

ASSESSMENT OF FINANCIAL RISK IN SHARE MARKET : INSIGHTS FROM STOCK PRICE ANALYSIS

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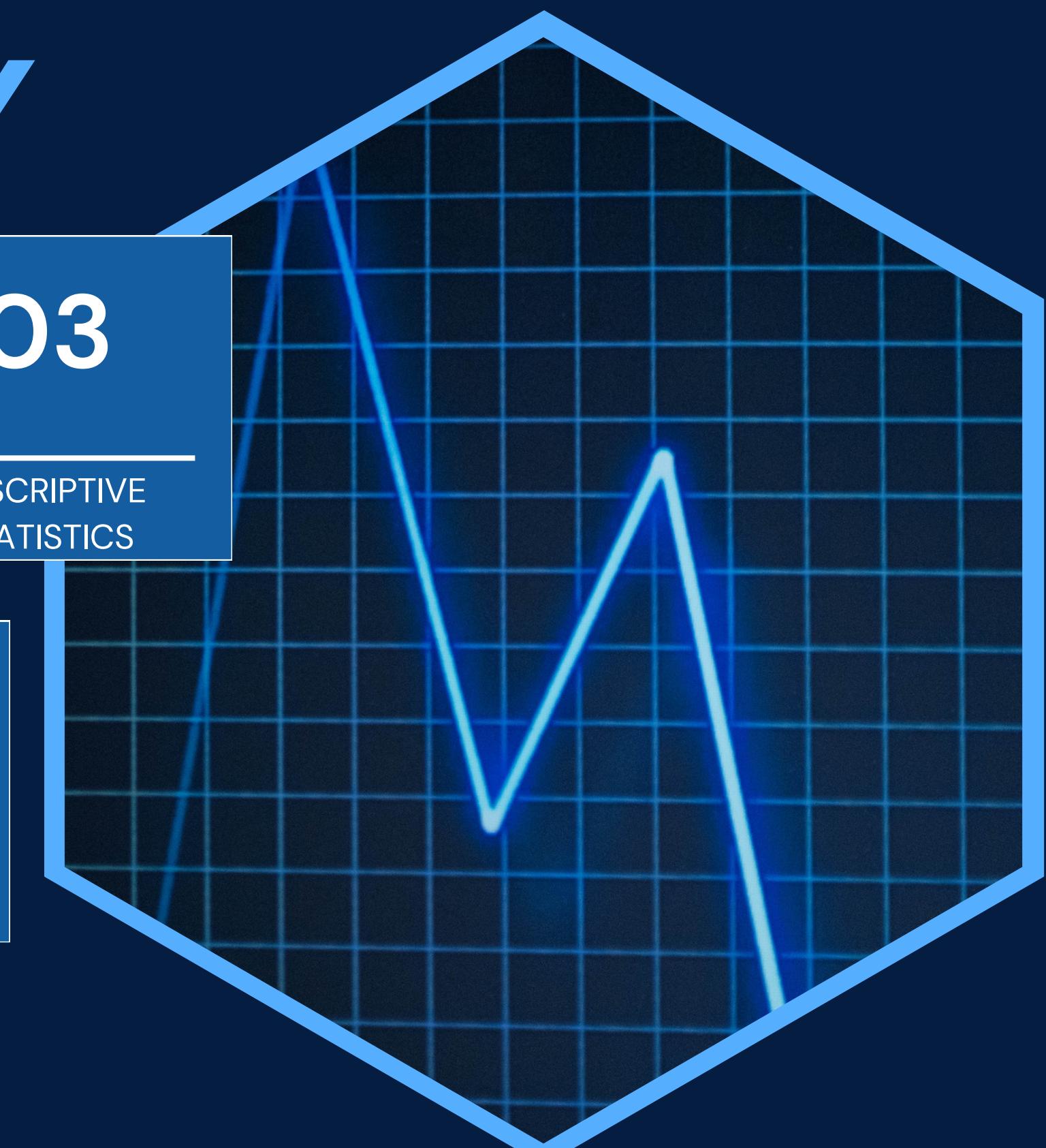
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PROJECT OVERVIEW

In this project, financial risk in the stock market was assessed by analyzing live data of technology companies such as Microsoft, Apple and Tesla, extracted from Yahoo Finance between 2018 and 2023. The dataset included S&P 500 values for the same period.

A comparative descriptive statistics analysis was conducted.

Additionally, regression models were built to compare the percentage change in stock vs. market return, with Beta coefficients used as measures of relative risk.



IMPORTANCE OF FINANCIAL RISK ASSESSMENT

- Risk Mitigation
- Investors Confidence
- Financial Stability
- Strategic Planning
- Competitive Advantage

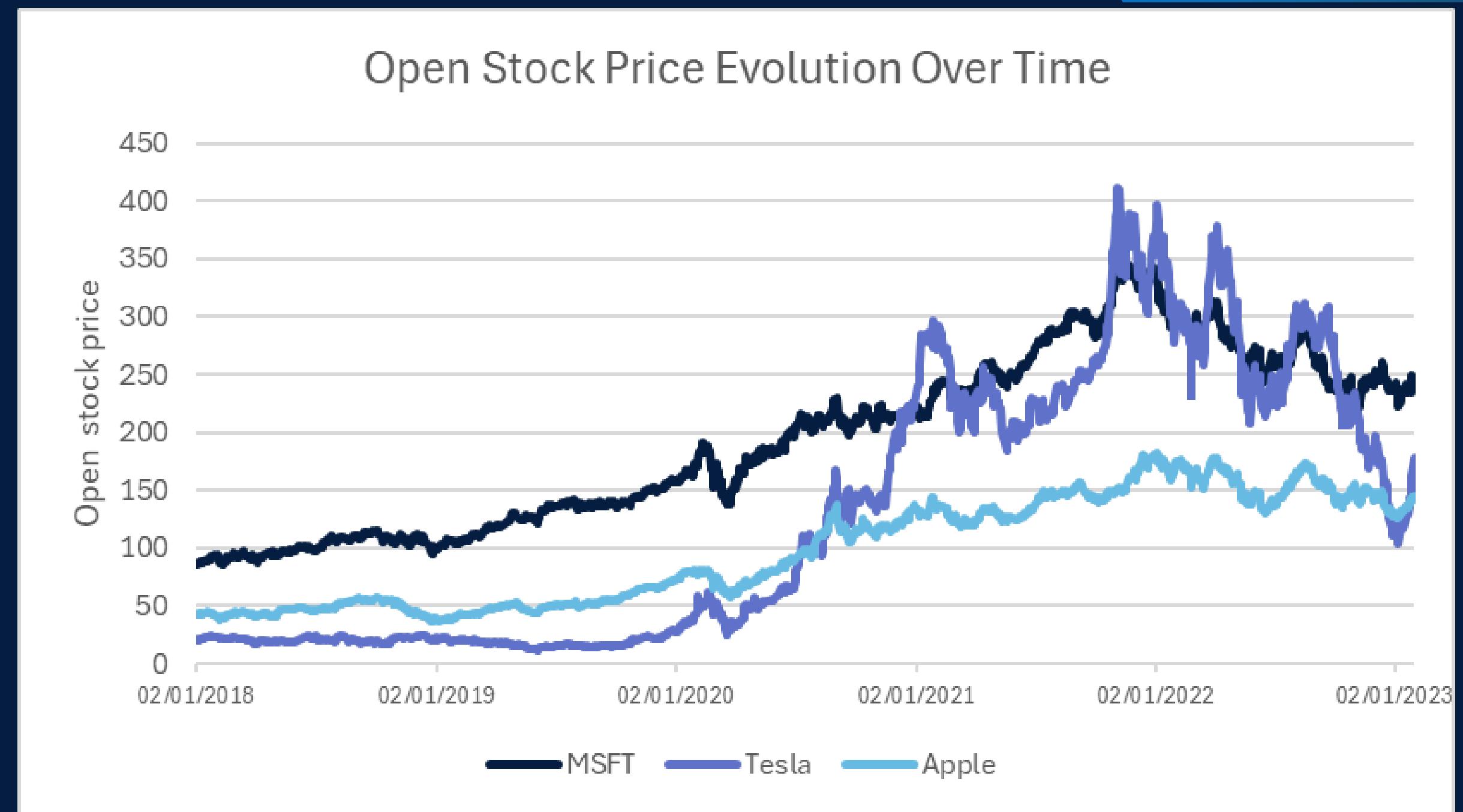
S&P 500

- Represents a diverse range of industries and sectors, providing investors with broad exposure to the U.S. stock market.
- It is a benchmark for measuring the performance of investment portfolios, mutual funds, and other financial instruments.

DESCRIPTIVE STATISTICS OVER TIME

The trend of each company's stock price between 2018 and 2023 are shown.

This analysis highlighted periods of growth, decline, and volatility in the stock prices of the companies.



DESCRIPTIVE STATISTICS IN OPEN STOCK PRICE

MSFT

- The Open Stock Price is described by the median value of 203.58.
- Standard deviation of 74.23
- The wide range of the sample is 258.55, with a minimum of 86.05 and a maximum of 344.61

Tesla

- The Open Stock Price is described by the median value of 96.57.
- Standard deviation of 117.16
- The wide range of the sample is 399.39 with a minimum of 12.07 and a maximum of 411.47

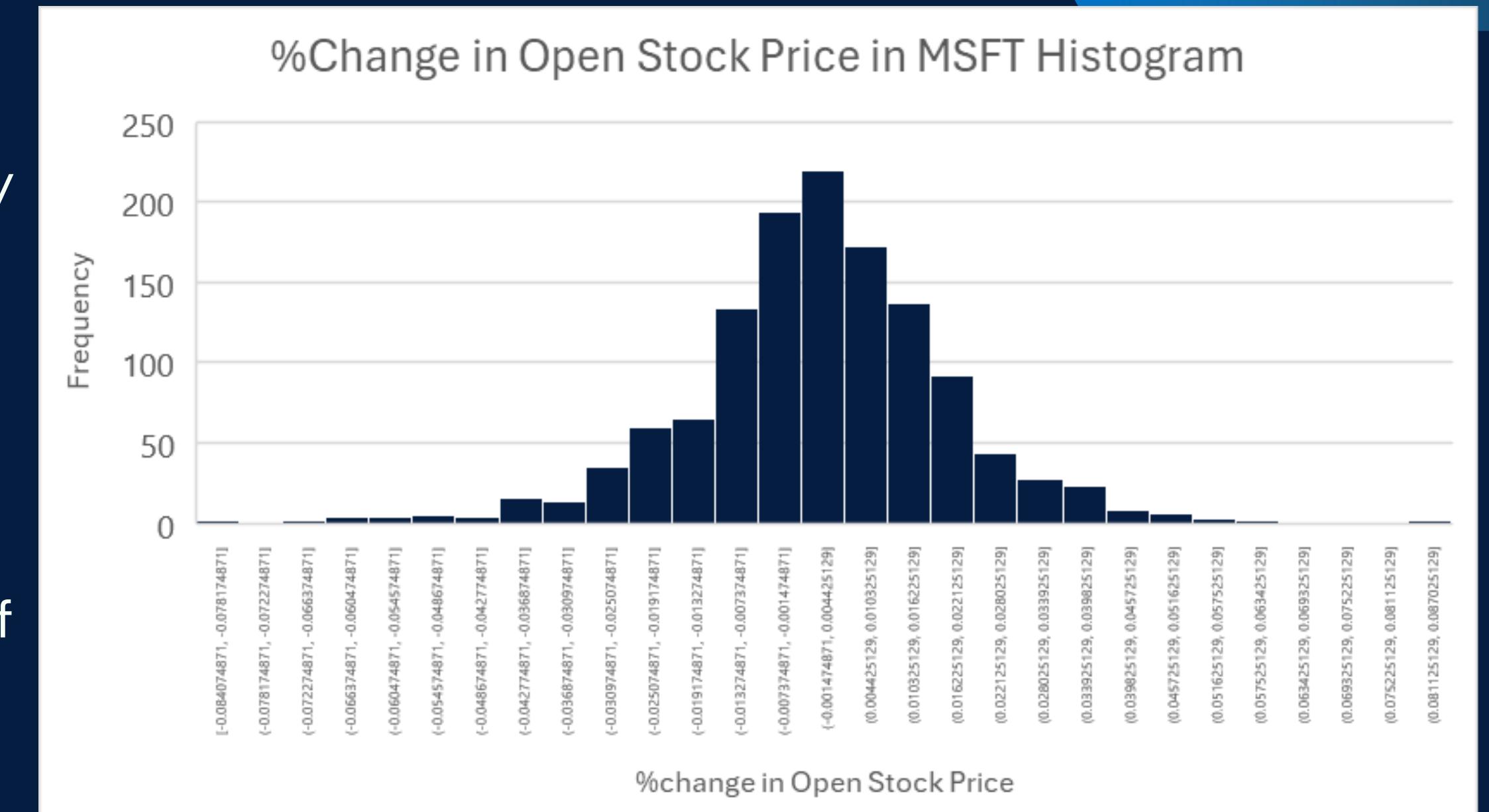
Apple

- The Open Stock Price is described by the median value of 95.08
- Standard deviation of 46.17
- The wide range of the sample is 146.63 with a minimum of 35.99 and a maximum of 182.63

DESCRIPTIVE STATISTICS % CHANGE IN OPEN STOCK PRICE

For MSFT:

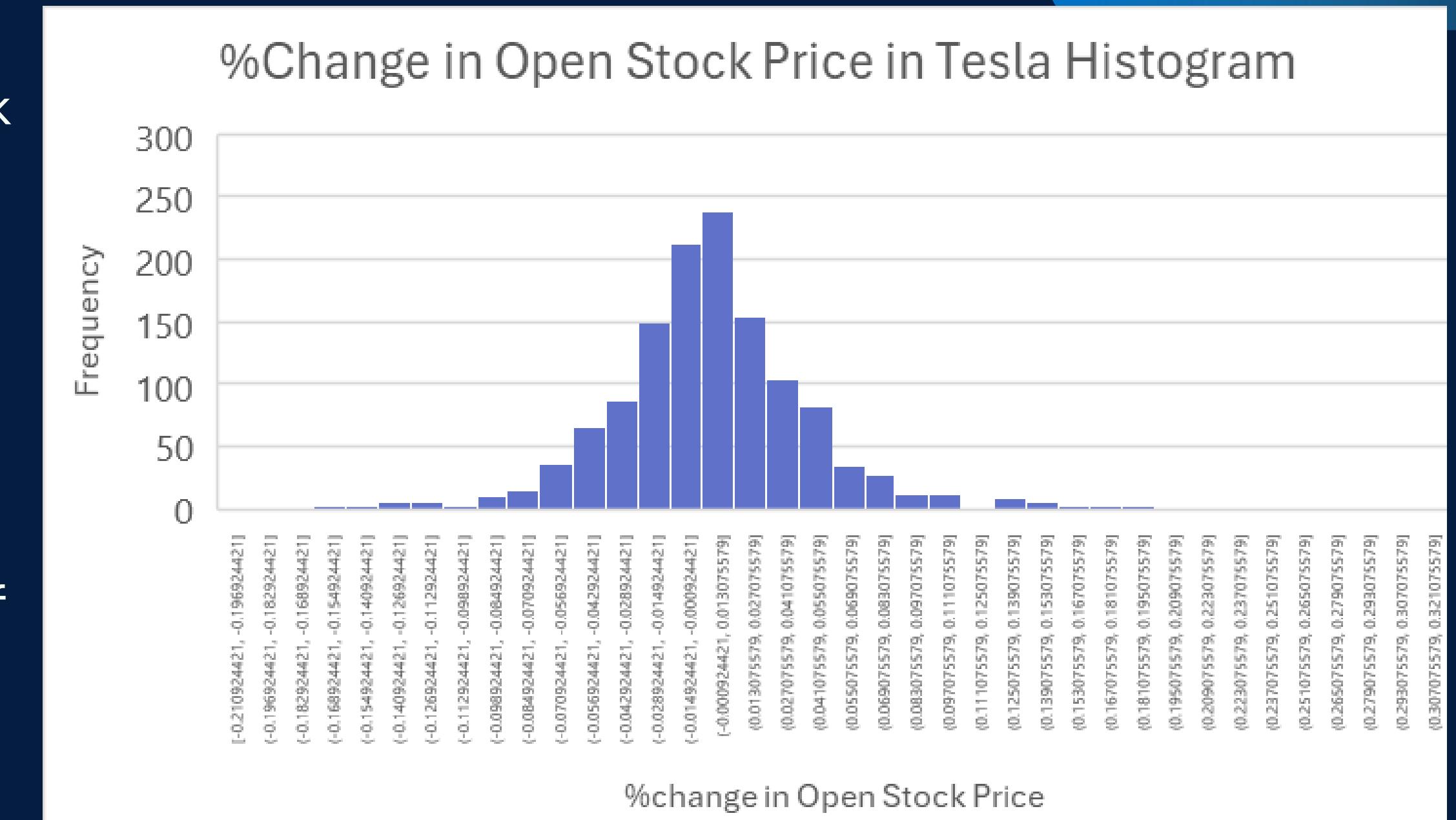
- The % change in Open Stock Price is described by the median value of 0.0012%.
- The standard deviation is 0.01816%
- The range of the sample is 0.1687%, with a minimum of -0.0840% and a maximum of 0.0846%



DESCRIPTIVE STATISTICS % CHANGE IN OPEN STOCK PRICE

For Tesla:

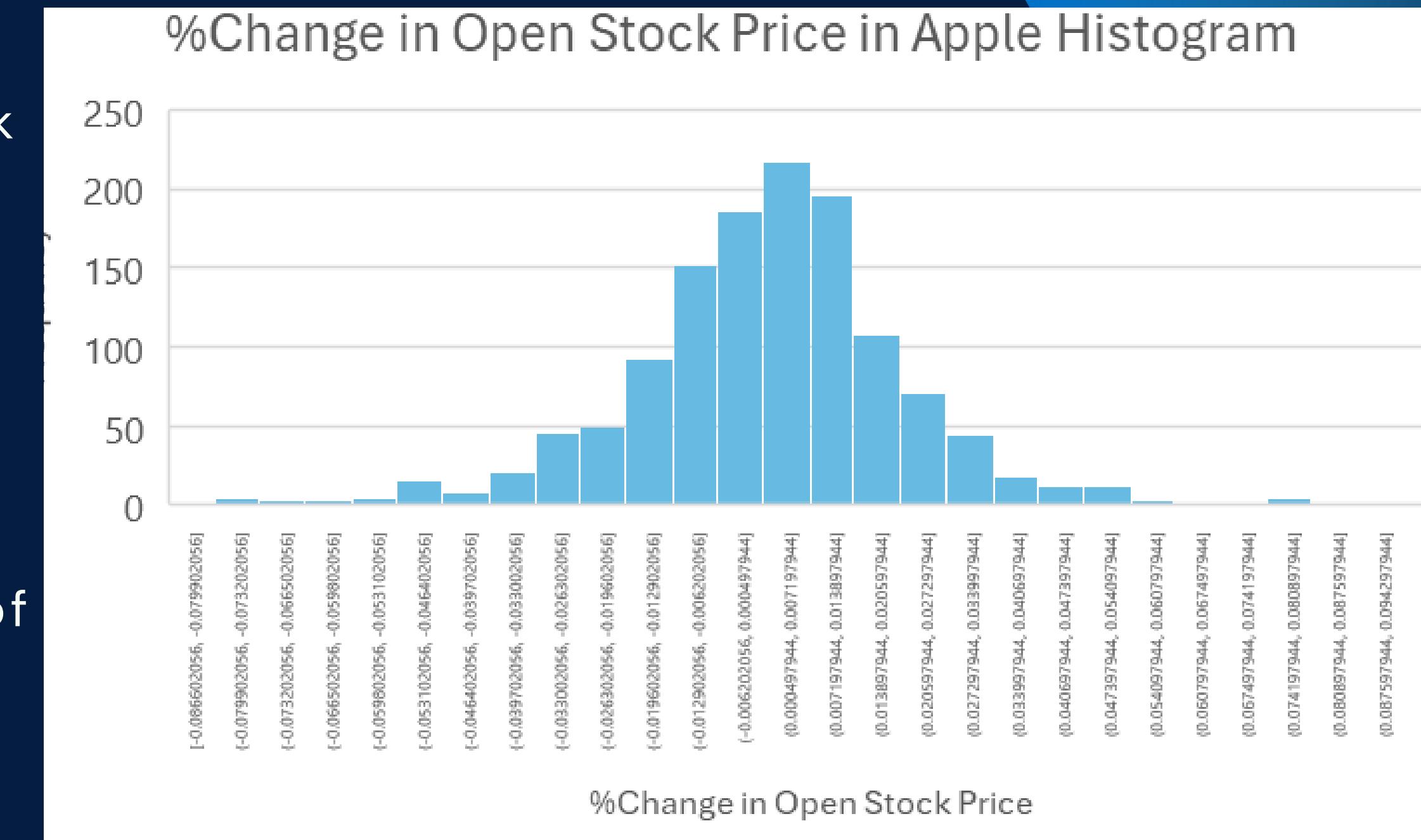
- The % change in Open Stock Price is described by the median value of 0.0019%.
- The standard deviation is 0.0436%
- The range of the sample is 0.5215%, with a minimum of -0.2109% and a maximum of 0.3106%



DESCRIPTIVE STATISTICS % CHANGE IN OPEN STOCK PRICE

For Apple:

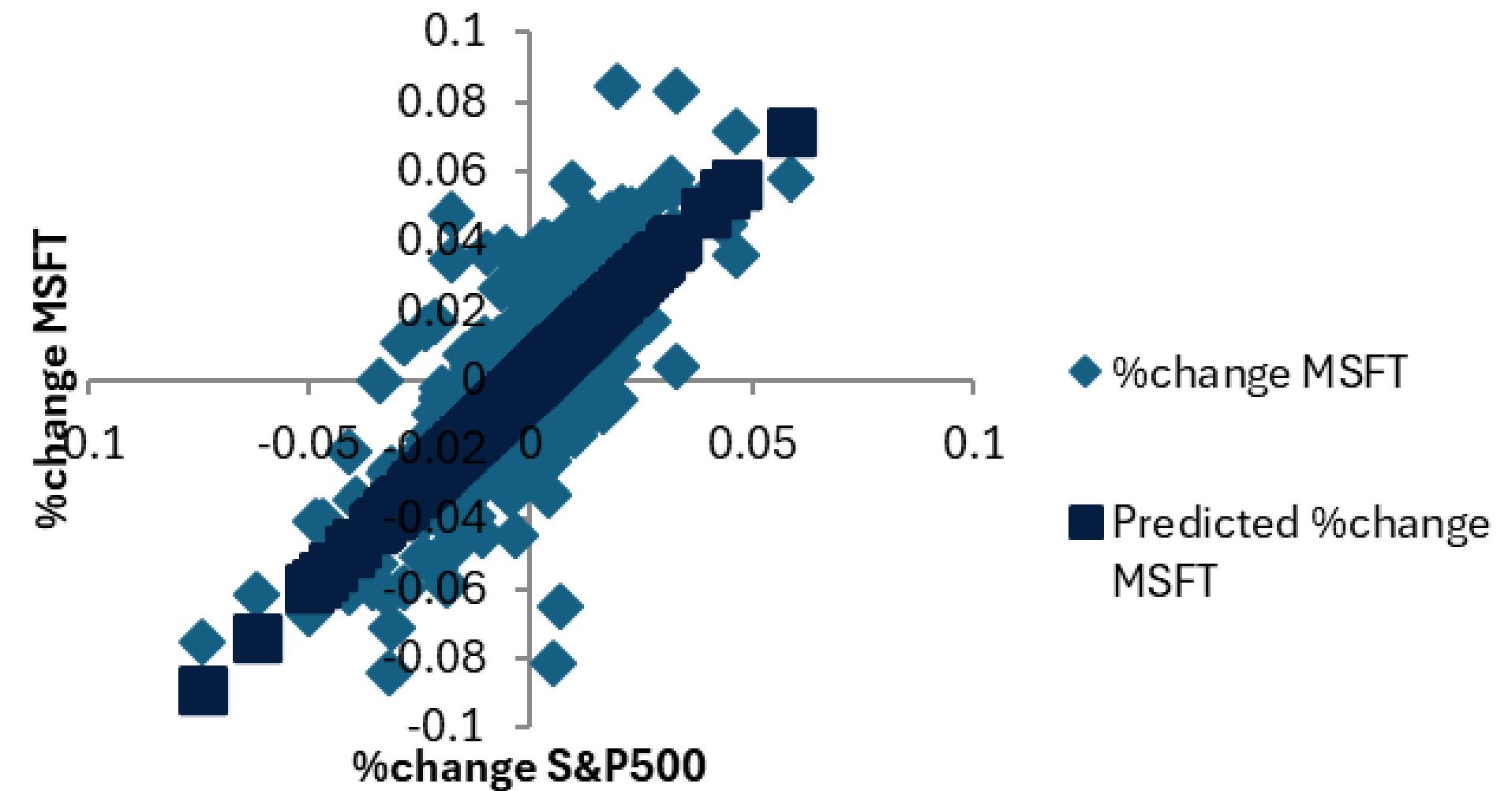
- The % change in Open Stock Price is described by the median value of 0.0020%.
- The standard deviation is 0.0206%
- The range of the sample is 0.1838%, with a minimum of -0.0866% and a maximum of 0.0972%



Relative risk in MSFT

- Beta value : 1.211
- Intercept : 0.0006
- Adjusted R square : 0.591

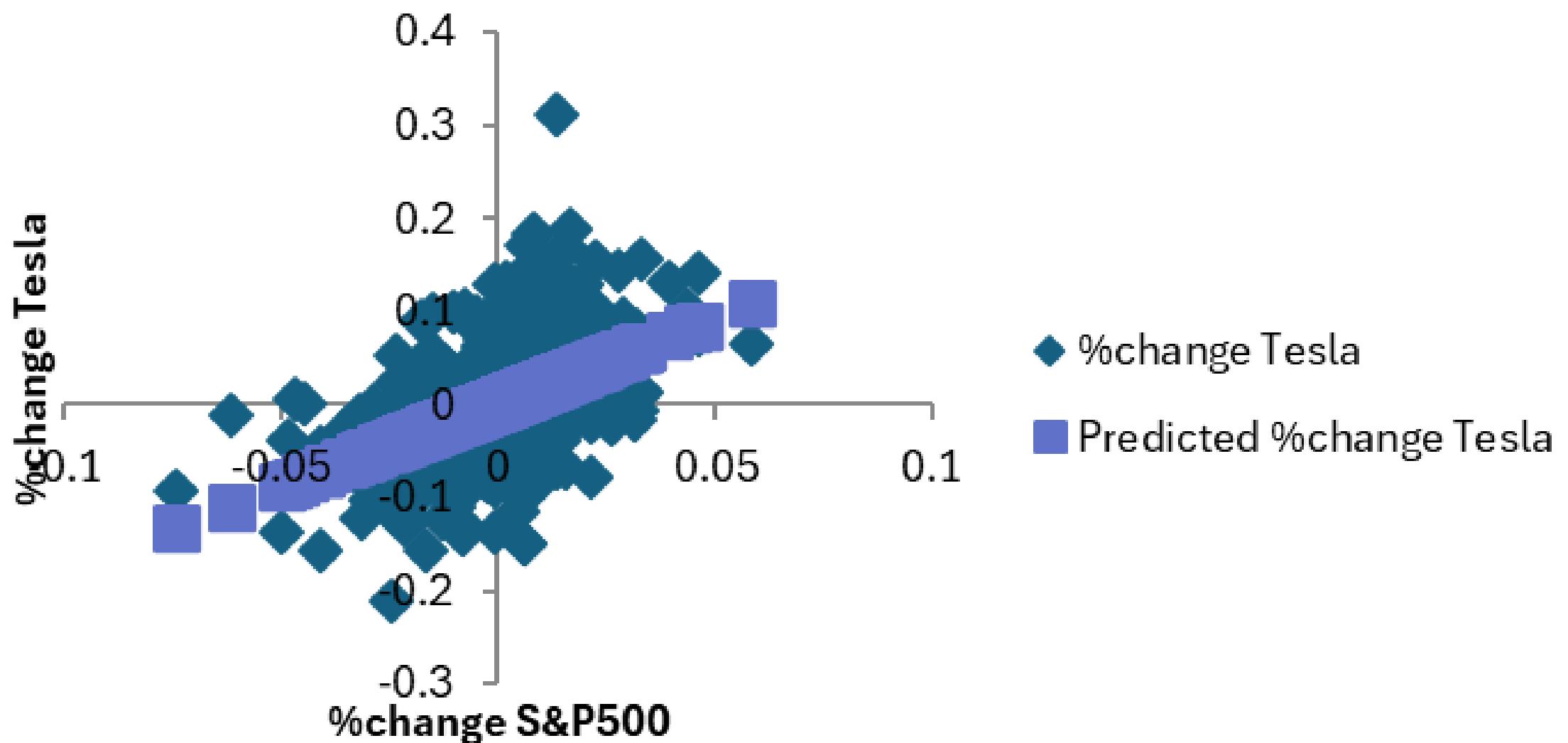
MSFT %change vs. S&P 500: Line Fit Plot



Relative risk in Tesla

- Beta value : 1.817
- Intercept : 0.0021
- Adjusted R square : 0.231

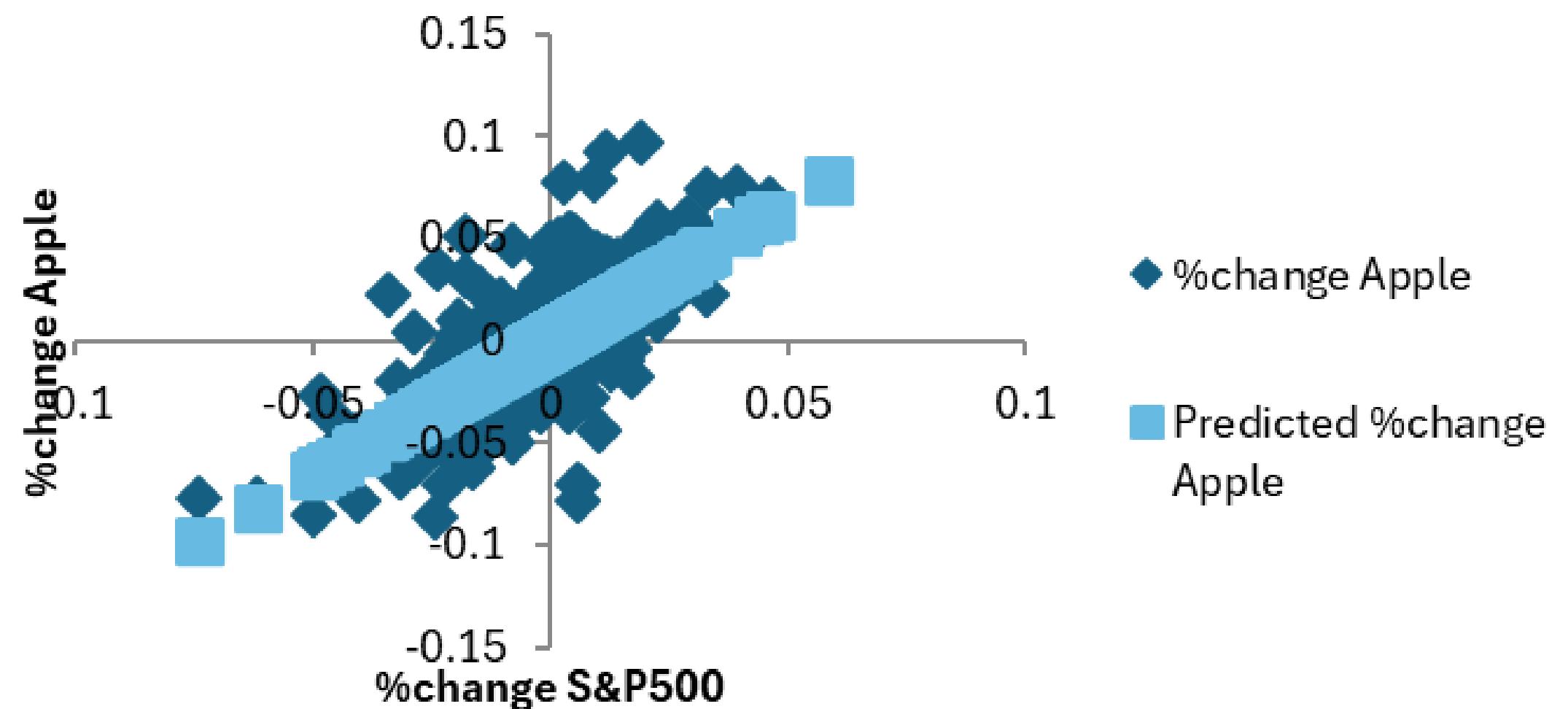
Tesla %change vs. S&P 500: Line Fit Plot



Relative risk in Apple

- Beta value : 1.329
- Intercept : 0.0008
- Adjusted R square : 0.547

Apple %change vs. S&P 500: Line Fit Plot





CONCLUSIONS

Profitability

- According to the beta values, the technological company offering the highest profitability is Tesla, with a beta value of 1.817 followed by Apple, and finally Microsoft

Volatility

- For the technological companies assessed beta value was higher than 1, concluding the companies are more volatile than the market.

Risk

- Higher profitability also indicates higher risk in investment. Hence, the most stable company tends to be Microsoft, evidenced by its lower % change in the open stock price, with a value of 0.0012% and a standard deviation of 0.01816%

Further details

<https://github.com/SadyGarcia/Stock-Analysis/blob/c302738dc9ea77493634ac9041f7a056e6c68e02/Stock%20Analysis.xlsx>

