Fractal Volatility Index for APP : 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: Applovin Corp APP 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): 0.703
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

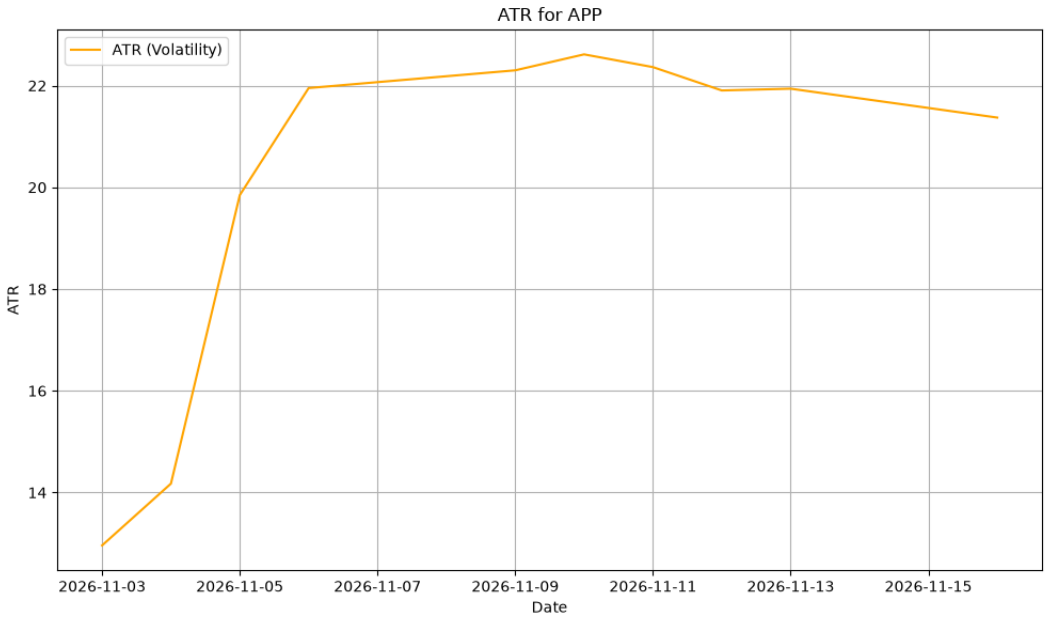
Fractal & Statistical Analysis

FVI Score: 0.513 (Fractal Volatility Index FVI)
DFA Result: 0.5406 (Detrended Fluctuation Analysis)
Lyapunov Exponent: 0.0157 (Measures chaos and predictability)
Hurst Exponent: 0.4819 (Indicates trending or mean-reverting behavior)

Breakout & Recent Price Change Analysis

Breakout Statement: No strong breakout signal detected: The latest closing price of 415.22 is within the Bollinger Bands range (171.57 - 453.78).
Latest ATR: 21.3709

Average True Range (ATR)

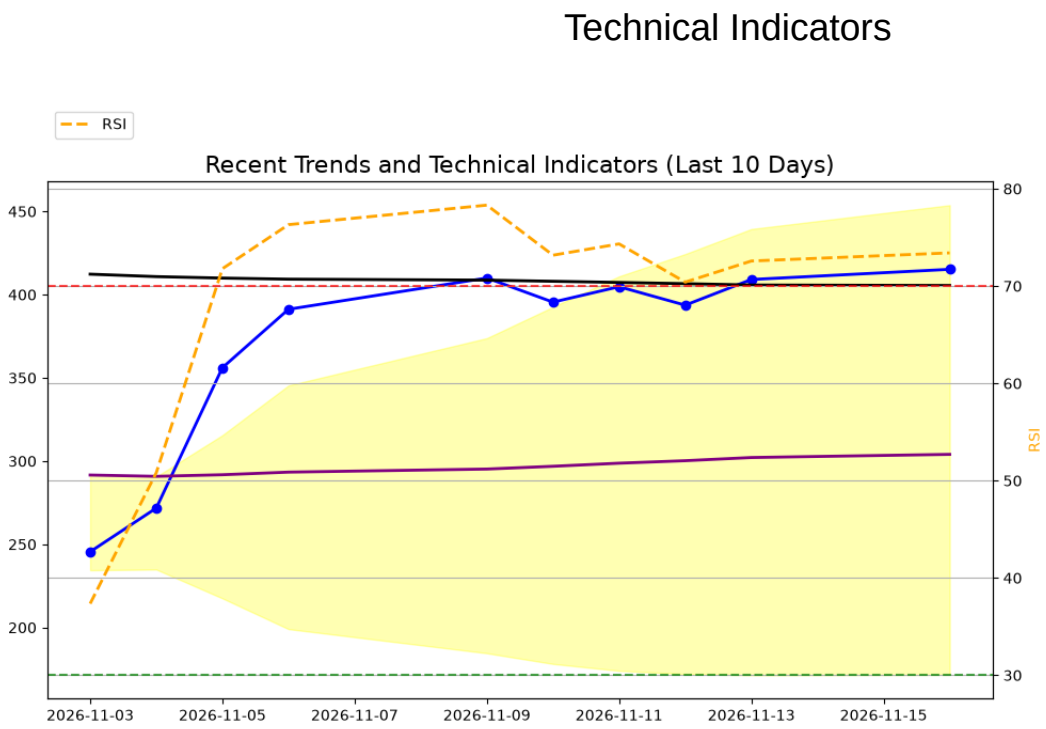


The ATR measures the recent price volatility of a stock, calculating the average range between its high and low prices over a given period (usually 14 days). A higher ATR indicates greater market volatility, and a lower ATR indicates less volatility.

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
- Stock FVI is 0.5129 versus the market-wide FVI of 0.478, indicating APP's structural instability is somewhat higher than the broad market on the supplied scale. FVI measures instability, not price direction.
- Lyapunov exponent is 0.0157. It quantifies sensitivity/divergence within the system; no magnitude classification is made without a benchmark.
- Hurst exponent is 0.4819, slightly below 0.5, which may suggest mild anti-persistence, but its proximity to 0.5 implies only weak evidence of that behavior.
- DFA is 0.5406, indicating a measurable scale-dependent correlation structure; by itself it does not signal a breakout, volatility surge, or direction.

2. Breakout Evidence
- Breakout Probability Score is 0.7028, which, in isolation, suggests meaningful breakout evidence per the score's definition, though no calibration thresholds were supplied.
- The explicit breakout observation states no strong breakout signal: the latest close (415.22) remains within the Bollinger Band range (171.57 – 453.78).
- These two inputs conflict; the score indicates breakout potential while the band-based observation does not confirm it. Breakout direction is not determined by the supplied evidence.

3. Participation and Technical Context
- Volume change: -39.55% (a decline in recent trading activity). Without a historical average or multi-period context, the significance of this change is limited.
- Latest ATR: 21.37 (price units). Without price-normalized context or a historical ATR comparison, its relative magnitude cannot be assessed.
- Beta: 2.498. No sector or historical benchmark is supplied to contextualize this reading.

4. Macro and Sector Context
- Structural instability comparisons (FVI): Gold (0.5936) > APP (0.5129) > Market-wide (0.478) "H TWI (0.4694) > FX (0.4343). These are macro risk proxies only; no specific causal drivers are inferred.
- GHG sector variability score: not available for Communication Services; Company GHG sector sensitivity score: not available. No emissions-related variability inference can be made for APP from the supplied data.

5. Risk Interpretation
- The evidence most strongly supports moderate uncertainty with elements of elevated instability: APP's FVI is above the market-wide level, Hurst is near 0.5 (weak behavioral bias), and the Lyapunov reading confirms sensitivity without a magnitude benchmark.
- Breakout potential is suggested by the BPS, but the explicit Bollinger Bands observation does not corroborate it, resulting in conflicting signals rather than a decisive regime shift.

6. Monitoring Implications

- Watch the stock FVI versus the market-wide FVI for changes in relative structural instability.
- Track BPS alongside price location relative to Bollinger Bands to resolve the current breakout-signal conflict.
- Monitor Hurst and DFA for shifts away from the near-0.5 regime and for evolving scale dependence.
- Observe Lyapunov for changes in sensitivity/divergence, and follow volume trends and ATR normalized by price for better context (when available).
- Keep an eye on macro FVI proxies (Gold, FX, TWI) for shifts in broader structural conditions that may frame APP’s relative instability.

FINAL TAKEAWAY

APP currently shows structural instability modestly above the market and mixed breakout signals, pointing to a moderately uncertain volatility regime rather than a confirmed transition. The key uncertainty is the conflict between the elevated Breakout Probability Score and the lack of a strong band-based breakout signal; monitoring BPS together with price versus Bollinger Bands, the stock FVI versus market FVI, and volume/ATR context would be most informative.

Stock Information

Market Capitalization: 135543824000, Industry: ADVERTISING AGENCIES, Latest Volume: 4548209, Description: Applovin Corp, Sector: COMMUNICATION SERVICES, Price to Book: 41.09, Trailing PE: 27.55, Forward PE: 19.46, Enterprise to Ebitda: 21.67, Enterprise to Revenue: 17.86, Profit Margins: 0.659

The trading volume has changed by -39.55% 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: 2.50
Beta of 2.50 suggests high volatility compared to the market.

Stock Investment Character Report

Analysis based on supplied stock characteristics and market context.

Investment Character: Valuation-Sensitive Quality
Resilience: 62%
Momentum: 40%
Structural Stress: 45%
Narrative Dependence: 30%
Confidence: 58%

Calculated Metrics:
- Price-Volume Divergence: 0.000
- Volatility Dissonance Index: -0.995

Evidence:
- Reported profit margin is high, indicating strong current profitability.
  Indicators: Profit margin=0.659
  Supports: Resilience
- Company-level structural volatility is moderate and broadly in line with the market.
  Indicators: Fractal Volatility Index=0.513, Market-wide FVI=0.478
  Supports: Structural Stress
- Market-relative volatility is high (beta above 1) and recent trading-range volatility is high by the provided ATR thresholds.
  Indicators: Beta=2.498, Latest ATR=21.370877303284093
  Supports: Structural Stress
- Elevated breakout probability exists, but no confirmed breakout is present per the Bollinger-band observation.
  Indicators: Breakout Probability Score=0.7028172932705286, Breakout statement=No strong breakout signal detected; price within Bollinger Bands (171.57 - 453.78) at 415.22
  Supports: Momentum
- Valuation multiples are demanding relative to earnings and revenue.
  Indicators: Price-to-book ratio=41.09, Trailing P/E=27.55, Forward P/E=19.46, EV/EBITDA=21.67, EV/Revenue=17.86
  Supports: Uncertainty

Assessment:
The stock shows strong operating evidence via a high profit margin, while structural instability is moderate by FVI but paired with elevated market-relative and recent range volatility (beta and ATR). Momentum potential is indicated by a high breakout probability score, yet no confirmed breakout is detected. Valuation appears demanding, making the profile quality-driven but sensitive to execution and sentiment. Overall it aligns with a valuation-sensitive quality character rather than pure momentum or narrative dependence.

Limitations:
- Earnings power beyond the reported profit margin is unclear due to non-meaningful EPS fields and lack of revenue or cash-flow trends.
- ATR is an absolute measure and lacks price-normalized or historical context beyond the provided threshold.
- Volume level and its recent decline do not establish accumulation, distribution, or conviction.
- Bollinger-band information confirms only the absence of a breakout and does not establish trend strength or consolidation breadth.

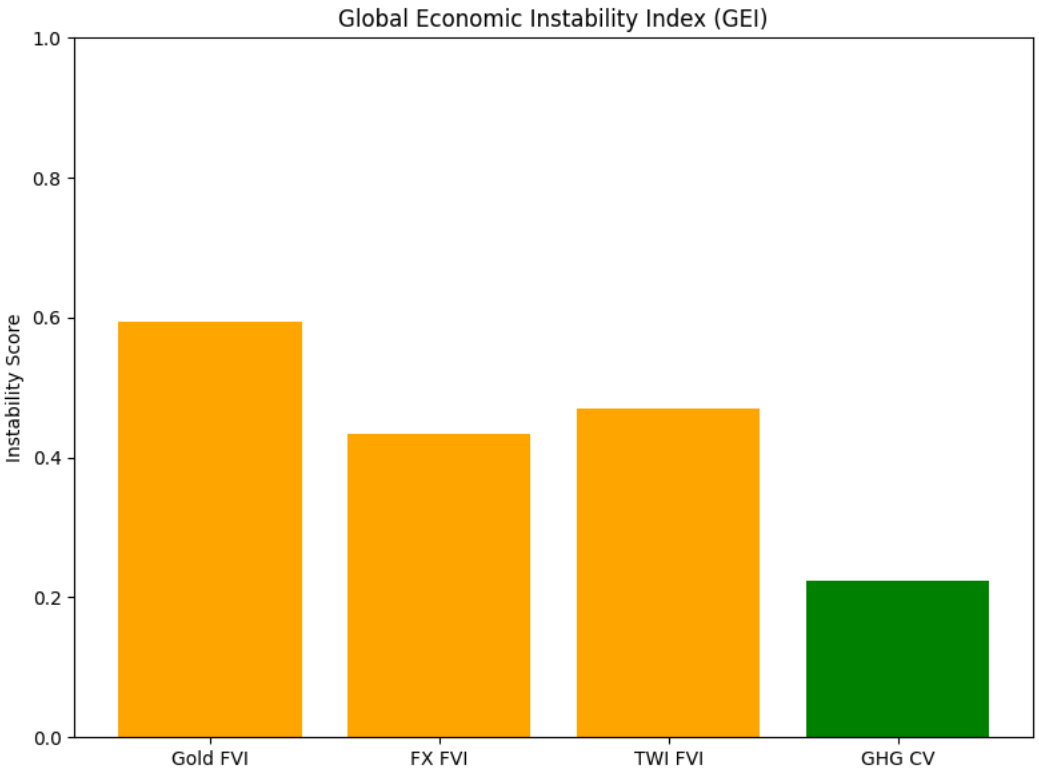
Medium-Term Fit:
Potential fit for a thesis prioritizing profitable ad-tech platforms with operational leverage, where an investor accepts higher volatility and monitors execution against demanding valuations without requiring immediate breakout confirmation.

Fractal Volatility Indices

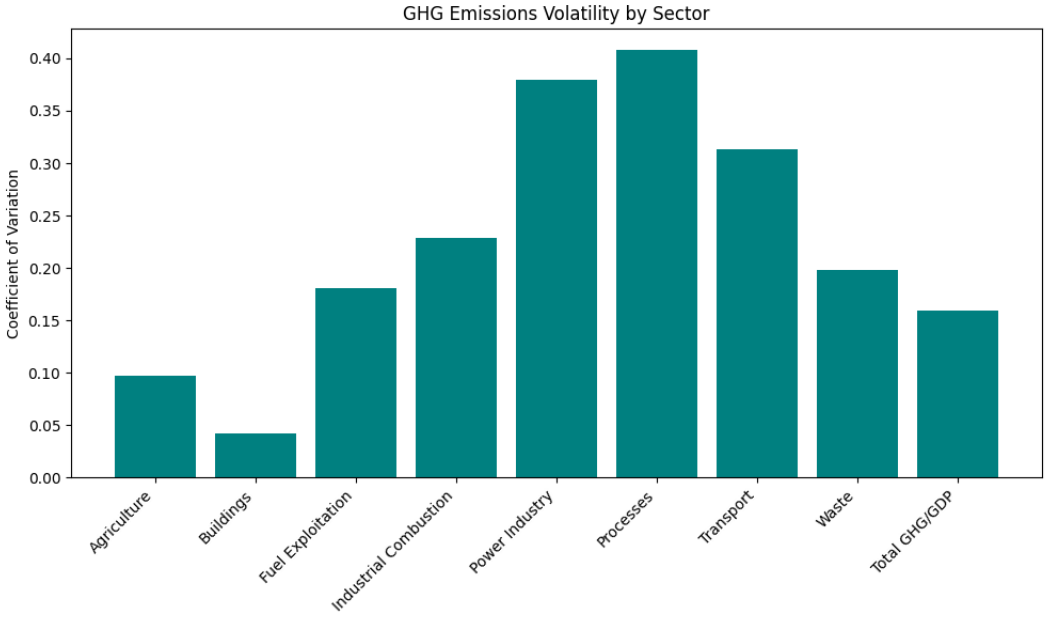
Global Geopolitical Fractal Volatility (Gold, Forex, TWI (Tariffs) and GHG Emissions)
FVI_GOLD: 0.593608 => Moderate gold volatility indicates increased investor caution
FVI_FX: 0.434301 => Moderate FX volatility indicates ongoing currency-market adjustment
FVI_TWI: 0.469352 => Moderate trade-weighted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