Fractal Volatility Index for JNJ : 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: Johnson & Johnson JNJ FVI 0.513

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): -0.507
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

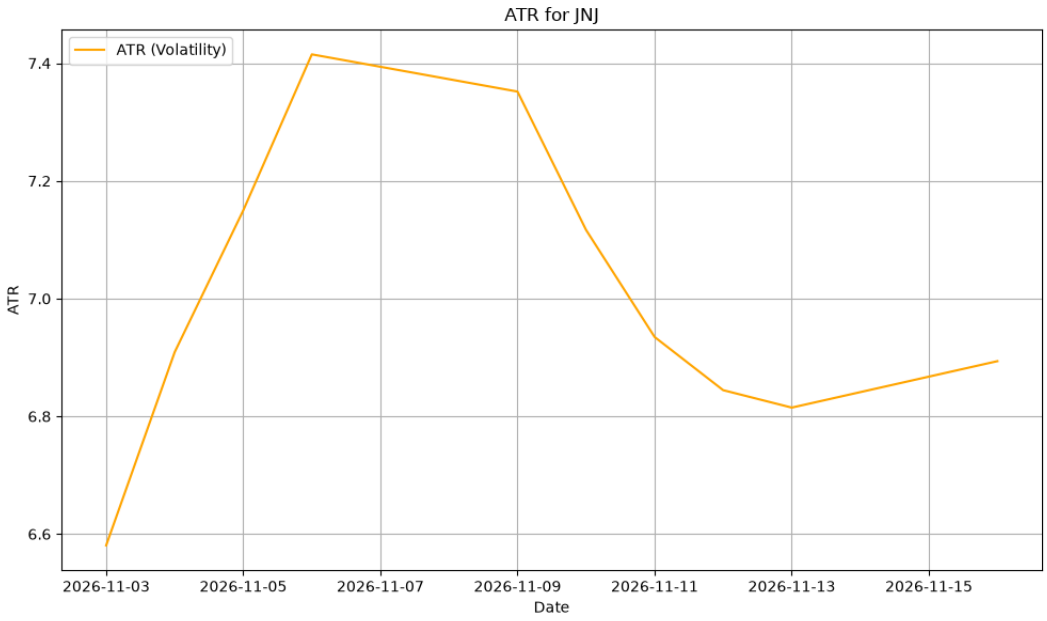
Fractal & Statistical Analysis

FVI Score: 0.513 (Fractal Volatility Index FVI)
DFA Result: 0.4999 (Detrended Fluctuation Analysis)
Lyapunov Exponent: 0.0161 (Measures chaos and predictability)
Hurst Exponent: 0.4762 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 282.55 is within the Bollinger Bands range (257.24 - 288.74).
Latest ATR: 6.8937

Average True Range (ATR)

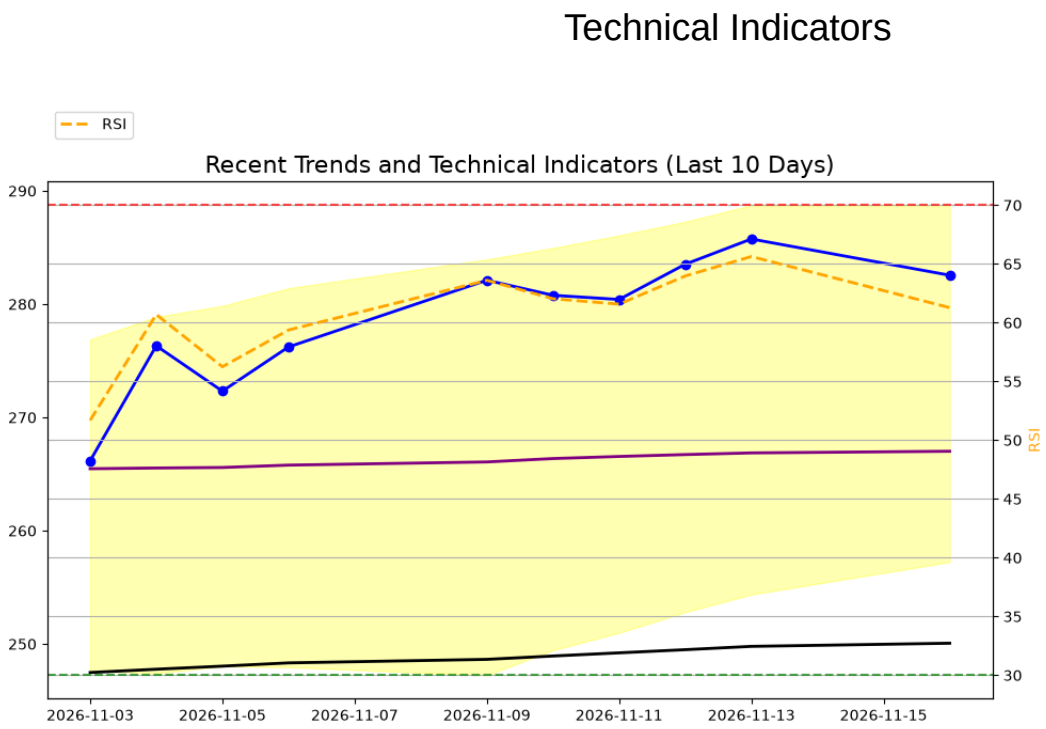


The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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
- Fractal Volatility Index (FVI) for JNJ is 0.5126 versus a market-wide FVI of 0.478, placing JNJ modestly above the broad-market structural instability baseline (difference "H 0.0346). This indicates relatively higher structural instability for JNJ than the market average; FVI does not imply price direction.
- Lyapunov Exponent is 0.0161. This indicates sensitivity/divergence is present within the measured system; without a threshold or historical benchmark, its magnitude cannot be characterized further.
- Hurst Exponent is 0.4762. Being below 0.5 suggests anti-persistence, but its proximity to 0.5 provides only weak evidence of such behavior.
- DFA is 0.4999. It characterizes the scale-dependent correlation structure; without calibration, it does not independently indicate breakout risk or direction.

2. Breakout Evidence
- Breakout Probability Score (BPS) is -0.5068. Combined with the supplied observation—no strong breakout signal detected and the latest close (282.55) within Bollinger Bands (257.24–288.74)—the current evidence points to the absence of a strong breakout setup.
- Breakout direction is not determined by the supplied evidence.

3. Participation and Technical Context
- Volume change: +17.38% (reported factually; no motive or direction inferred). A stronger conclusion would require a baseline or multi-period volume comparison.
- Latest ATR: 6.8937 price units. As simple context, this is approximately 2.44% of the latest close (6.8937 / 282.55); classifying it as high or low would require historical or price-normalized benchmarks over time.
- Beta: 0.2 (reported factually). No further classification is made without additional calibration.
- The price remains within the Bollinger Band range; without comparative band-width data, band expansion or contraction cannot be assessed.

4. Macro and Sector Context
- Macro FVI proxies: Gold FVI (0.5936) > TWI FVI (0.4694) > FX FVI (0.4343). This hierarchy indicates higher structural instability in gold relative to FX and trade-weighted currency series; no specific cause is assigned.
- GHG context: Healthcare sector variability score is described as low (0.052), and the company’s GHG sector sensitivity score is similar in magnitude (0.05153). These scores reflect emissions-related variability only and are not a complete measure of geopolitical, energy-security or supply-chain exposure.

5. Risk Interpretation
- The slightly above-market FVI suggests somewhat higher structural instability for JNJ relative to the market average, while Hurst near 0.5 and DFA near 0.5 offer only weak directional or persistence signals. Together with a negative BPS and an explicit “no strong breakout” observation, the evidence most strongly supports a moderate-uncertainty regime without a current breakout setup, rather than

elevated instability or imminent breakout.

6. Monitoring Implications
- Track JNJ’s FVI relative to the market-wide FVI for shifts in structural instability.
- Monitor BPS and the explicit breakout observation (price versus Bollinger Band range) for any transition toward a confirmed breakout condition.
- Observe Hurst and DFA for moves away from ~0.5 that would strengthen persistence/anti-persistence or scaling inferences, and the Lyapunov Exponent for changes in sensitivity/divergence.
- Watch ATR in relation to price (e.g., ATR as a percentage of price) and volume change versus a historical baseline to contextualize participation and realized volatility.
- Keep an eye on macro proxy FVIs (Gold, FX, TWI) for changes in background structural instability, noting they are not directional signals.
- The sector GHG variability and company sensitivity scores can be monitored as a low-level, emissions-related variability input, recognizing their limited scope.

FINAL TAKEAWAY

The strongest supported conclusion is a moderate-uncertainty state: JNJ’s FVI sits modestly above the market-wide FVI while BPS and the explicit observation indicate no strong breakout at present. The most important indicator to monitor for confirmation or change is the combination of BPS and the price’s relationship to the Bollinger Band range, alongside shifts in JNJ’s FVI relative to the market-wide FVI.

Stock Information

Market Capitalization: 680185496000, Industry: DRUG MANUFACTURERS - GENERAL, Latest Volume: 8104368, Description: Johnson & Johnson, Sector: HEALTHCARE, Price to Book: 8.44, Trailing PE: 42.88, Forward PE: 24.1, Enterprise to Ebitda: 26.68, Enterprise to Revenue: 7.2, Profit Margins: 0.162

The trading volume has changed by 17.38% 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: 0.20
Beta of 0.20 suggests low volatility compared to the market.

Stock Investment Character Report

Analysis based on supplied stock characteristics and market context.

Investment Character: Valuation-Sensitive Quality
Resilience: 60%
Momentum: 20%
Structural Stress: 40%
Narrative Dependence: 35%
Confidence: 58%

Calculated Metrics:
- Price-Volume Divergence: 0.000
- Volatility Dissonance Index: -0.556

Evidence:
- Structural volatility is moderate relative to the provided FVI scale, market sensitivity is low, while recent trading-range volatility is high per the provided ATR thresholds.
  Indicators: FVI=0.513, Market-wide FVI=0.478, Beta=0.2, Latest ATR=6.893706583102171
  Supports: Resilience
- No strong breakout signal is detected and the statistical persistence metrics are near 0.5, indicating no clear trending persistence.
  Indicators: Breakout Probability Score=-0.5068491601827978, Bollinger Bands status=Within range (257.24 - 288.74), Hurst Exponent=0.4762149048948021, DFA=0.4998547704624411
  Supports: Momentum
- Positive profit margin with very large scale suggests ongoing operations with capacity to absorb shocks.
  Indicators: Profit margin=0.162, Market capitalisation=680185496000
  Supports: Resilience
- Valuation multiples are numerically high in absolute terms while EPS fields are non-meaningful, limiting clarity on earnings power from the supplied data.
  Indicators: Trailing P/E=42.88, Forward P/E=24.1, Price-to-book=8.44, EV/EBITDA=26.68, EV/Revenue=7.2, Trailing EPS=0, Forward EPS=0
  Supports: Narrative Dependence

Assessment:
Johnson & Johnson shows low market sensitivity and moderate structural volatility, indicating underlying steadiness, but recent trading ranges have been wide. Momentum evidence is weak with a negative breakout score and price contained within Bollinger Bands. Valuation multiples are comparatively large in absolute terms, making the profile more sensitive to valuation assumptions despite positive profit margin. Overall, it appears to be quality tilted but valuation-sensitive rather than momentum-driven.

Limitations:
- Earnings power is unclear given non-meaningful EPS fields despite other profitability metrics.
- No historical context for valuation ratios or multi-period trend data limits comparability.
- Volume data and its change do not establish accumulation or distribution without additional context.
- Breakout and statistical metrics do not predict future price direction.

Medium-Term Fit:
Potential fit for an independent thesis favoring large-cap, diversified healthcare exposure with low market beta

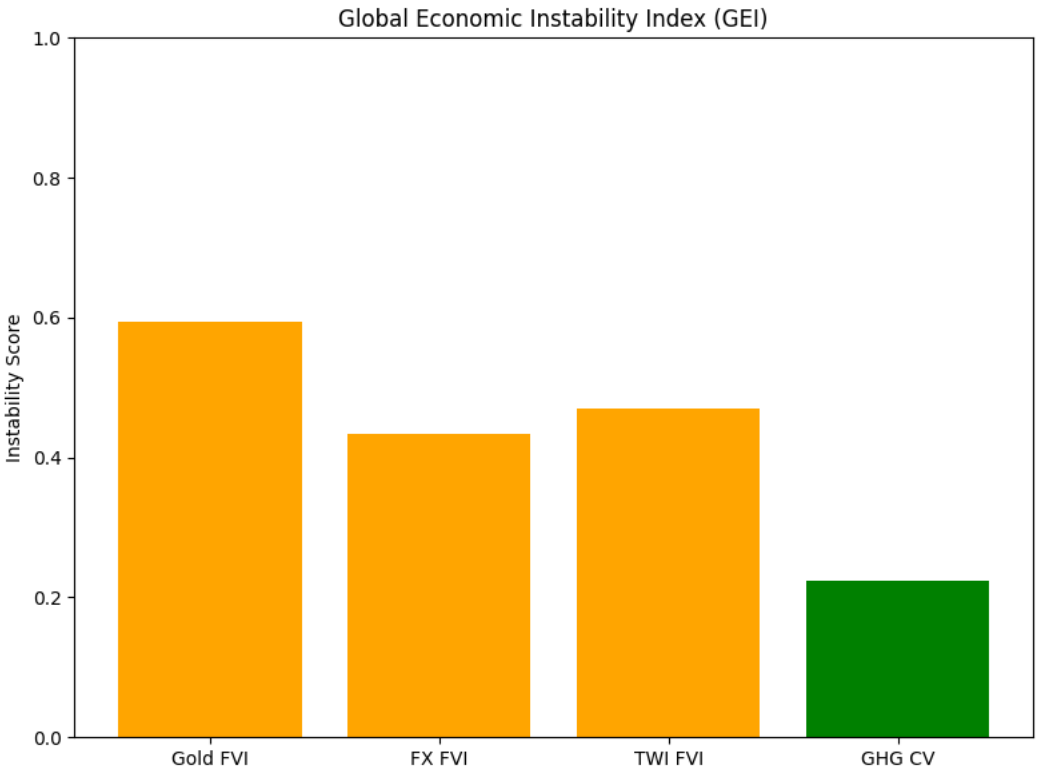
and operational persistence, where the investor accepts valuation sensitivity and limited near-term momentum while prioritizing defensive characteristics.

Fractal Volatility Indices

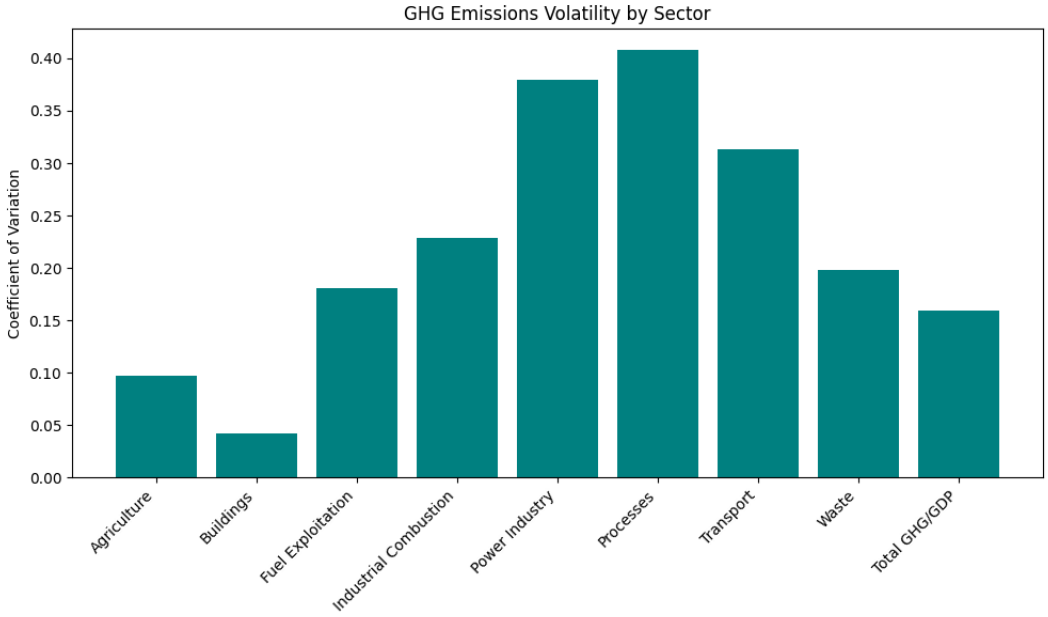
Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted 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 (0.052) for the Healthcare 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.

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