

# Ozempic Sentiment and Stock Price Analysis

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# Background

Novo Nordisk has become one of the world's most valuable pharmaceutical giants, fueled by the rise of Ozempic, a diabetes and GLP-1 inhibitor.

Ozempic has gained attraction due to its dramatic weight-loss effects on the body. This has public perception, media coverage, and the financial sector.

Our Project aims to understand online ozempic sentiment and market changes.

We use Reddit (subreddits r/Ozempic and r/stocks) because it provides a more organic sentiment compared to other forums with more marketing and filters, to understand the conversation surrounding Ozempic.

We then look at the correlations between online sentiment and Novo Nordisk stock price.

# Problem Statement

**Can public sentiment on Reddit about Ozempic predict stock price movements of Novo Nordisk?** This study investigates whether fluctuations in online sentiment, particularly from subreddits like r/Ozempic and r/stocks, have a measurable impact on stock performance, challenging the weak form of the Efficient Market Hypothesis.

# Hypotheses

## SET 1:

***H0:*** There is no significant correlation between Ozempic sentiment on Reddit and investor sentiment on r/Stock regarding Novo Nordisk.

***H1:*** A significant correlation exists between Ozempic sentiment on Reddit and investor sentiment on r/Stock regarding Novo Nordisk.

## SET 2:

***H0:*** There is no significant relationship between sentiment on Reddit and future movements in Novo Nordisk's stock price.

***H1:*** Positive sentiment on Reddit is associated with increases in Novo Nordisk's stock price, while negative sentiment is linked to decreases.

## Our Sources and Approach

### Data Sources

#### **Bloomberg**

To get daily closing stock prices in March

#### **PRAW Reddit API**

"Python Reddit API Wrapper" Collected the data from Reddit

#### **VADER**

Sentiment Analysis Tool.

### Data Approach

#### **Why:**

- Why PRAW?
- Why Vader?

#### **Analysis tools:**

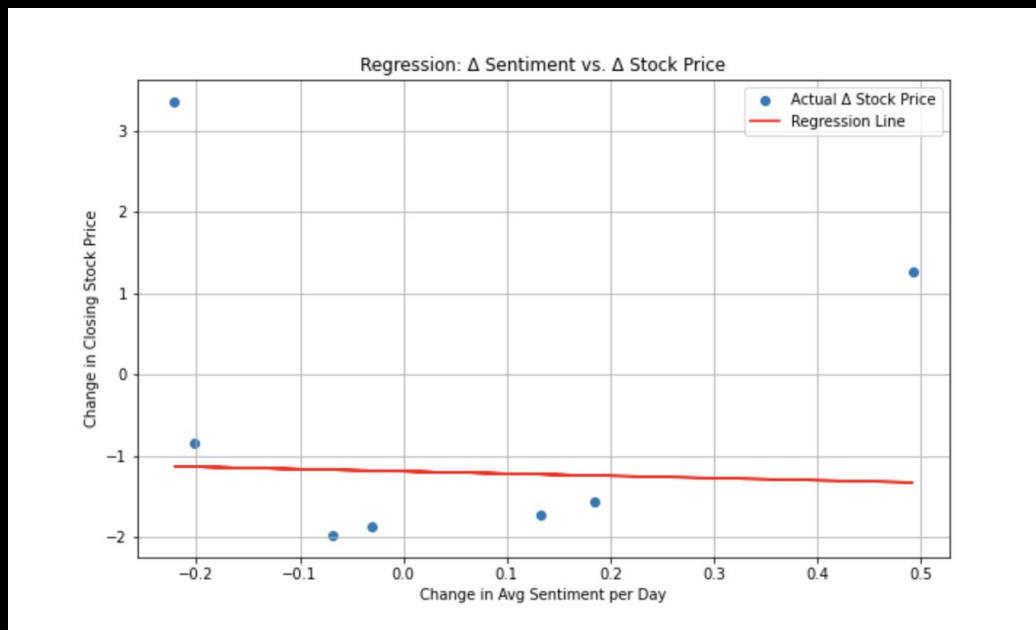
- time series analysis
- linear regression
- heat map
- weighted sentiment analysis
- 

#### **Data Organization**

- Bloomberg CSV
- Dictionary of dataframes for each reddit
- Averaging by day
- adjustment by day

## Results: Linear Regression Plot

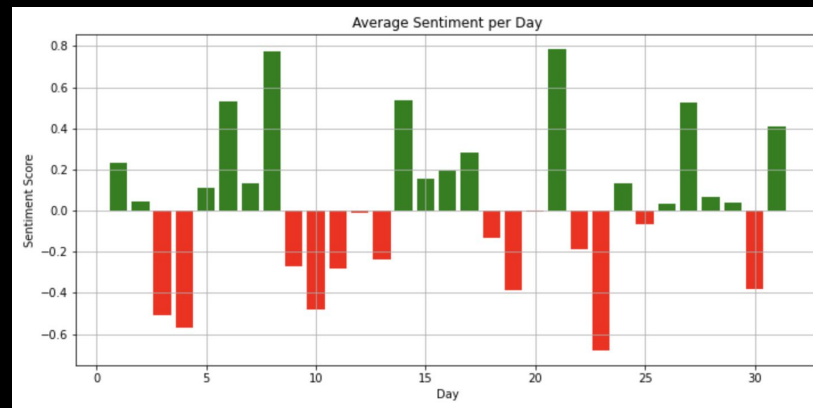
R VALUE: -0.0138, P VALUE: 0.9526



## Results:

7

Average of NVO closing price and Average reddit Sentiment per Day in March







## Final Thoughts

What we learned:

## Conclusion

- No correlation

## Future Studies

- Include more reddit groups
- Monitor during expected events
- Different platforms

Thank You!