Fractal Volatility Index for XOM : 0.608. 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: ExxonMobil Holdings Corporation XOM FVI 0.608

Analysis Period: 2021-11-18 to 2026-11-18

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): 0.226
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

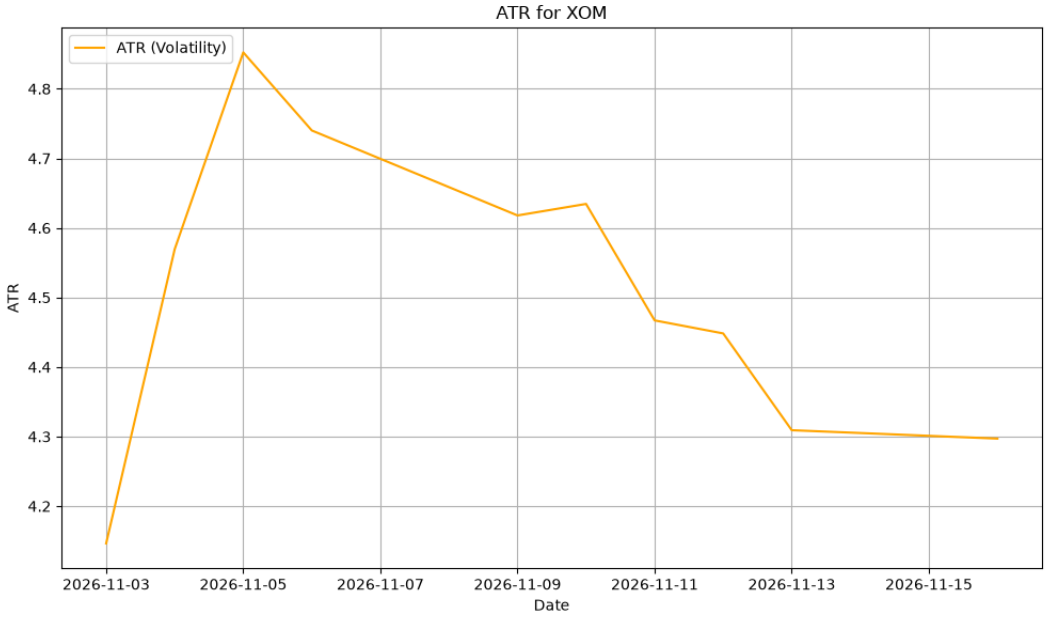
Fractal & Statistical Analysis

FVI Score: 0.608 (Fractal Volatility Index FVI)
DFA Result: 0.5000 (Detrended Fluctuation Analysis)
Lyapunov Exponent: 0.0173 (Measures chaos and predictability)
Hurst Exponent: 0.4776 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 166.87 is within the Bollinger Bands range (159.83 - 189.68).
Latest ATR: 4.2971

Average True Range (ATR)

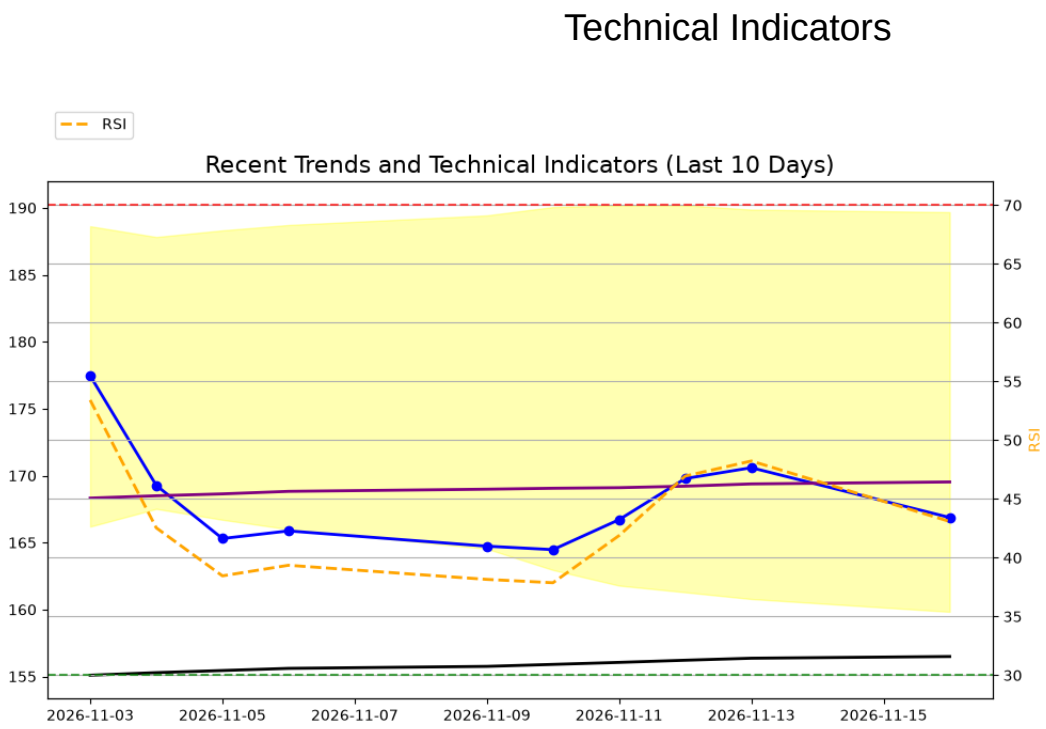


The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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.



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
- Observations:
  - Stock FVI: 0.6077 vs Market-wide FVI: 0.478.
  - Lyapunov exponent: 0.0173.
  - Hurst exponent: 0.4776 (slightly below 0.5).
  - DFA: 0.49999 (very close to 0.5).
  - Reported beta: 0.141.
- Interpretation:
  - XOM's FVI is above the market-wide FVI, indicating higher structural instability in XOM's return dynamics relative to the broader market on the same scale.
  - The Lyapunov exponent value indicates measured sensitivity/divergence in the modeled system; without a benchmark its magnitude cannot be classified, but a positive value is consistent with some divergence over time.
  - Hurst modestly below 0.5 gives only weak evidence of anti-persistence; DFA near 0.5 points to little deviation from uncorrelated scaling across horizons. Together, these time-series metrics suggest only mild, non-directional serial structure.
  - A beta of 0.141 indicates relatively low co-movement with broad equity market moves compared with a beta of 1, though this does not speak to absolute volatility or direction.
- Unknown:
  - Whether current FVI is rising or falling over time (no historical FVI path provided).
  - The relative magnitude of Lyapunov and whether it differs from peers or history.

2. Breakout Evidence
- Observations:
  - Breakout Probability Score (BPS): 0.2256.
  - Explicit breakout observation: "No strong breakout signal detected: The latest closing price of 166.87 is within the Bollinger Bands range (159.83 – 189.68)."
- Interpretation:
  - The explicit observation and a modest BPS reading together indicate that current breakout evidence is not strong. Breakout direction is not determined by the BPS or the given observation.
- Unknown:
  - Whether latent pressure is building toward a breakout (no additional regime-shift or bandwidth context provided).

3. Participation and Technical Context
- Observations:
  - Volume change: -16.88%.
  - Latest ATR: 4.2971 (price units), which is approximately 2.6% of the latest close (166.87).
- Interpretation:
  - Lower recent volume and the stated ATR quantify activity and absolute trading range but, on their own, do not indicate direction or a regime change.

- Missing comparisons for stronger conclusions:
  - Historical average volume vs. current volume, ATR history or price-normalized benchmarks over time, and any change in Bollinger Band width.

4. Macro and Sector Context
- Observations:
  - Gold FVI: 0.5936; FX FVI: 0.4343; TWI FVI: 0.4694.
  - GHG sector variability score: 0.042 (Energy sector labeled “Low GHG impact”).
  - Company GHG sector sensitivity score: 0.041606.
- Interpretation:
  - Among the macro proxies, structural instability appears highest in Gold, lower in TWI, and lowest in FX. These are comparative signals of instability in their respective series and do not specify causes.
  - The sector’s emissions-related variability is labeled low, and the company’s sensitivity score is of similar magnitude, suggesting emissions-related variability is not presently a dominant driver in the supplied framework.
- Unknown:
  - Any causal macro drivers behind these FVI levels (not supplied).

5. Risk Interpretation
- Synthesis:
  - The evidence most strongly supports moderate structural uncertainty: XOM’s FVI is above the market-wide FVI, while Hurst and DFA hover near 0.5 (weak serial structure), and the Lyapunov value indicates measured sensitivity without a clear magnitude benchmark.
  - Breakout conditions are not confirmed: the BPS is modest and the explicit observation reports no strong breakout with price within bands.
  - Net result: structurally more unstable than the market baseline but without concurrent confirmation of an imminent breakout.

6. Monitoring Implications
- Indicators to watch:
  - XOM FVI relative to market-wide FVI for shifts in structural instability.
  - BPS and the explicit breakout observation for any transition from “no strong breakout” toward confirmed breakout conditions.
  - Hurst and DFA for movement away from ~0.5 that could signal stronger persistence or anti-persistence across scales.
  - Lyapunov exponent for changes in sensitivity/divergence.
  - Volume trend and ATR (preferably tracked as a percentage of price) for evolving trading range and participation context.
  - Macro FVIs (Gold, FX, TWI) as background structural risk proxies.

FINAL TAKEAWAY

XOM currently exhibits higher structural instability than the market baseline by FVI, while time-series

metrics (Hurst, DFA) remain near neutral and there is no strong breakout signal. The key uncertainty is whether instability evolves into a breakout; monitor the Breakout Probability Score and the explicit breakout condition for confirmation.

Stock Information

Market Capitalization: 680699822000, Industry: OIL & GAS INTEGRATED, Latest Volume: 14290008, Description: ExxonMobil Holdings Corporation, Sector: ENERGY, Price to Book: 2.618, Trailing PE: 17.17, Forward PE: 13.97, Enterprise to Ebitda: 8.3, Enterprise to Revenue: 1.849, Profit Margins: 0.105

The trading volume has changed by -16.88% 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: 0.14
Beta of 0.14 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: 66%
Momentum: 20%
Structural Stress: 30%
Narrative Dependence: 25%
Confidence: 62%

Calculated Metrics:
- Price-Volume Divergence: 0.000
- Volatility Dissonance Index: 0.037

Evidence:
- FVI of 0.608 falls in the Moderate volatility band, the market-wide FVI is lower at 0.478, Beta is below 1, and ATR is within the 2 to 5 moderate range.
  Indicators: FVI=0.608, Market-wide FVI=0.478, Beta=0.141, Latest ATR=4.297075762064529
  Supports: Resilience
- A low breakout probability score is reported and the latest close remains within the stated Bollinger Band range.
  Indicators: Breakout Probability Score=0.225644065790239, Breakout statement=No strong breakout; price 166.87 within Bollinger Bands 159.83 - 189.68
  Supports: Momentum
- Positive profit margin is reported alongside mainstream valuation multiples on earnings, book value, EBITDA, and revenue.
  Indicators: Profit margin=0.105, Trailing P/E=17.17, Forward P/E=13.97, EV/EBITDA=8.3, Price-to-book=2.618, EV/Revenue=1.849
  Supports: Resilience
- Reported trading volume is provided with a recent decrease of approximately 16.88%, without additional context on causes or implications.
  Indicators: Current volume=14290008, Recent volume change percentage=-16.884379256655947
  Supports: Uncertainty

Assessment:
The indicators point to a steady profile: very low beta and a moderate ATR suggest contained market-relative and recent trading-range volatility, while profitability and conventional valuation multiples indicate operating support. Structural stress appears limited, with FVI in the moderate band rather than high. Momentum signals are subdued, as the breakout probability is low and no Bollinger Band breakout is indicated.

Limitations:
- No time-series context for earnings, cash flow, or leverage to assess durability trends.
- ATR is an absolute measure without price-normalized or historical comparison beyond the provided threshold.
- Volume change lacks corroborating data on flows or positioning, limiting momentum interpretation.

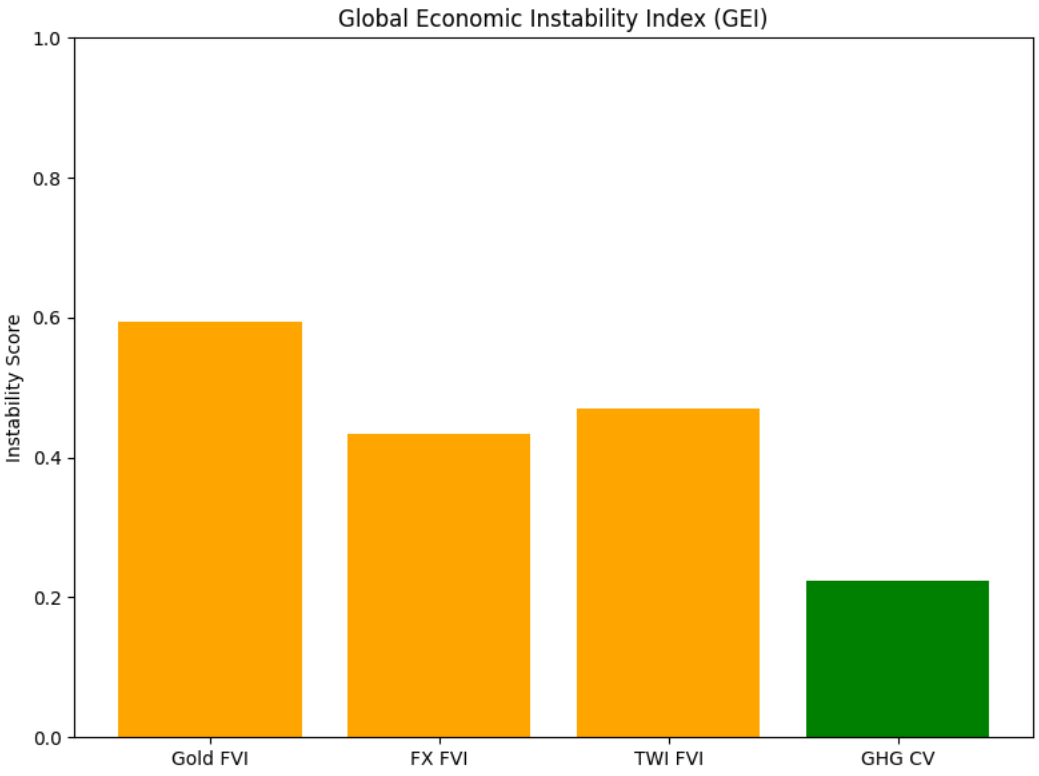
Medium-Term Fit:
May align with an independent thesis favoring large integrated energy exposure that prioritizes lower market sensitivity and established profitability over breakout-driven returns.

Fractal Volatility Indices

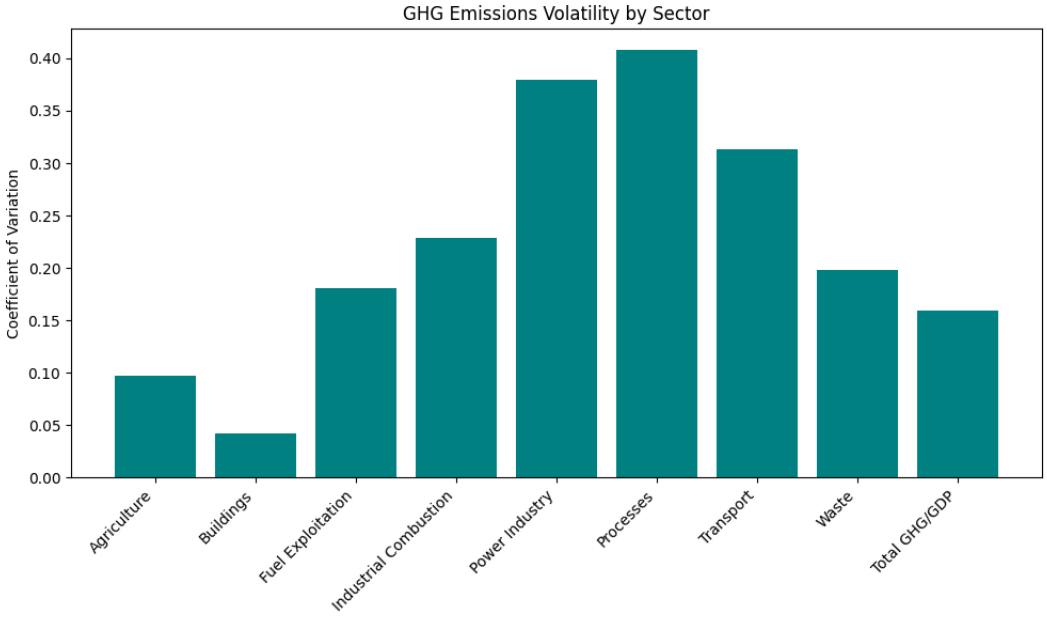
Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted 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_____