

Do Events hosted by Phone Companies impact their stock values?

Ruchirapraikan Pamonpon(21229058)

Jason Sebastian (21224520)

Introduction

As phones got gradually more popular since the release of Iphone. People started getting used to smartphone as another part of their activity. Recent technology is proceeding in a much faster time than the 90s and there is a hype over a new phone release yearly from various phones company. We want to know how new features, consumer expectations, and market trends influence investor behavior and stock performance.

AlphaVantage API

<https://www.alphavantage.co/>

AlphaVantage is a well-known API providing historical and real-time market data on stocks, foreign exchange (FX), cryptocurrencies, and other financial assets. Developers, analysts, and traders use it extensively to do algorithmic trading, automate trading systems, conduct market research, and incorporate financial data into their applications.

Example output from Alphavantage API

```
# Show the first few rows
print(df.head())

# Optionally save the data to CSV
df.to_csv('nasdaq_stock_data.csv', index=False)
```



	Date	Open	High	Low	Close	Volume
0	2024-10-11	229.30	229.41	227.34	227.55	31759188.0
1	2024-10-10	227.78	229.50	227.17	229.04	28183544.0
2	2024-10-09	225.23	229.75	224.83	229.54	33591091.0
3	2024-10-08	224.30	225.98	223.25	225.77	31855693.0
4	2024-10-07	224.50	225.69	221.33	221.69	39505354.0

As the Portugal captain sat down to chat with the media in Budapest on Monday before of his country's Group F opener against Hungary, he was clearly concerned to see two bottles of the fizzy soft drink in front of him.

With Ronaldo's activities, Coca-Cola's share price dropped by 1.6% to \$55.22. Market value decreased by \$4 billion, from \$242 billion to \$238 billion.(Garcia, 2021)



Hypothesis 1: Every time Apple does a phone launch, their stock value rises

Null Hypothesis: Apple launch events do not affect their stock value.

Apple's Launch Dates

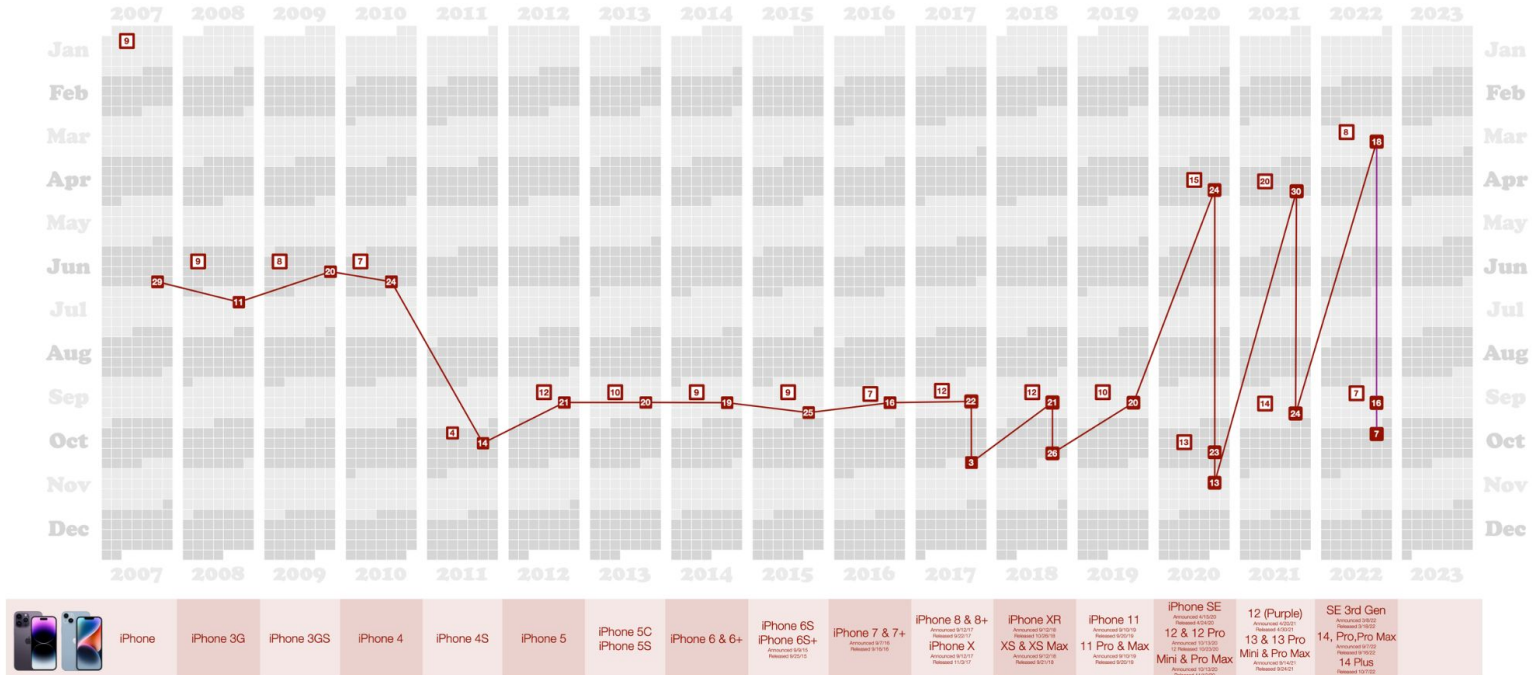
<https://infonewt.com/apple-release-patterns>

Apple iPhone Release Pattern

Updated 1/20/23

□ Announced ■ Released

InfoNewt®

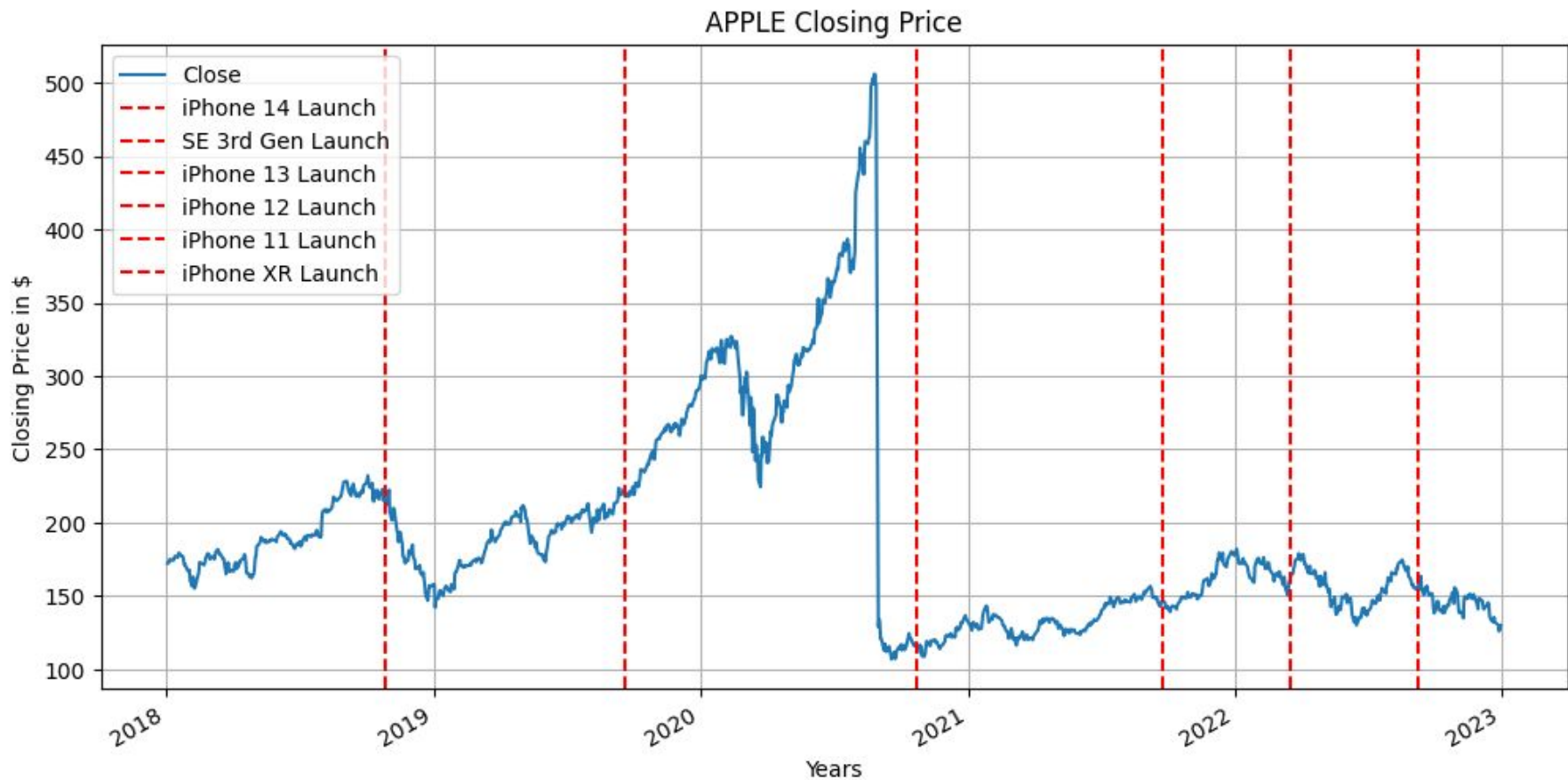


SOURCES: Apple.com, MacRumors.com, Wikipedia.com, TUAW.com, iMore.com

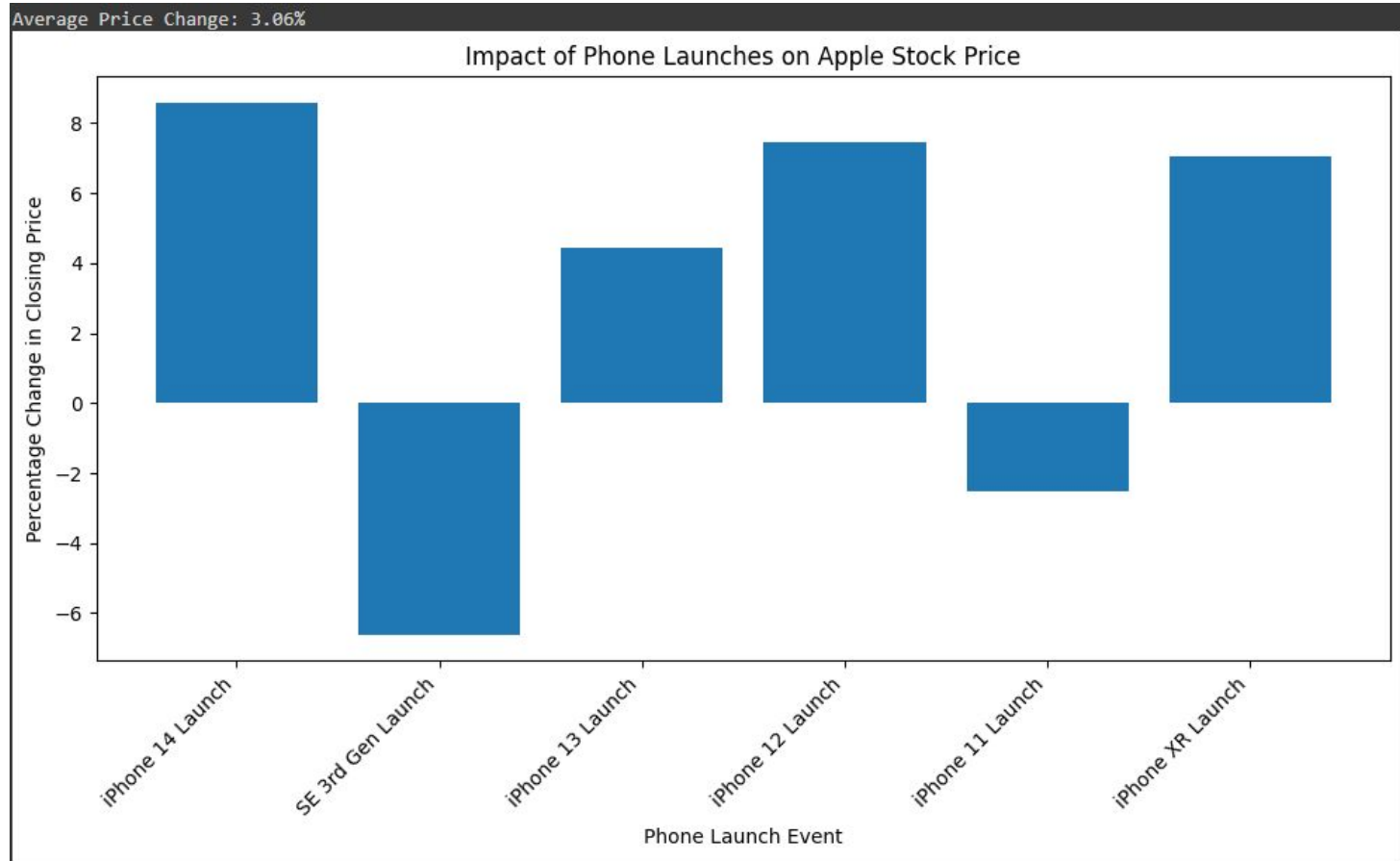


Visit [InfoNewt.com/Apple-Release-Patterns](https://infonewt.com/apple-release-patterns)

Visual 1:



Visual 2:



Explanation

- Apple Launch Events do not increase its stock value.
- They tend to show a slight increase, but none too significant to prove it is because of the event.
- Research has been made that User Generated Content (UGC) has affected the expectations of the launches and can affect the stock prices (van Dieijen et al., 2020).



T-statistic: 1.2079888043781402

P-value: 0.2548434884897066

Fail to reject the null hypothesis.

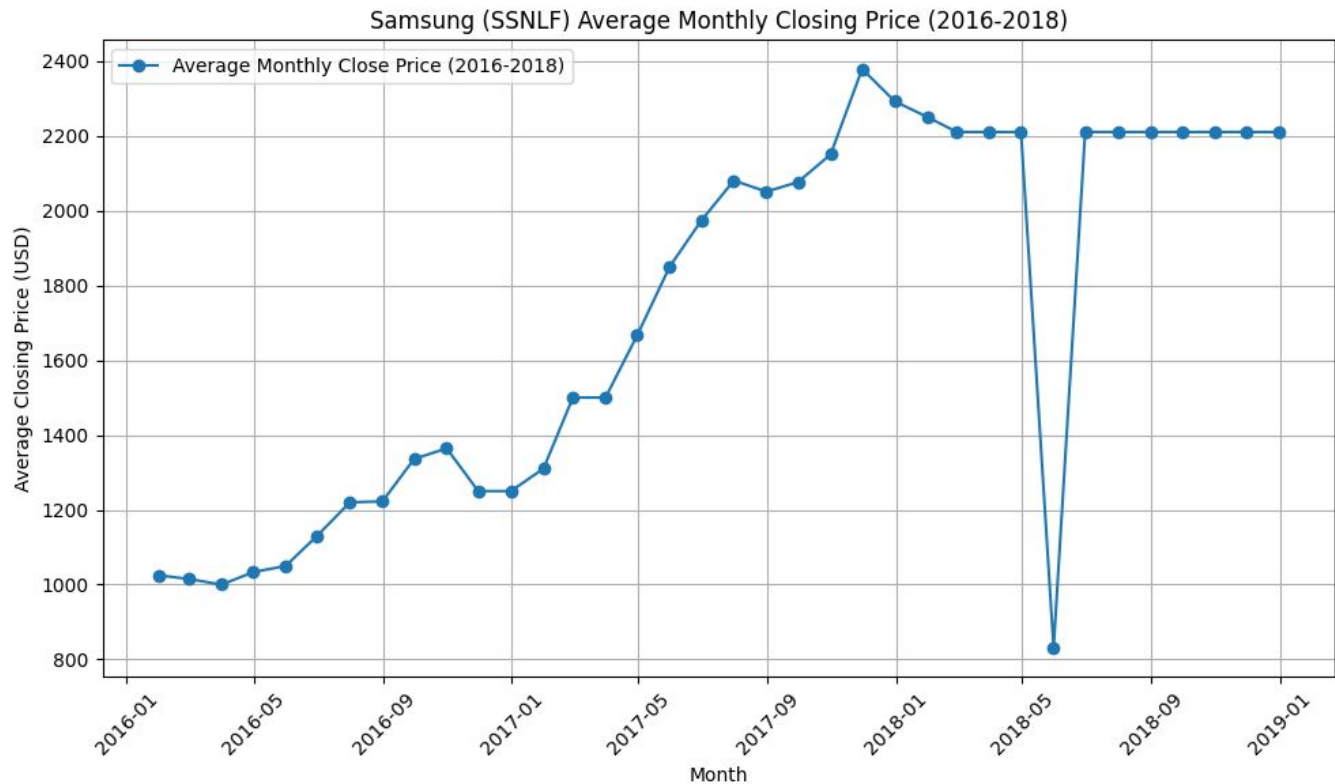
There is not enough evidence to suggest that events increase stock prices.

Hypothesis 2: Samsung's launch events also show an increase in stock value

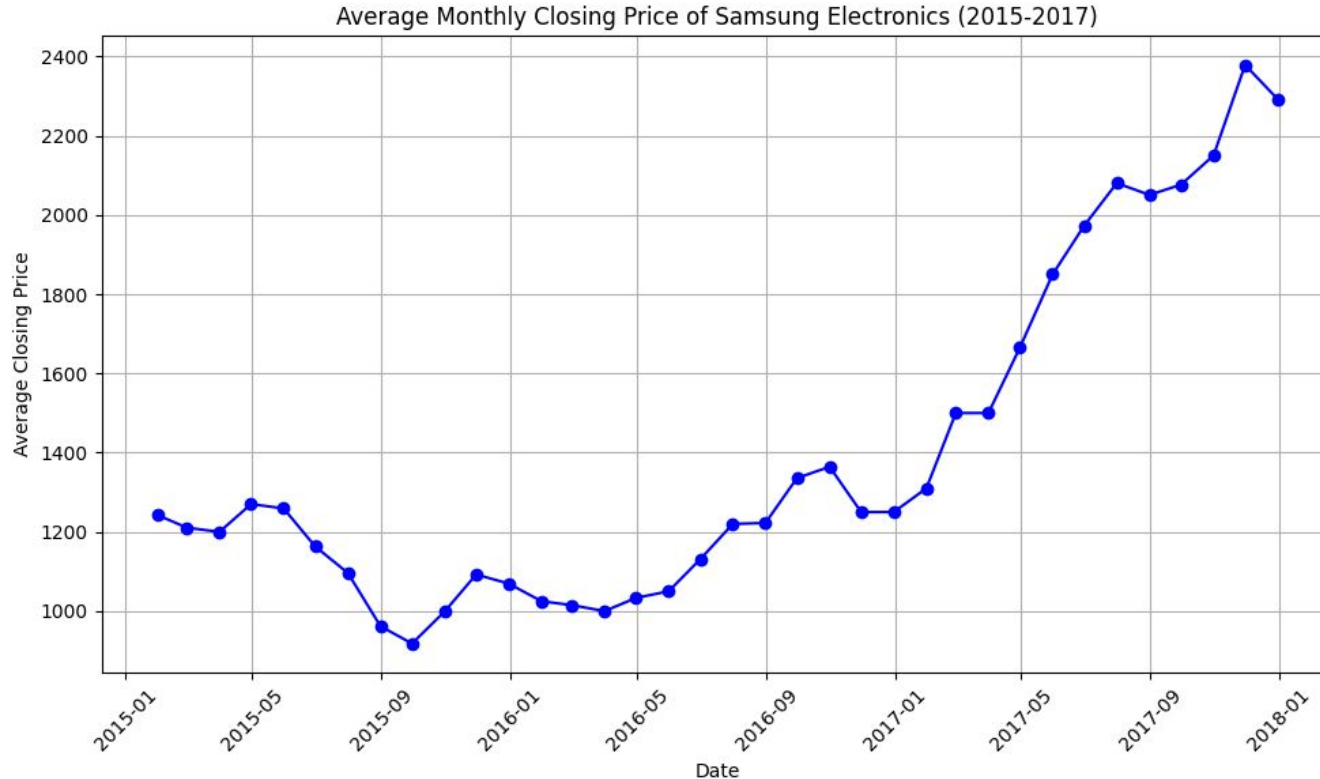
Null Hypothesis: Samsung's launch events do not affect their stock value

<https://colab.research.google.com/drive/1gHL4sI7HpGu30-xiqAgSdsdDHN4j3yBG?usp=sharing>

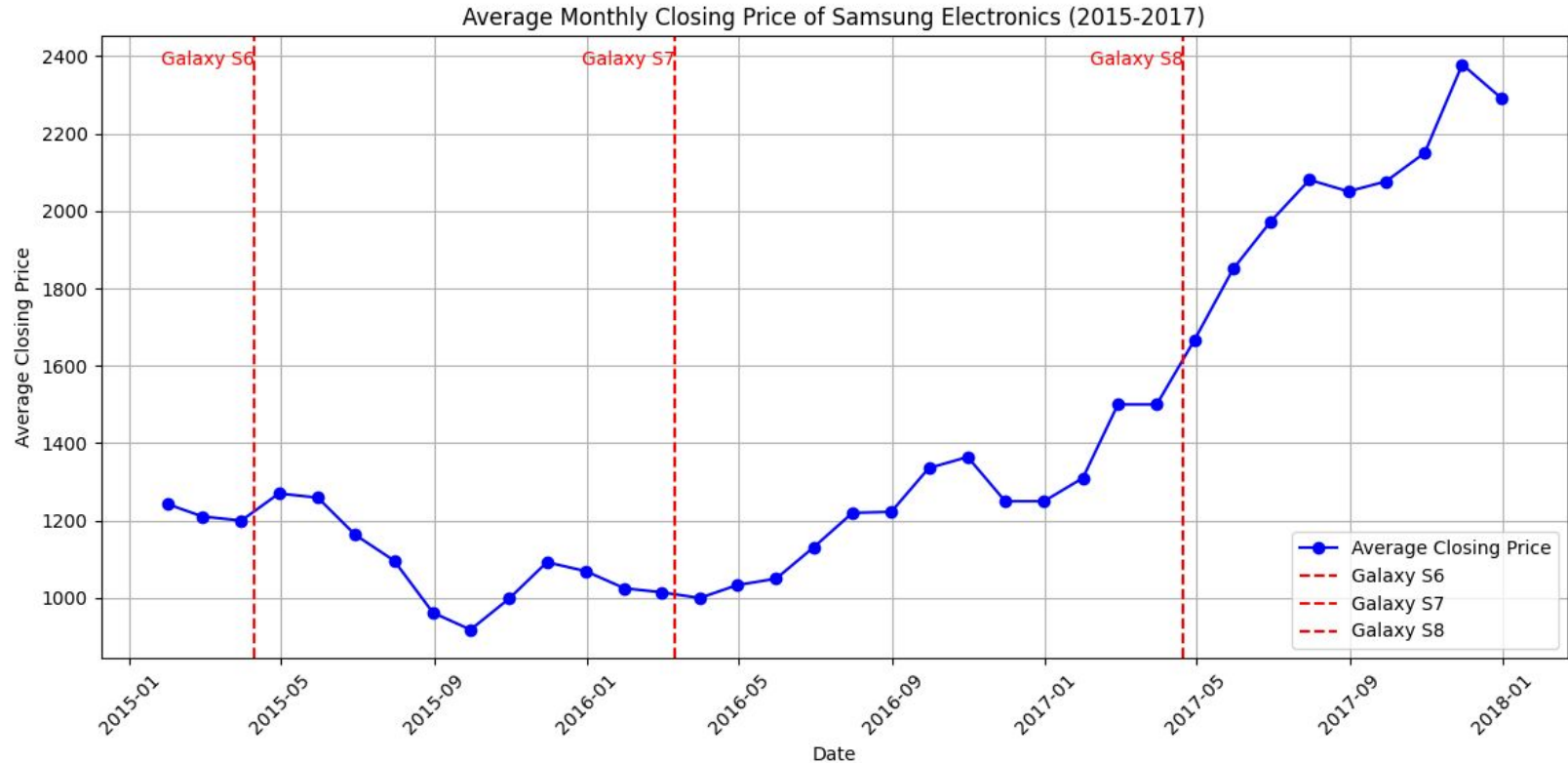
Problem on using AlphaVantage API (Late 2018 stock price)



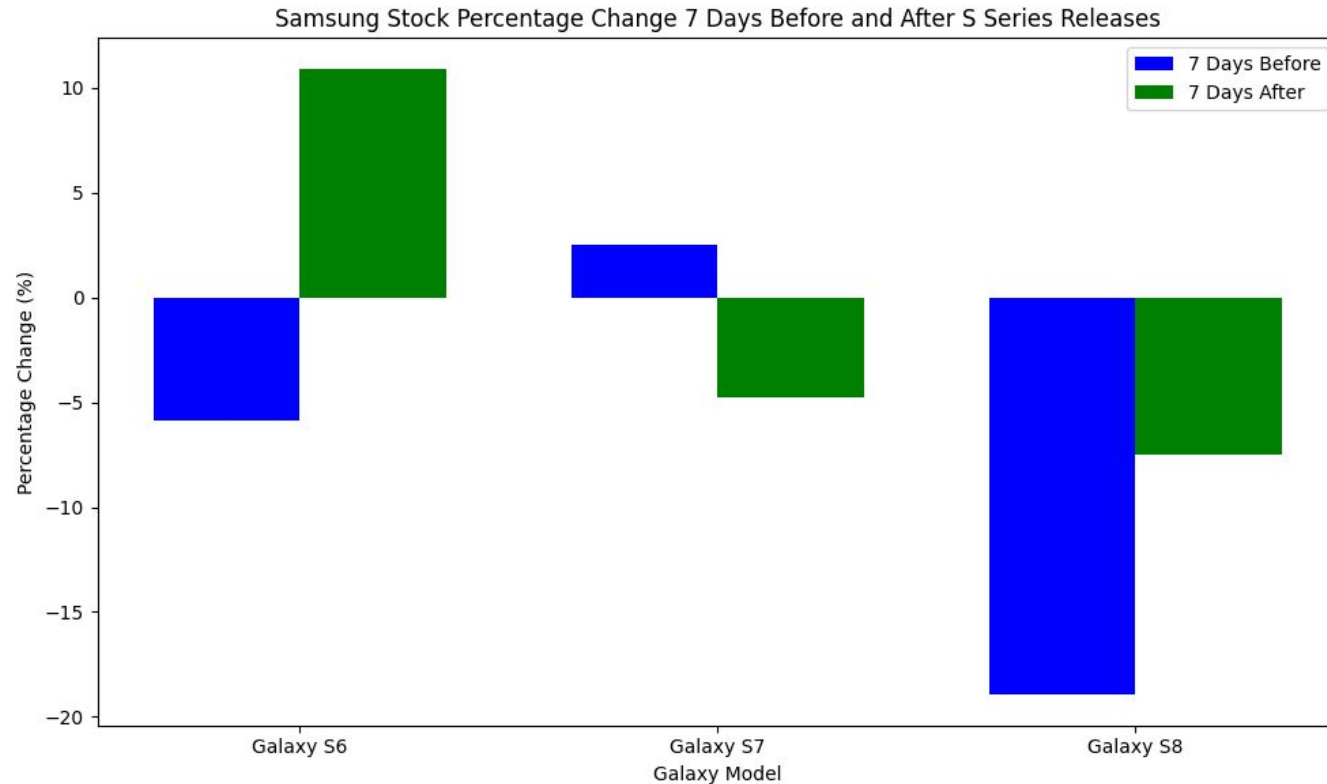
Visual 1: Average stock closing price of samsung by month



Visual 2: Average stock closing price of samsung by month including Samsung Galaxy S release date within the time frame



Samsung stock price trend *before* and *after* Phone release



Statistics for Galaxy S6 Release (Date: 2015-04-10):

Before Release (7 days):

Mean = 1207.14, Std = 22.28, Min = 1200.00, Max = 1275.00

After Release (7 days):

Mean = 1247.09, Std = 57.16, Min = 1150.00, Max = 1286.85

Statistics for Galaxy S7 Release (Date: 2016-03-11):

Before Release (7 days):

Mean = 1015.48, Std = 12.29, Min = 1000.00, Max = 1025.00

After Release (7 days):

Mean = 1025.61, Std = 25.30, Min = 1000.00, Max = 1050.00

Results

T-statistic: -1.2196288330976426, P-value: 0.3469131822463817

Fail to reject the null hypothesis: No significant increase in stock prices after the release.

T-statistic: -1.2196288330976426, P-value: 0.3469131822463817

Fail to reject the null hypothesis: No significant increase in stock prices after the release.

Explanation

When the Galaxy S8 was introduced in March, Samsung noticed a minor gain in stock prices as investors put their trust in the likelihood that buyers will upgrade their existing Samsung phone.

With the release of the Galaxy Note 8, Samsung's second announcement of the year, profits and losses were distributed across cellular carriers and merchants, indicating that Wall Street was uninterested in the bigger, more potent Samsung smartphone.

Apple was one of the few exceptions, with its shares rising by 0.5 percent on the debut of the Galaxy Note 8 (Gonzalez, 2017).

Conclusion

- The phone company's launch events do not result in an increase in stock value.
- External factors can be the reason why it fluctuates during the launch events.
Competition does not

Reference

Gonzalez, O. (2017, October 27). *The iphone effect: How every new smartphone affects the stock market*. NBCNews.com.

<https://www.nbcnews.com/tech/tech-news/iphone-effect-how-every-new-smartphone-affects-stock-market-n815021>

van Dieijen, M., Borah, A., Tellis, G. J., & Franses, P. H. (2020). Big Data Analysis of volatility spillovers of brands across social media and stock markets. *Industrial Marketing Management*, 88, 465–484. <https://doi.org/10.1016/j.indmarman.2018.12.006>

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