Media Predictions, Election Outcomes, and Stock Market Reactions in India Analyzing the Impact of Pre-Election Forecasts

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Motivation

- During the 2024 Indian General Elections, there was intense media-driven optimism, with exit polls across major TV channels and YouTube strongly projecting a BJP landslide.
- This created a surge of investor confidence, and the Nifty 50 index rallied sharply.
- However, when the actual results revealed BJP had lost its outright majority, the markets crashed suddenly.
- Our study seeks to understand how this mismatch between media predictions and reality affected stock market behavior, and whether public sentiment could act as an early signal for such volatility.

Research Questions

01. How did public sentiment from Reddit, YouTube, and news platforms evolve across the election timeline?

02. Was this sentiment in sync with real-world stock market behavior?

03. Could grassroots discussions, especially on platforms like Reddit, better predict market risks compared to mainstream media optimism?

Data Collection

To answer those research questions, we constructed a custom dataset covering multiple perspectives:

The data collection window was from **May 20 to June 6**, capturing both the exit poll hype and the election outcome reaction.

Reddit – PRAW

Reddit discussions were scraped using **PRAW**, focusing on politically and financially active communities like **r/India and r/IndianStreetBets.**
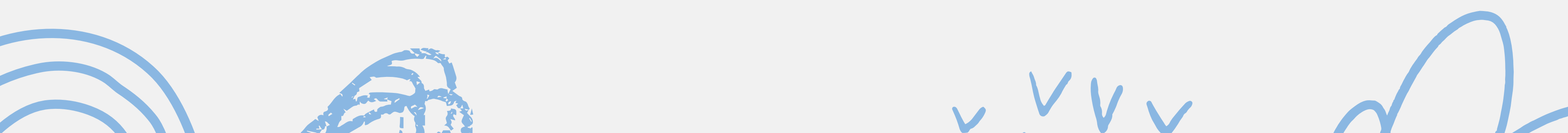
YouTube API

YouTube videos, transcripts, and comments were collected from major news channels via the **YouTube API.**

SERP API

News headlines were gathered using the **SERP API**, simulating Google News searches.

Nifty 50 – Yfinance

Nifty 50 index closing prices were pulled from Yahoo Finance using the **yfinance** package.
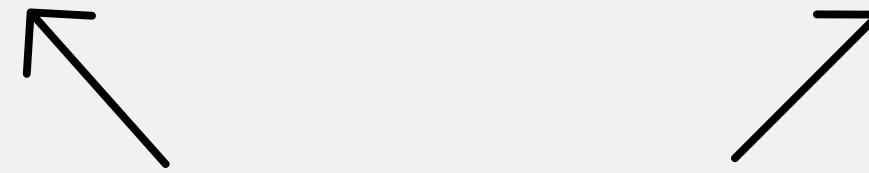
Sentiment analysis was performed using **VADER**, which is effective for informal text like Reddit posts, video transcripts, and headlines.

Missing values were handled with forward-filling for smooth analysis.

Daily average sentiment scores were computed separately for **Reddit, YouTube, and News.**

We employed a multi-step analytical pipeline

Methods

Visualizations included line plots, boxplots, scatterplots, and correlation matrices.

The datasets were merged and aligned by date with Nifty 50 stock data.

Finally, we explored correlations between sentiment trends and market movements.

Special event markers were placed for **June 1 (exit poll day) and June 4 (results day)** to observe impact points.

Key Finding 1: Market Reactions

- The Nifty index showed a sharp rally immediately after the exit polls were announced on June 1.
- However, when the real results on June 4 revealed that the BJP had lost its outright majority, the market witnessed a steep crash in a single trading day.
- This suggests that financial markets are highly sensitive to surprise outcomes — not just optimism levels.
- The difference between expectations and actual outcomes played a bigger role in driving market volatility.

Key Finding 1: Market Reactions

Nifty 50 vs Public Sentiment: Reddit, News, YouTube (2024 Indian Elections)
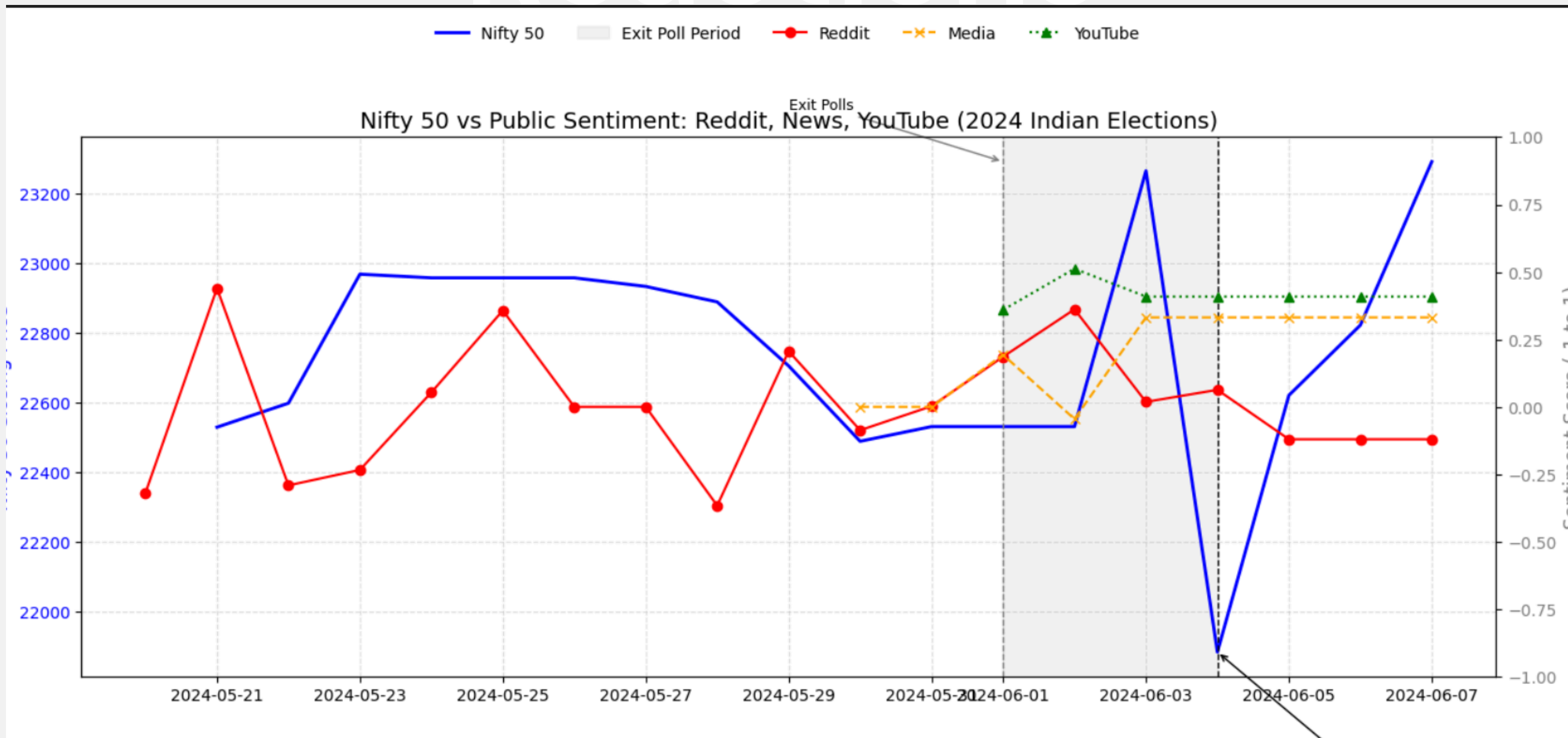
Key Finding 2: Sentiment Trends

When we analyzed sentiment trends:
- YouTube and News media sentiment spiked sharply positive after the exit polls, continuing into early June.
- Reddit sentiment, however, remained neutral or slightly skeptical throughout.

This indicates that while mainstream media narratives fueled collective optimism, grassroots platforms like Reddit reflected underlying doubts, which proved to be more accurate later.

It highlights the importance of examining decentralized sentiment channels during uncertain events.

Key Finding 2: Sentiment Trends

Sentiment Trends Over Time (with Fill)
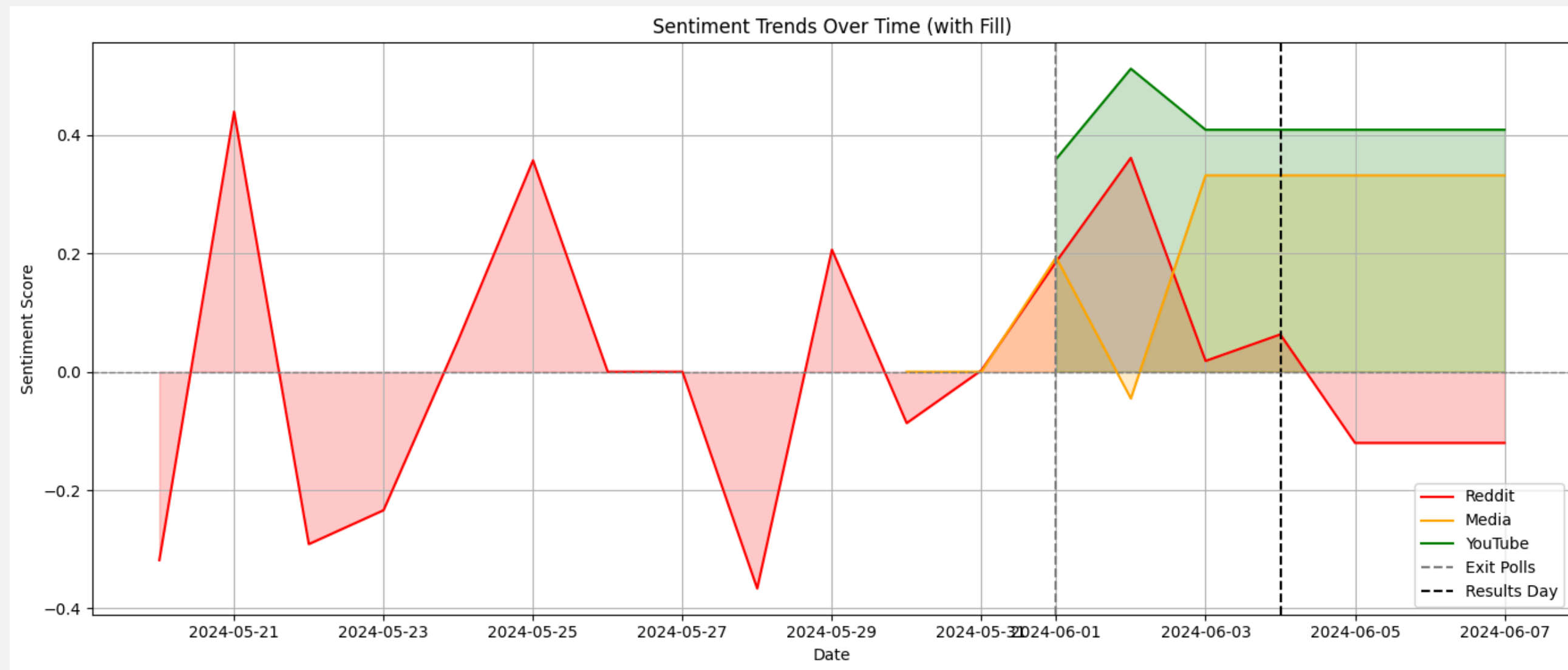
Correlation Insights

Our correlation analysis revealed some important patterns:

- Media sentiment had a moderate positive correlation with Nifty movements (r = 0.27), meaning when media positivity increased, Nifty often rose too.
- YouTube sentiment had almost no correlation (r = –0.05), showing a weak predictive power.
- Reddit sentiment had a noticeable negative correlation (r = –0.22), suggesting that as skepticism grew on Reddit, market volatility also increased.

These results emphasize that alternative grassroots signals may provide early warnings that mainstream media optimism misses.

Correlation Insights
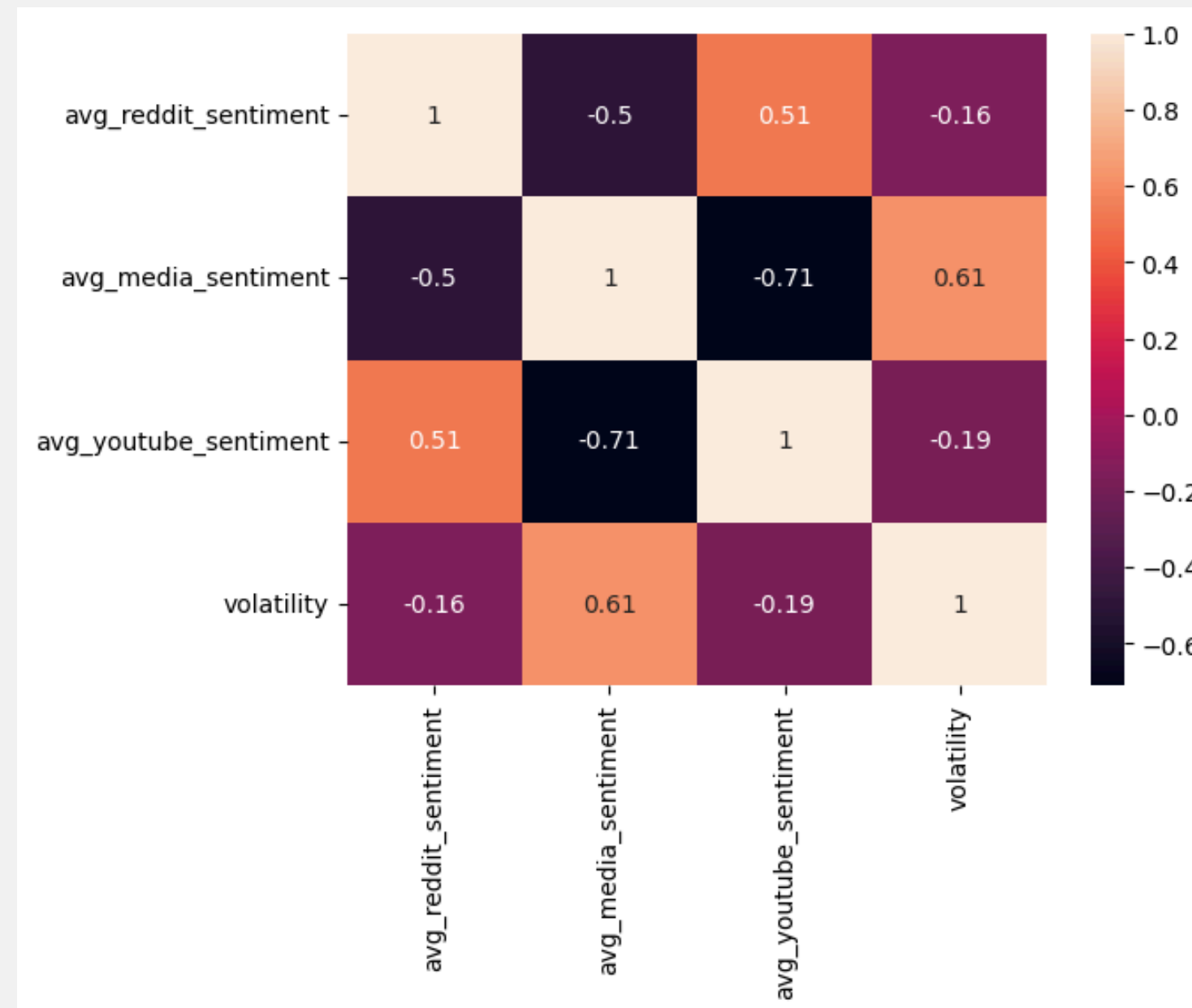
Final reflections

- Financial markets are highly reactive to surprises, not just to positive or negative sentiment.
- Media-driven optimism can create temporary bubbles that collapse when reality deviates from expectations.
- Grassroots skepticism on platforms like Reddit can serve as an important early signal of underlying risks.
- Monitoring a wide range of sentiment sources during political events is crucial for investors and analysts alike.

Thank you very much