

Fractal Volatility Index for RIVN : 0.221. 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: Rivian Automotive Inc RIVN FVI 0.221

Analysis Period: 2021-08-13 to 2026-08-13

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): -1.027

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: 0.221 (Fractal Volatility Index FVI)

DFA Result: 0.3553 (Detrended Fluctuation Analysis)

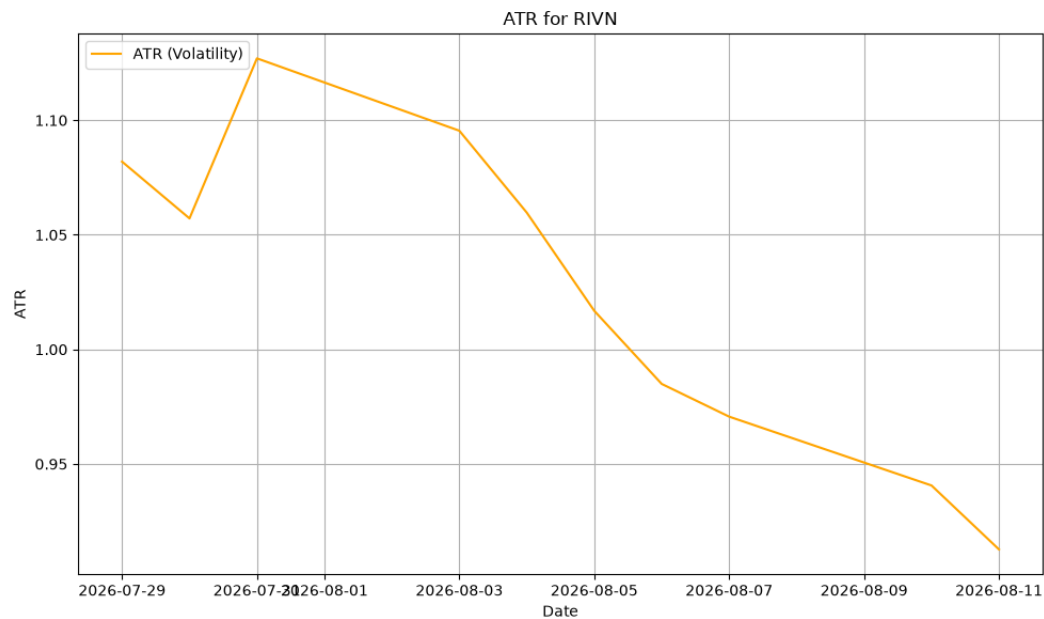
Lyapunov Exponent: 0.0133 (Measures chaos and predictability)

Hurst Exponent: 0.5009 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 16.36 is within the Bollinger Bands range (14.91 - 18.01).
Latest ATR: 0.9127

Average True Range (ATR)



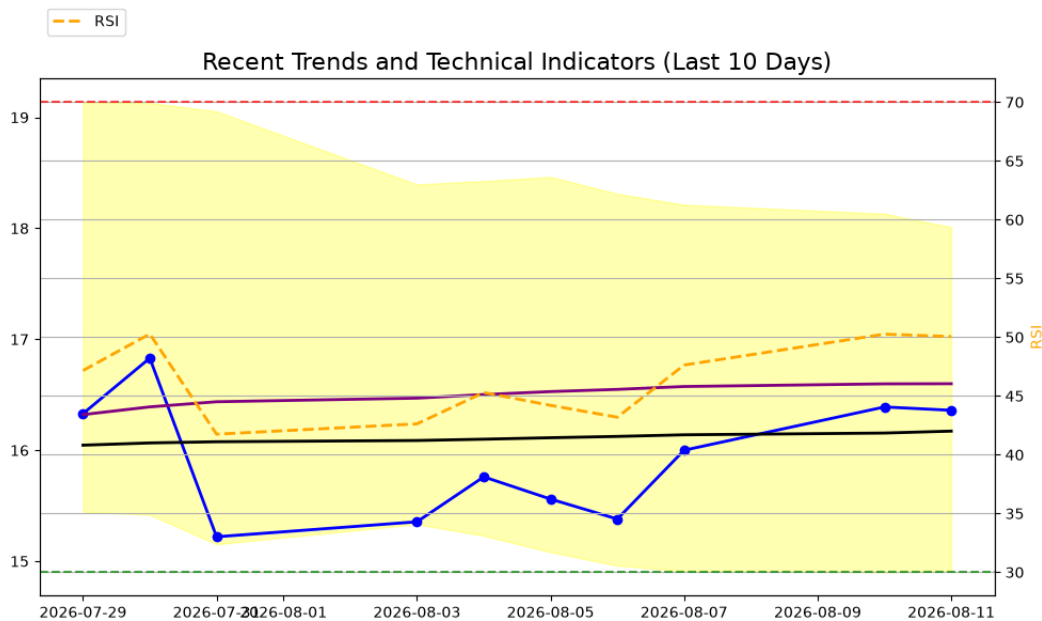
The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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

Investment Report:

--- INVESTMENT REPORT ---

1. Volatility & Breakout Potential

RIVN's metrics suggest a relatively stable regime, with a low FVI of 0.221 indicating limited noise or acceleration in price movement. The Lyapunov score of 0.013 is also low, suggesting less systemic instability compared to the market-wide values. The Bollinger Bands indicate no significant expansion or contraction, and there is no strong breakout signal detected. However, the negative stock volume change of -34.00% does not confirm the price moves, indicating a potential lack of investor confidence or interest.

2. Market Sentiment

The large trading volume of 23687000000 suggests institutional-driven behaviour, indicating a significant level of interest from large investors. However, the lack of a strong breakout signal and decreasing volume may suggest a cautious or bearish investor mood.

3. Geopolitical Risk Assessment

The market-wide FVI indicators suggest a heightened level of global stress, with high volatility in gold, FX, and TWI. RIVN, as a part of the consumer cyclical sector, may be exposed to these global stressors, particularly if it is highly globalized or supply-chain dependent. The absence of a GHG score for the sector indicates a lack of sectoral emissions risk exposure.

4. Sector and Supply Chain Exposure

RIVN, as a part of the consumer cyclical sector, may be exposed to various risks, including fuel cost surges, geopolitical transport risk, and supply-side inflation risk due to trade instability. The company's exposure to these risks will depend on its specific operations and supply chain dependencies.

--- STRATEGY RECOMMENDATION ---

Given the current market conditions and RIVN's metrics, the optimal strategy may be to hedge or adopt a defensive position. The lack of strong breakout signals, decreasing volume, and heightened global stress indicators suggest potential downside risk and a bearish market regime.

--- FINAL TAKEAWAY ---

RIVN appears to be in a stable regime but faces potential downside risk due to decreasing volume and heightened global stress indicators. Investors should consider adopting a defensive strategy, prioritizing downside risk management. "Stability amidst global stress—position defensively."

Stock Information

Market Capitalization: 23687000000, Industry: AUTO MANUFACTURERS, Latest Volume: 15414116, Description: Rivian Automotive Inc, Sector: CONSUMER CYCLICAL, Price to Book: 4.648, Enterprise to Ebitda: -1.955, Enterprise to Revenue: 4.041, Profit Margins: -0.55

The trading volume has changed by -34.00% 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: 1.61

Beta of 1.61 suggests high volatility compared to the market.

Stock Investment Character Report

Analysis in view of stock characteristics and current global macroeconomic information.

Investment Character: Narrative-Driven

Resilience: 32%

Momentum: 18%

Structural Stress: 72%

Narrative Dependence: 78%

Confidence: 57%

Calculated Metrics:

- Price-Volume Divergence: 0.000

- Volatility Dissonance Index: 0.915

Evidence:

- Profit margin: -0.55; EV/EBITDA: -1.955 (loss-making, negative operating earnings)

- Price-to-book: 4.648; EV/Revenue: 4.041 with Trailing/Forward EPS: 0 (valuation not supported by earnings)

- Fractal Volatility Index: 0.221 vs market FVI: 0.478; Latest ATR: 0.913 (moderate relative volatility)

- Breakout Probability Score: -1.0266; No strong breakout signal within Bollinger Bands (14.91 - 18.01) at price 16.36

- Recent volume change: -34.0%; Beta: 1.612 (lower participation recently, high market sensitivity)

Assessment:

Rivian currently appears pre-profit and valuation-driven by expectations rather than earnings, with negative margins and EBITDA alongside a relatively rich price-to-book and EV/revenue. Trading shows consolidation without a breakout and moderate day-to-day volatility, though beta is high. This points to a narrative-driven profile with notable structural stress from ongoing losses, rather than active momentum or demonstrated operational resilience.

Medium-Term Fit:

May suit an independent thesis focused on long-horizon EV adoption and policy support for electrification, where an investor is comfortable with loss-making scale-up dynamics, high beta, and periods of consolidation while awaiting operational milestones or improved unit economics..

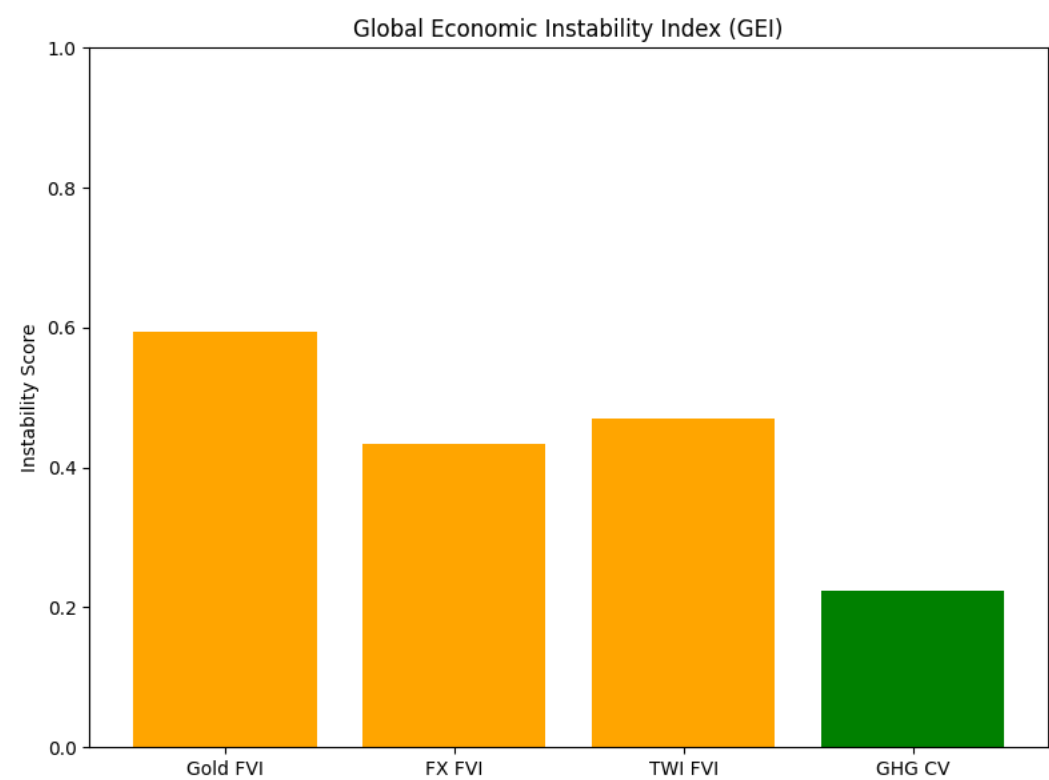
Fractal Volatility Indices

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

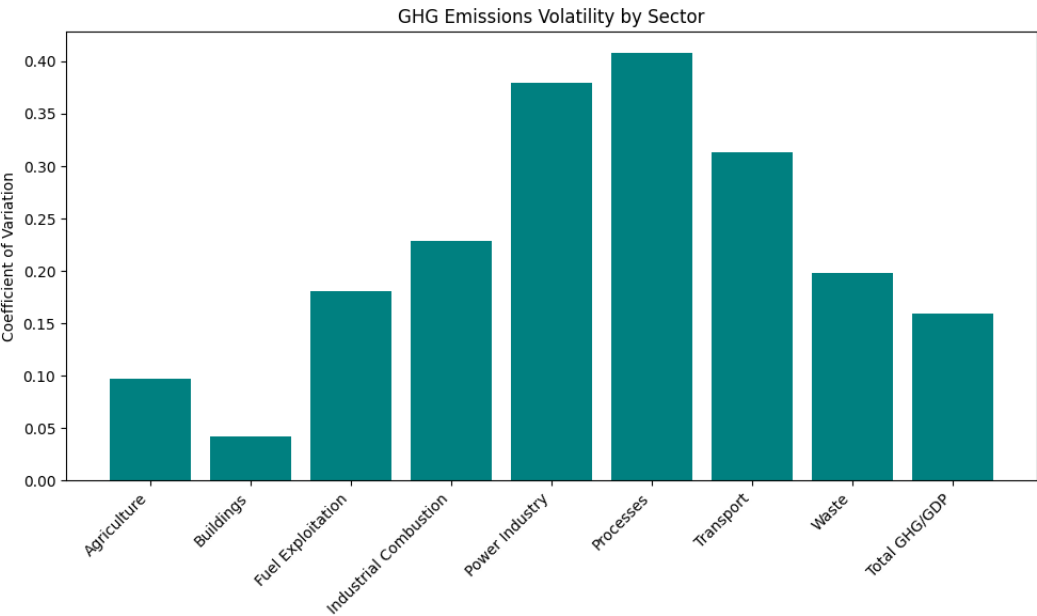
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Low FX volatility indicates relatively stable currency markets
FVI_TWI: 0.469352 => Moderate trade-weighted volatility indicates some external-sector adjustment
GHG_CV: 0.223036 => Moderate GHG sector 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 cyclical 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_____