

Fractal Volatility Index for RIVN : 0.188. Market Wide FVI:0.478
(0 - 0.33: Stable, 0.33 - 0.66: Moderate Volatility, 0.66 - 1: High Volatility)



Global Geopolitical 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 0.188

Analysis Period: 2021-04-29 to 2026-04-29

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

FVI_GOLD: 0.593608 => Moderate gold volatility, likely reflecting investor caution

FVI_FX: 0.434301 => Low FX volatility; currency markets stable for now

FVI_TWI: 0.469352 => Moderate TWI volatility; minor export/import fluctuations

GHG CV: 0.223036 => Moderate emissions volatility; sector-level uncertainty exists

Primary Risk Driver: Gold volatility is a good proxy for global geopolitical risk. 0.593608.

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 Score (BPS): 0.132

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: 0.188 (Fractal Volatility Index FVI)

DFA Result: 0.3558 (Detrended Fluctuation Analysis)

Lyapunov Exponent: 0.0130 (Measures chaos and predictability)

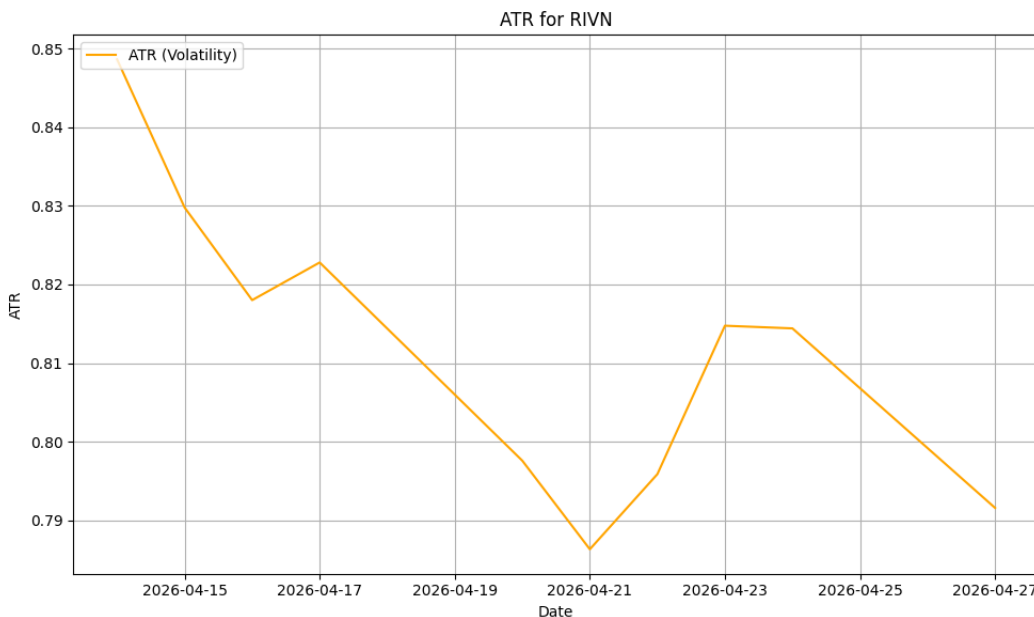
Hurst Exponent: 0.5236 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 16.72 is within the Bollinger Bands range (14.11 - 17.90).

Latest ATR: 0.7916

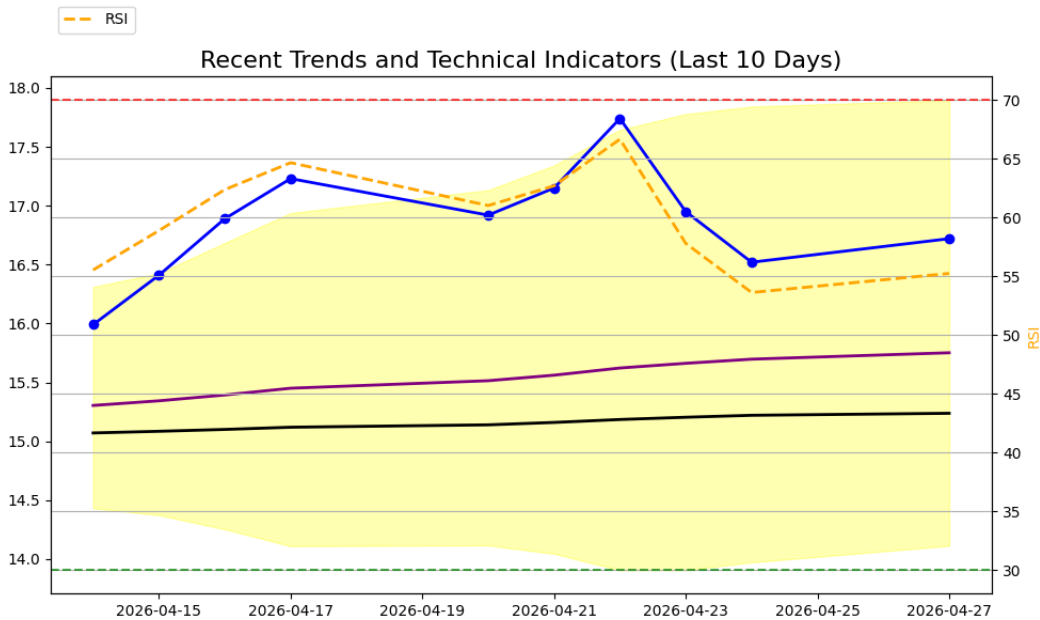
Average True Range (ATR)



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



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-Generated Market Insights

Investment Report:

--- INVESTMENT REPORT ---

1. Volatility & Breakout Potential

RIVN's volatility index is relatively low, suggesting a stable regime. The low Lyapunov value indicates a low degree of chaos and instability. However, the Hurst value is slightly above 0.5, suggesting a trend-following behavior. The Bollinger Bands are within the range, and there is no strong breakout signal. The volume change is positive, which could be a sign of price confirmation.

2. Market Sentiment

The market sentiment for RIVN seems to be driven by institutional investors. The low volatility and lack of a strong breakout signal suggest a cautious mood among investors.

3. Geopolitical Risk Assessment

The high market-wide Gold FVI indicates a high level of geopolitical tension. The FX and TWI FVI values also suggest some degree of currency volatility and global trade disruptions. RIVN, being a consumer cyclical sector company, may be sensitive to these macroeconomic factors.

4. Sector and Supply Chain Exposure

RIVN, being in the electric vehicle industry, may have exposure to Asia-sourced components such as lithium and semiconductors. It may also be affected by energy price shocks and trade disruptions. However, without detailed supply chain data, it's difficult to accurately assess these risks.

4. Strategy Recommendation

Given the current market conditions and RIVN's metrics, a cautious approach is recommended. The stock is not showing strong breakout signals, and the geopolitical risks are high. Therefore, a defensive position may be more appropriate.

--- FINAL TAKEAWAY ---

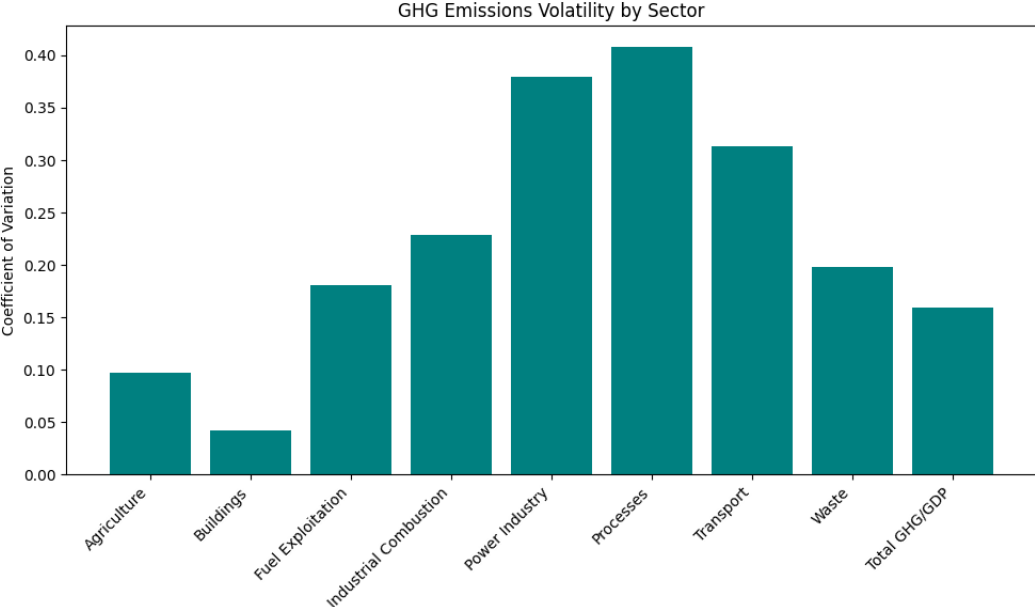
"RIVN is in a stable regime with a trend-following behavior. However, high geopolitical risks and lack of strong breakout signals suggest a cautious approach. Position defensively."

Market Capitalization: 20501152000, Industry: AUTO MANUFACTURERS, Latest Volume: 21176043, Description: Rivian Automotive Inc, Sector: CONSUMER CYCLICAL, Price to Book: 4.49, Enterprise to Ebitda: -1.955, Enterprise to Revenue: 3.911, Profit Margins: -0.677

The trading volume has changed by 7.93% 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: 1.69
Beta of 1.69 suggests high volatility compared to the market.

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.

Stock Market Price Credibility Report

Analysis based on current global macroeconomic and geopolitical information.

Market_Price_Credibility_Analysis:

```
{  
  "Final_Score": 0.593,  
  "Price_Volume_Divergence": 0,  
  "Volatility_Dissonance_Index": 0.946,  
  "Deception_Risk": 0.808,  
  "Trumpery_Alert": true,  
  "Summary": "Truth is on vacation. Please hold for alternate facts."  
}
```

Explanation:

The NRDl score of 0.75 suggests a significant disconnect between the economic narratives and the underlying fiscal, monetary, and geopolitical realities.

The rising U.S. debt and deficit levels are concerning and not sustainable in the long run. Yet, the narrative often downplays the severity of the situation.

Changes in U.S. Treasury bond yields and issuance, along with reports of declining foreign demand for U.S. bonds, indicate a shift in global confidence in the U.S. economy. However, this is often overlooked in mainstream narratives.

Central bank interventions, such as rate cuts and quantitative easing, are typically portrayed as necessary and beneficial, but they can distort market dynamics and create artificial stability.

The use of tariffs and sanctions as economic tools is often framed in a positive light, but they can lead to trade wars and economic instability.

The inflation vs. official interest rate policy shows a disconnect as inflation continues to rise despite low-interest rates, suggesting that traditional monetary policy tools may not be as effective.

BRICS+ influence and de-dollarization trends indicate a shift in global economic power, but this is often downplayed in the narrative.

Gold volatility and geopolitical hedging are often seen as signs of uncertainty and instability, but they can also be seen as rational responses to the current economic environment.

The Trumpery Alert is set to true due to the manipulative or performative policymaking evident in the use of tariffs and sanctions as economic tools, as well as the central bank interventions. The Satirical Summary reflects this, suggesting skepticism towards the narrative that these are simply market forces at play.

Deception Risk:

Between 0 and .2, markets appear fundamentally sound, no price distortion.

Between .2 and .4 there may be some irrationality or manipulation. Caution is advised.

Between .4 and .6 there are signals of disconnect between narratives and reality.

Between .6 and .8 distortions mean possible financial gaslighting.

Between .8 and 1 signals a confidence scam - you are being sold a bridge.

What Price Credibility Sell You a Bridge Index captures:

Price to Volume Divergence PVD.' When price rises while volume drops is suspicious behavior.

A Narrative Reality Dislocation Index NRDIndex is an AI score for disconnect between corporate statements and underlying fundamentals.

A Volatility Persistence Score VPI. When volatility indicators stay low despite geopolitical/economic chaos.

The Macro Score includes Tariff Impact Denial. High tariffs plus high exposure plus rising stock. This may be a trumpery illusion alert.

Treasury Detector TFD Liquidity Masking Metric. Fed/Treasury injections may be affecting retail activity or debt spreads.

The Media Sentiment Mismatch is included. This is where news tone is contrary to actual market data (e.g. bullish despite bond collapse).

Note: Trumpery derives from a French word meaning to deceive, in many dictionaries showy but worthless.

_____ **END OF REPORT** _____