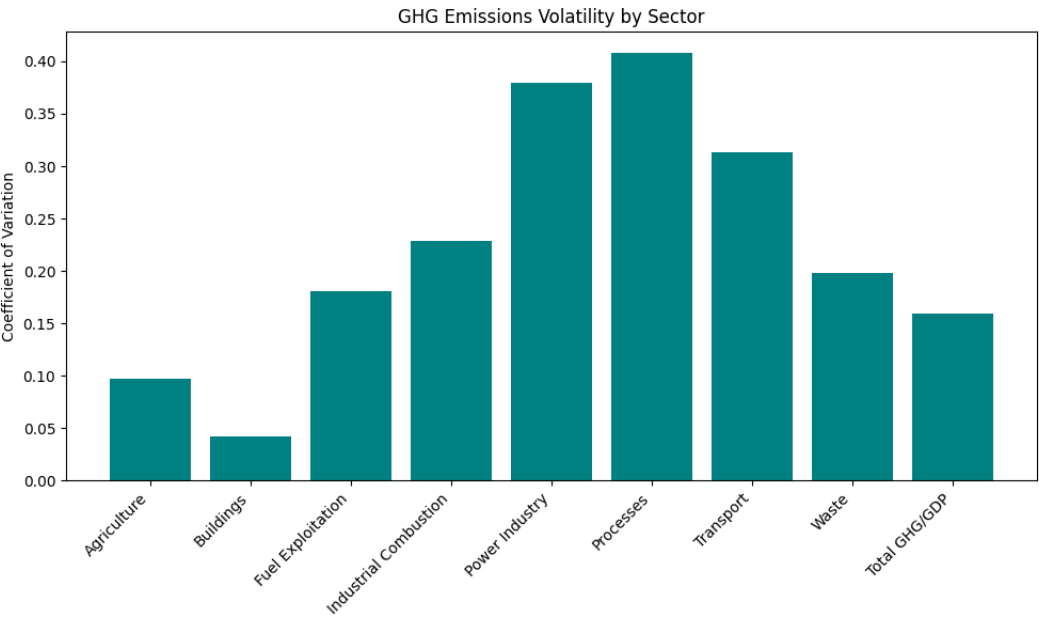
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted volatility indicates some external-sector adjustment
GHG_CV: 0.223036 => Moderate GHG 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 (0.042) for the Energy 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_____