Fractal Volatility Index for PEP : 0.549. 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: PepsiCo Inc PEP FVI 0.549

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): -0.285
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

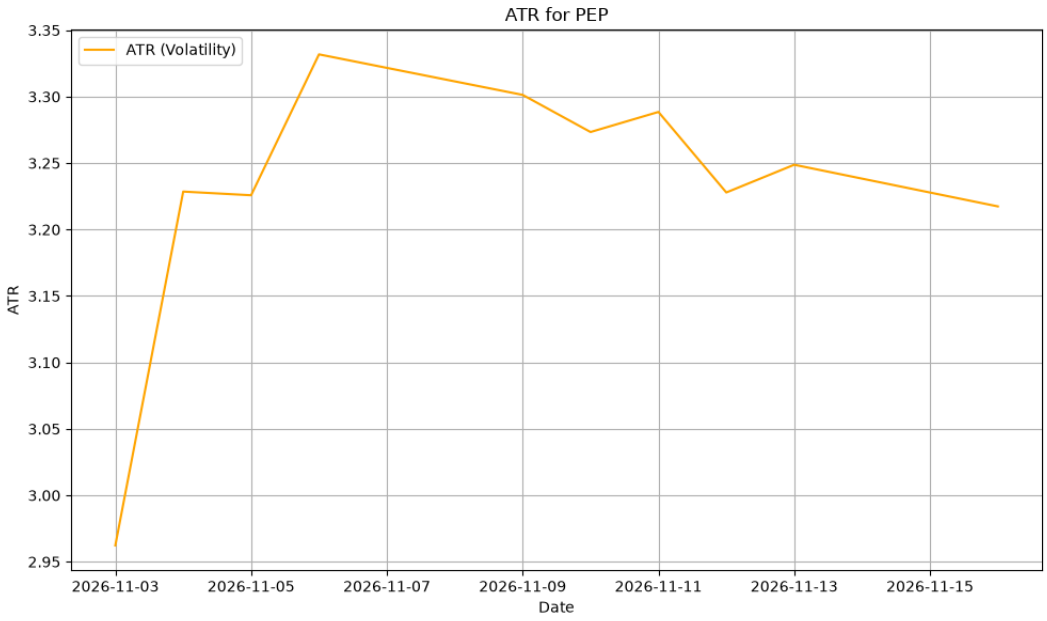
Fractal & Statistical Analysis

FVI Score: 0.549 (Fractal Volatility Index FVI)
DFA Result: 0.5261 (Detrended Fluctuation Analysis)
Lyapunov Exponent: 0.0163 (Measures chaos and predictability)
Hurst Exponent: 0.5232 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 146.43 is within the Bollinger Bands range (130.66 - 147.71).
Latest ATR: 3.2174

Average True Range (ATR)

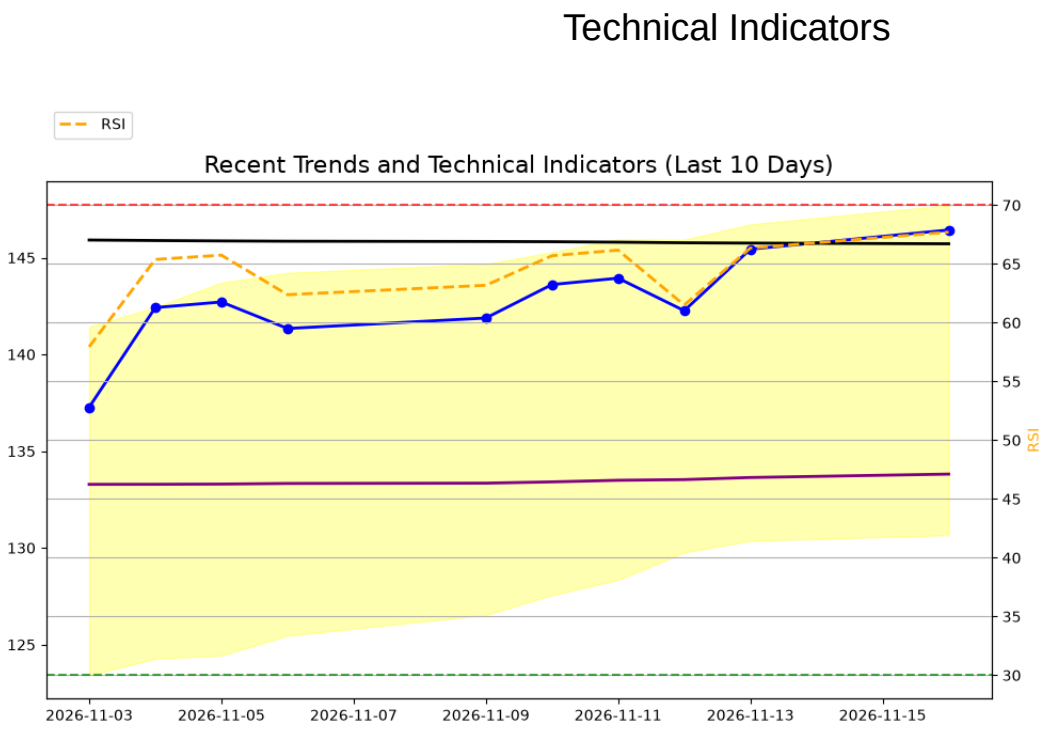


The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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
- Observation: PEP's Fractal Volatility Index (FVI) is 0.5489 versus a market-wide FVI of 0.478. Hurst exponent is 0.5232, DFA is 0.5261, and the Lyapunov exponent is 0.0163. Beta is 0.321.
- Interpretation: PEP's FVI above the market-wide level indicates relatively higher structural instability than the broad market (not a direction signal). Hurst slightly above 0.5 provides weak evidence of mild persistence; DFA modestly above 0.5 suggests some scale-dependent correlation, but neither implies a breakout or price direction on their own. A positive Lyapunov exponent indicates sensitivity and divergence exist within the series, without a basis here to characterize its magnitude.
- Unknown: The absolute positioning of FVI, Hurst, DFA, and Lyapunov on a long-term scale cannot be judged without historical benchmarks or thresholds.

2. Breakout Evidence
- Observation: Breakout Probability Score (BPS) is -0.2854. The latest close of 146.43 sits within the Bollinger Bands range (130.66–147.71), and the supplied observation notes no strong breakout signal.
- Interpretation: The combination of a negative BPS and price remaining within the bands indicates weak current breakout evidence. Breakout direction is not determined by the supplied data.
- Unknown: The precise strength implied by the BPS cannot be calibrated without an explicit scale or threshold.

3. Participation and Technical Context
- Observation: Volume change is +18.56%. Latest ATR is 3.2174 (price units). Beta is 0.321.
- Interpretation: Trading activity has increased versus its recent baseline, and the ATR quantifies the current absolute movement range; neither, by themselves, implies motive or near-term direction. A beta well below 1.0 indicates lower co-movement with the broad market, offering context for how PEP might respond to market-wide swings, separate from its internal volatility structure.
- Missing comparison: No historical average volume, price-normalized ATR, or long-horizon ATR history is provided to evaluate whether current activity or range is unusually high or low.

4. Macro and Sector Context
- Observation: Gold FVI is 0.5936, FX FVI is 0.4343, and TWI FVI is 0.4694 (market-wide FVI: 0.478).
- Interpretation: Relative structural instability appears highest in Gold, lowest in FX, and slightly below market in TWI. PEP's FVI sits closer to Gold's instability than to FX, indicating its current structure is comparatively more unstable than these lower-volatility macro proxies, without implying cause.
- Sector note: No GHG sector variability score is available for Consumer Defensive, and no company GHG sensitivity score is provided; emissions-related variability cannot be assessed from the supplied data.

5. Risk Interpretation
- Interpretation: The evidence most strongly supports a state of moderate uncertainty characterized by above-market structural instability (FVI > market), modest persistence/correlation signals (Hurst/DFA just over 0.5), and no strong breakout indication at present (negative BPS and price within bands). The

positive Lyapunov exponent aligns with the presence of sensitivity in the series but does not, on its own, escalate the risk classification without thresholds. Overall, this suggests structural instability above the market average but not accompanied by clear breakout conditions.
- Unknown: Without time-series context for these metrics, the durability or trajectory of this state cannot be established.

6. Monitoring Implications
- Monitor PEP's FVI versus the market-wide FVI for shifts in relative structural instability.
- Track BPS alongside whether price moves outside the Bollinger Bands to reassess breakout evidence and its timing (direction remains undetermined).
- Watch Hurst and DFA for moves away from ~0.5 that would strengthen persistence or anti-persistence inferences.
- Observe changes in the Lyapunov exponent for evolving sensitivity.
- Keep an eye on volume change and ATR for participation and range dynamics, ideally with historical baselines.
- Follow macro FVIs (Gold, FX, TWI) to contextualize cross-asset structural instability that may correlate with changes in PEP's structure.
- Incorporate sectoral GHG variability if/when a score becomes available to broaden the risk context.

FINAL TAKEAWAY

PEP currently shows above-market structural instability with only modest persistence/correlation signals and no strong breakout evidence. The most important indicators to monitor for confirmation or change are the BPS and PEP's FVI relative to the market, along with whether price moves outside the Bollinger Bands and any shifts in macro FVIs (especially Gold).

Stock Information

Market Capitalization: 198197068000, Industry: BEVERAGES - NON-ALCOHOLIC, Latest Volume: 13579243, Description: PepsiCo Inc, Sector: CONSUMER DEFENSIVE, Price to Book: 8.89, Trailing PE: 18.29, Forward PE: 16.86, Enterprise to Ebitda: 12.4, Enterprise to Revenue: 2.432, Profit Margins: 0.111

The trading volume has changed by 18.56% 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: 0.32
Beta of 0.32 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: 70%
Momentum: 20%
Structural Stress: 30%
Narrative Dependence: 30%
Confidence: 64%

Calculated Metrics:
- Price-Volume Divergence: 0.000
- Volatility Dissonance Index: -0.019

Evidence:
- The stock shows low market sensitivity and a moderate recent trading-range volatility per the provided ATR thresholds.
  Indicators: Beta=0.321, Latest ATR=3.217411456444606
  Supports: Resilience
- Structural volatility is moderate and slightly above the market-wide level.
  Indicators: Fractal Volatility Index=0.549, Market-wide FVI=0.478
  Supports: Structural Stress
- A negative breakout score and price remaining within Bollinger Bands indicate no strong breakout signal.
  Indicators: Breakout Probability Score=-0.2853717105590963, Bollinger Bands range=130.66-147.71, Latest close=146.43
  Supports: Momentum
- Positive profitability with valuation that is not extreme relative to earnings and cash flow measures.
  Indicators: Profit margin=0.111, Trailing P/E=18.29, Forward P/E=16.86, EV/EBITDA=12.4
  Supports: Narrative Dependence

Assessment:
PEP exhibits low market sensitivity and moderate trading-range volatility, supporting a steady profile. Structural volatility is moderate and slightly above the market, but there is no strong breakout signal. Profitability and non-extreme earnings-based valuation temper narrative dependence. Overall, the balance of evidence aligns with a steady operator rather than momentum-driven or stressed behavior.

Limitations:
- No historical context for ATR, valuation, or margins is provided, limiting assessment of trends.
- Earnings growth and cash flow trajectory are not supplied; trailing and forward EPS values are non-meaningful.
- Volume and its change cannot establish accumulation, distribution, or future price direction.
- Absence of explicit macroeconomic data prevents conditioning on current consumer or inflation dynamics.

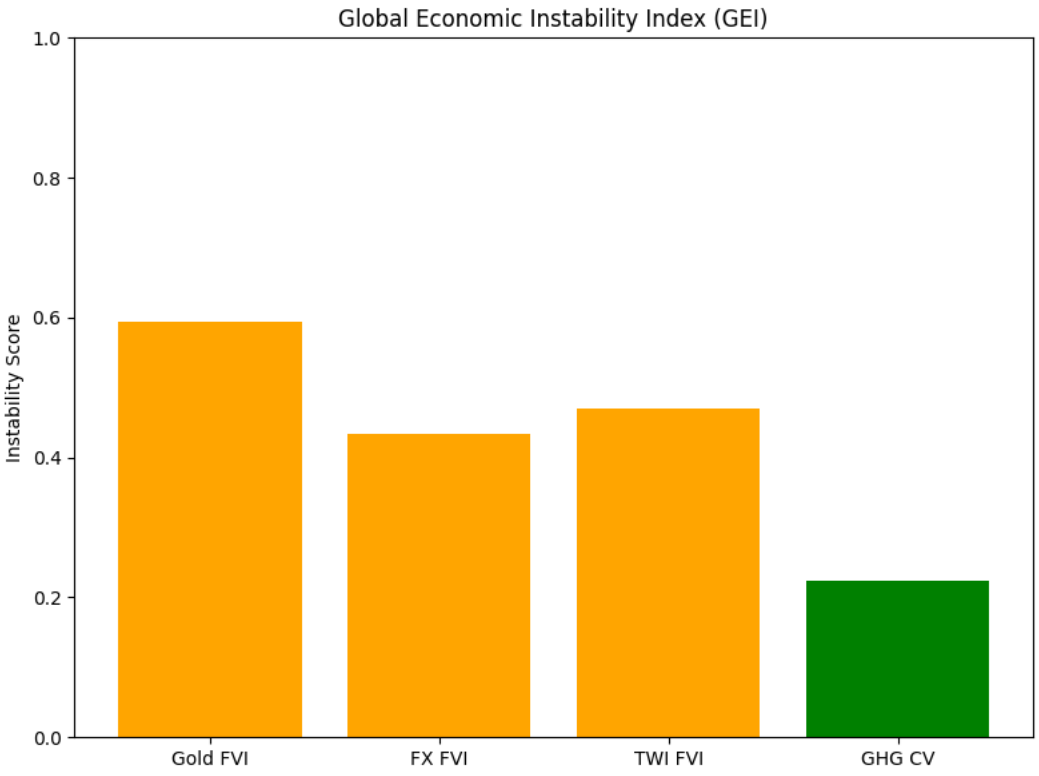
Medium-Term Fit:
Potential fit with an independent thesis seeking low-beta, consumer defensive exposure with persistent demand characteristics and acceptable earnings-based valuation while awaiting sector-driven catalysts such as pricing power durability or margin stability.

Fractal Volatility Indices

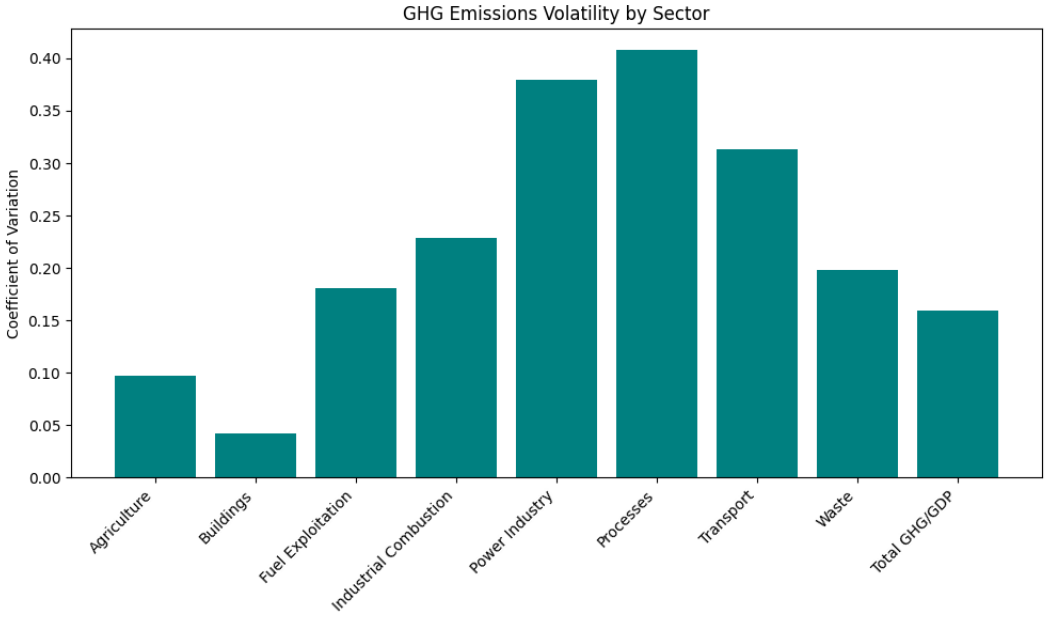
Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted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



No GHG score available for Consumer defensive 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_____