Fractal Volatility Index for IBM : 0.566. 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: International Business Machines IBM FVI 0.566

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): -1.056
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

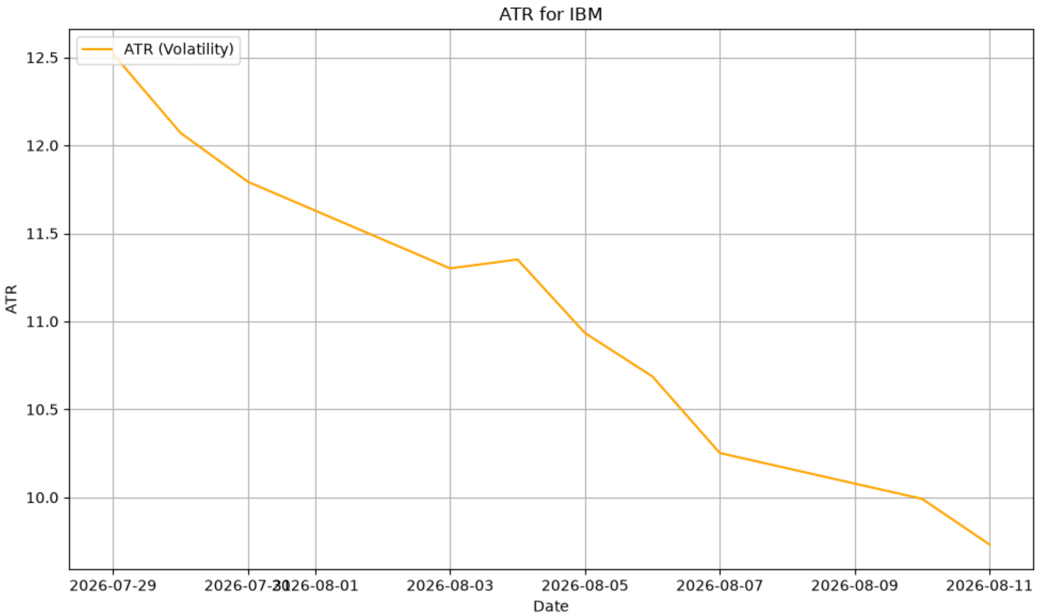
Fractal & Statistical Analysis

FVI Score: 0.566 (Fractal Volatility Index FVI)
DFA Result: 0.4897 (Detrended Fluctuation Analysis)
Lyapunov Exponent: 0.0169 (Measures chaos and predictability)
Hurst Exponent: 0.5361 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 238.42 is within the Bollinger Bands range (201.18 - 243.97).
Latest ATR: 9.7321

Average True Range (ATR)



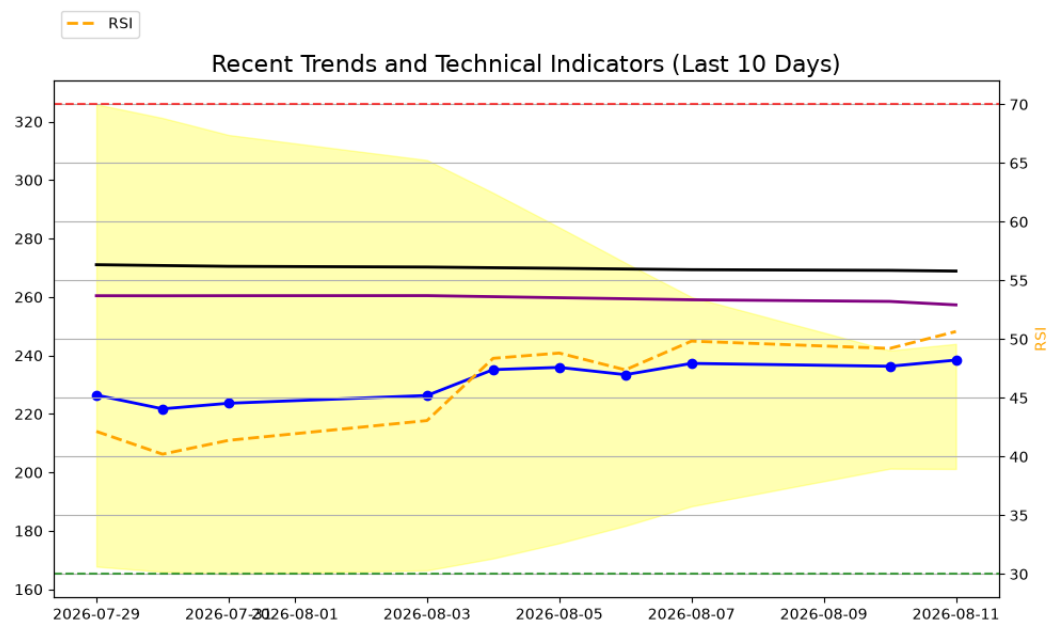
The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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
IBM stock is currently in a regime of stability rather than chaos, as indicated by a relatively low Lyapunov value of 0.017. The Fractal Volatility Index (FVI) of 0.566 suggests the presence of some noise, but not a strong acceleration in the stock's price movements. The Breakout Potential Score (BPS) of -1.056 and the absence of a strong breakout signal suggest that the stock is not likely to experience a significant price surge in the near future. The stock's volume has decreased by 40.71%, indicating a lack of strong investor participation in the stock's price moves.

2. Market Sentiment
The stock's trading pattern suggests institutional-driven behavior. Market sentiment appears to be cautious, reflecting the lack of a strong breakout signal and the presence of some noise in the stock's price movements.

3. Geopolitical Risk Assessment
IBM's exposure to geopolitical risks appears to be moderate. The stock's sector sensitivity score of 0.04825 suggests a relatively low exposure to energy, transport, and emissions volatility. However, given the current state of global trade disruptions and geopolitical tensions, it's crucial to consider the potential impact of these factors on the stock.

4. Sector and Supply Chain Exposure
IBM, being a technology company, may have some exposure to risks associated with Asia-sourced components such as semiconductors. However, the company's low GHG impact score suggests a limited exposure to sectoral emissions risk.

--- STRATEGY RECOMMENDATION ---
Given the current state of the stock's volatility and breakout potential, a conservative investment strategy is recommended. The lack of a strong breakout signal and the presence of some noise in the stock's price movements suggest that a trend-following strategy may not be optimal at this time. Instead, investors may want to consider a mean-reversion strategy or a hedging strategy to protect against potential downside risks.

--- FINAL TAKEAWAY ---
"IBM stock is currently experiencing moderate volatility with no strong breakout signal. Given the stock's institutional-driven trading pattern and the presence of some noise in its price movements, a cautious investment approach is recommended. Investors should also consider the potential impact of global trade disruptions and geopolitical tensions on the stock."

Stock Information

Market Capitalization: 224623690000, Industry: INFORMATION TECHNOLOGY SERVICES, Latest Volume: 4468987, Description: International Business Machines, Sector: TECHNOLOGY, Price to Book: 6.46, Trailing PE: 21.01, Forward PE: 19.12, Enterprise to Ebitda: 15.92, Enterprise to Revenue: 4.049, Profit Margins: 0.155

The trading volume has changed by -40.71% 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: 0.70
Beta of 0.70 suggests low volatility compared to the market.

Stock Investment Character Report

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

Investment Character: Steady Operator

Resilience: 66%
Momentum: 20%
Structural Stress: 20%
Narrative Dependence: 20%
Confidence: 63%

Calculated Metrics:
- Price-Volume Divergence: 0.000
- Volatility Dissonance Index: -0.355

Evidence:
- Beta 0.705 indicates lower market sensitivity relative to the broader market.
- Breakout Probability Score -1.056 and statement notes no strong breakout; price 238.42 within Bollinger Bands 201.18–243.97.
- Fractal Volatility Index 0.566 vs market-wide FVI 0.478 shows slightly elevated but moderate volatility.
- Profit margin 0.155 alongside EV/EBITDA 15.92 and EV/Revenue 4.049 indicate profitable operations with moderate valuation multiples.
- Hurst Exponent 0.536 and Lyapunov Exponent 0.01694 suggest mild persistence and low chaotic instability.
- Recent volume change -40.71% (current volume 4,468,987) signals reduced participation, tempering momentum.

Assessment:
IBM appears to be consolidating with low-to-moderate volatility and a below-market beta, supported by positive profitability metrics. Absence of a breakout and declining volume point to limited near-term momentum rather than deterioration. Overall, trading behavior and fundamentals align more with a steady, resilient operator than

with speculative or narrative-driven dynamics.

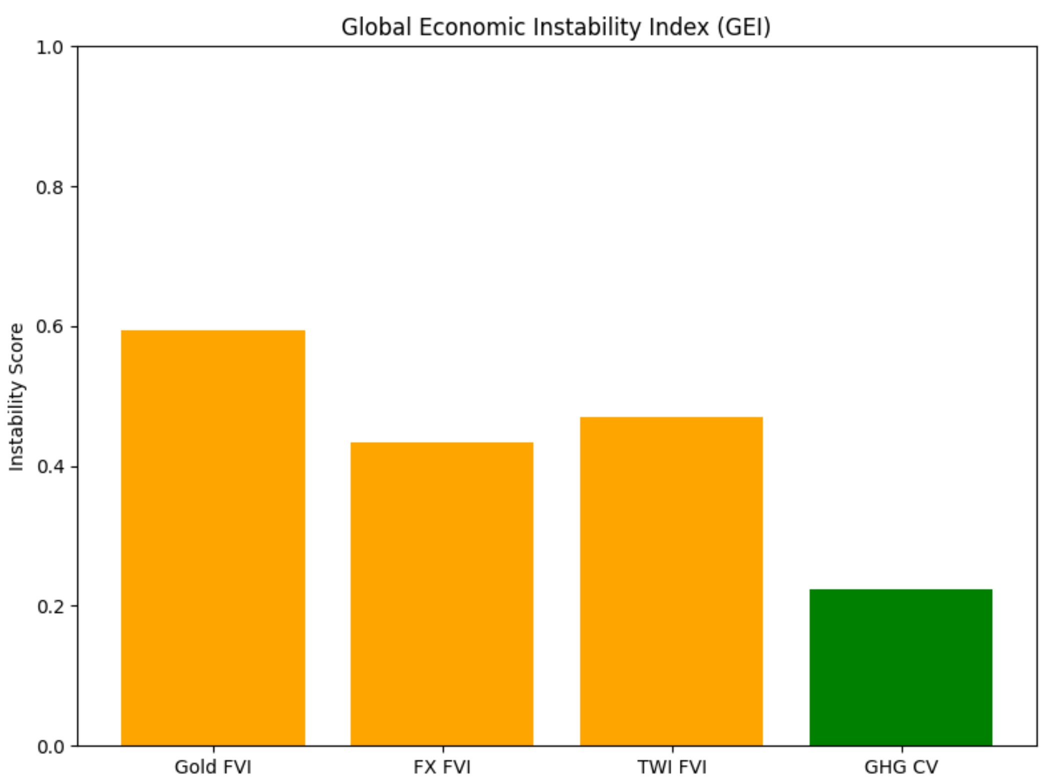
Medium-Term Fit:
May suit an independent thesis seeking lower-beta, profitable technology-services exposure during periods favoring stable cash flows and consolidation phases, or a thesis anticipating incremental operational resilience over headline momentum..

Fractal Volatility Indices

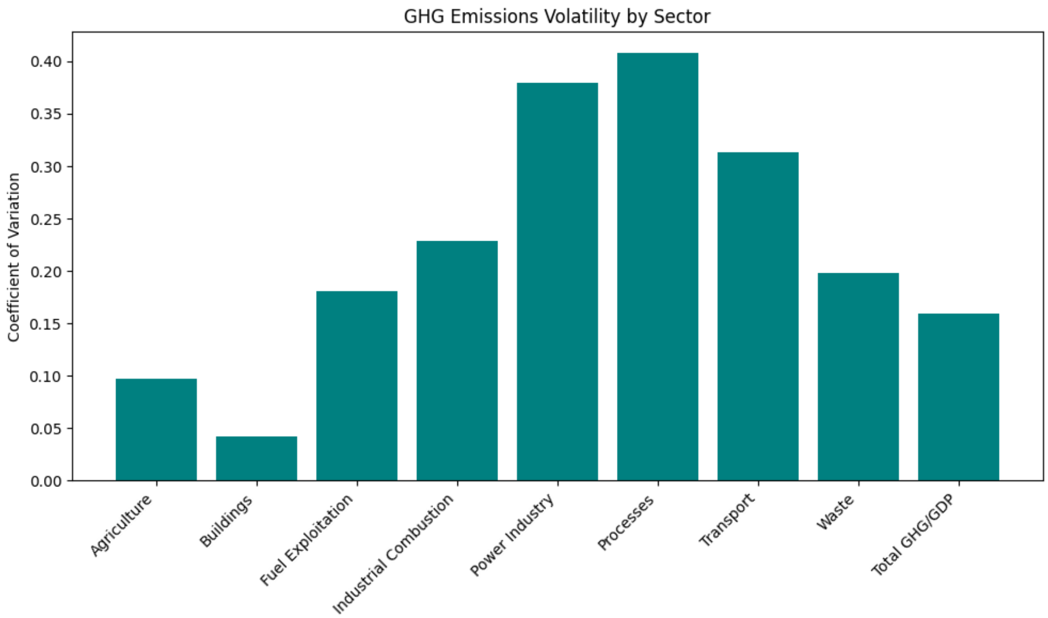
Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Low FX volatility indicates relatively stable currency markets
FVI_TWI: 0.469352 => Moderate trade-weighted volatility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



Low GHG impact (0.048) for theTechnology 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__________