

# *STOCK MARKET ANALYSIS*

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# *AGENDA*

Introduction

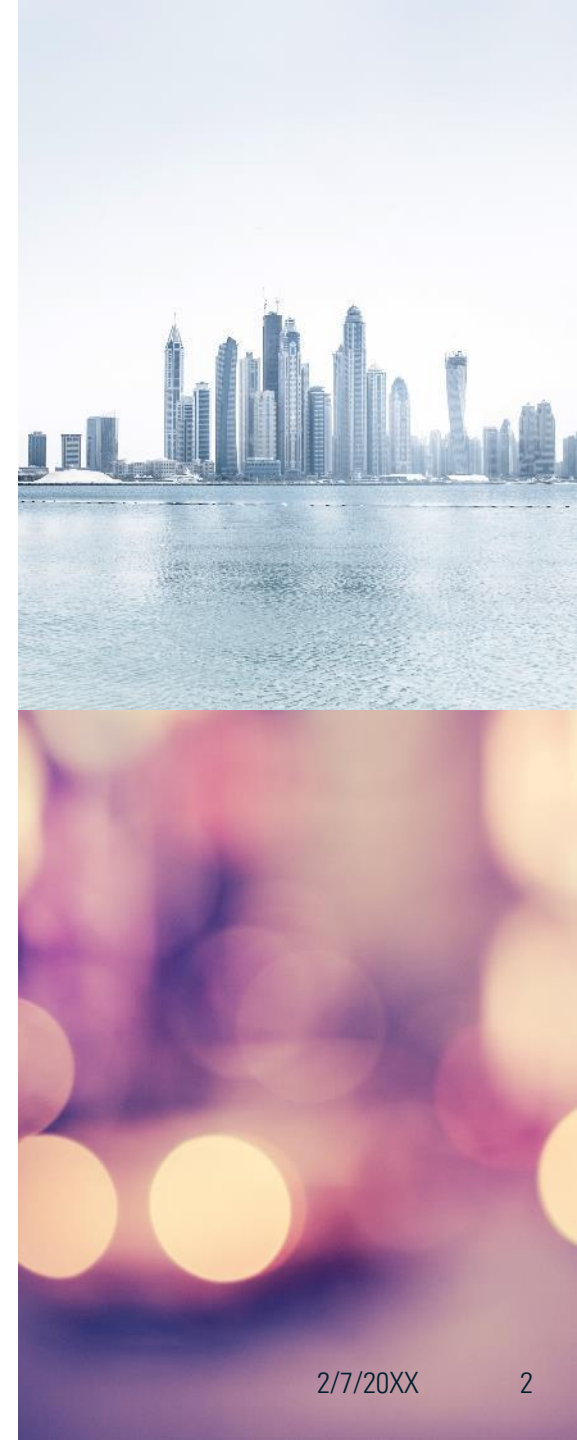
Objectives

Price Value Analysis

Stock Trend Comparison (2018-2023)

Performance Analysis with S&P 500

Summary







# *INTRODUCTION*

- This statistical report aims to compare the stock prices of three major U.S. companies—Apple, Microsoft, and Tesla. The analysis spans a comprehensive timeframe from 2018 to 2023, utilizing stock data sourced from Yahoo Finance.
- Various statistical techniques were employed, including correlation analysis to highlight any noteworthy correlations or divergences.



# *OBJECTIVE*

- To conduct a comparative statistical analysis on price values of individual stocks (Apple, Microsoft, Tesla).
- To compare the stock trends of each company over the period from 2018 to 2023.
- To analyse the performance of each company's stock relative to the S&P 500.



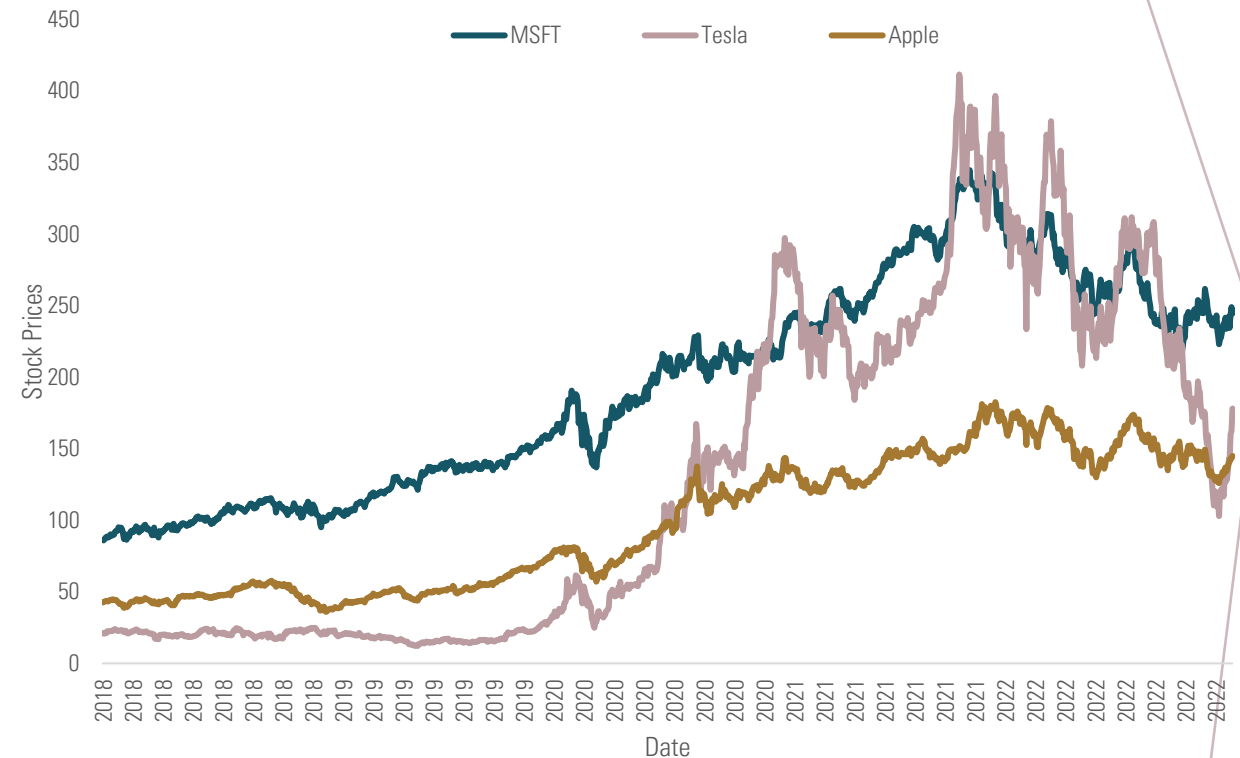
# PRICE VALUE ANALYSIS

The range and standard deviation provide complementary insights into the variability of Tesla, Microsoft, and Apple stock prices. Tesla's wide range of \$399.4 and high standard deviation of \$117.2 collectively indicate substantial variability, reflecting a potentially volatile performance with elevated risk. Microsoft, with a moderate range of \$258.6 and standard deviation of \$74.2, shows a balanced level of variability, suggesting a more measured risk profile. On the other hand, Apple, exhibiting the narrowest range of \$146.6 and the lowest standard deviation at \$46.2, signifies limited variability and a more stable trend, indicating a lower level of risk. This combined analysis enables investors to discern the distinct risk characteristics associated with each company's stock, aiding in the formulation of well-informed investment strategies aligned with individual risk tolerances and objectives.

	Microsoft	Tesla	Apple
Mean	194.5	131.9	98.6
Standard Error	2.1	3.3	1.3
Median	203.6	96.6	95.1
Mode	95.1	24	127.8
Standard Deviation	74.2	117.2	46.2
Sample Variance	5510.4	13,728	2,132.2
Kurtosis	-1.3	-1.3	-1.6
Skewness	0.1	0.5	0.1
Range	258.6	399.4	146.6
Minimum	86.1	12.1	36.0
Maximum	344.6	411.5	182.6
			125,977.
Sum	248,533.8	168,562	7

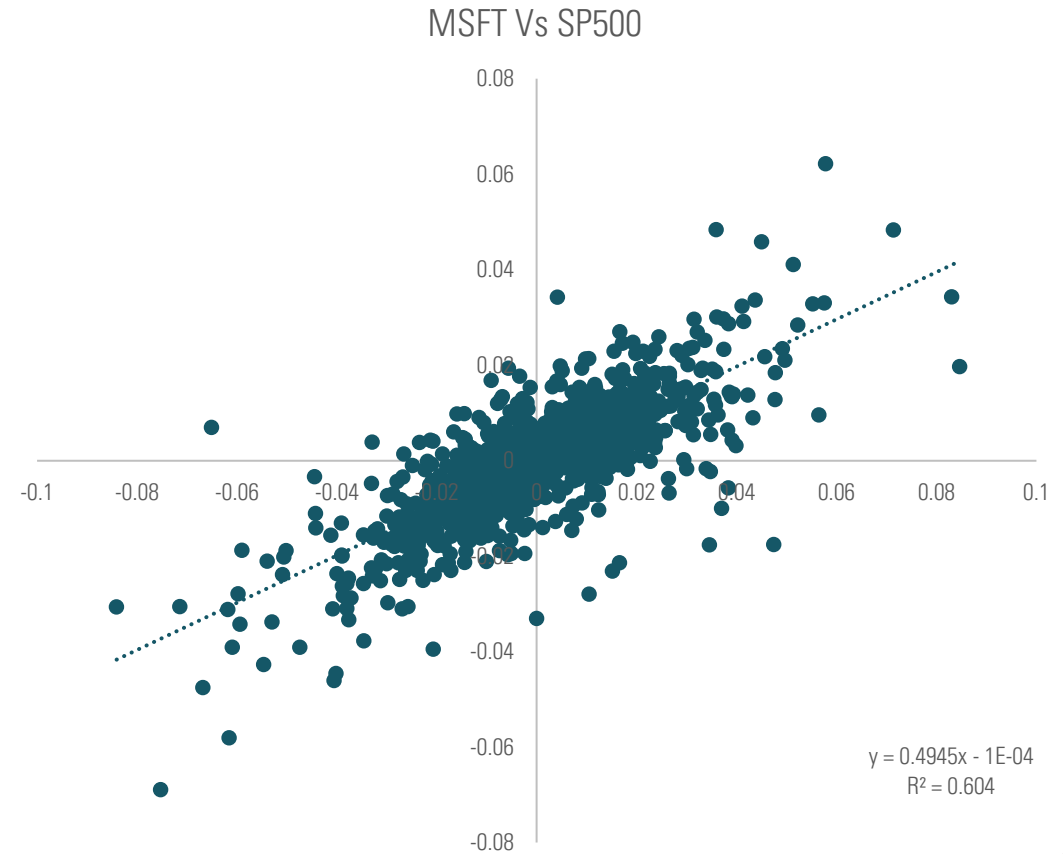
# *STOCK TREND COMPARISON (2018-2023)*

Analysing the stock trend comparison among Tesla, Microsoft, and Apple reveals distinct patterns in their price movements from 2018 to 2023. Microsoft's stock price was the highest in 2018, while Tesla had the lowest stock price. The companies have generally experienced consistent growth in their respective market values, with a recent drop in prices observed in 2023. A notable surge occurred in Tesla's stock price, skyrocketing in 2021 and surpassing Microsoft as the company with the highest stock price.



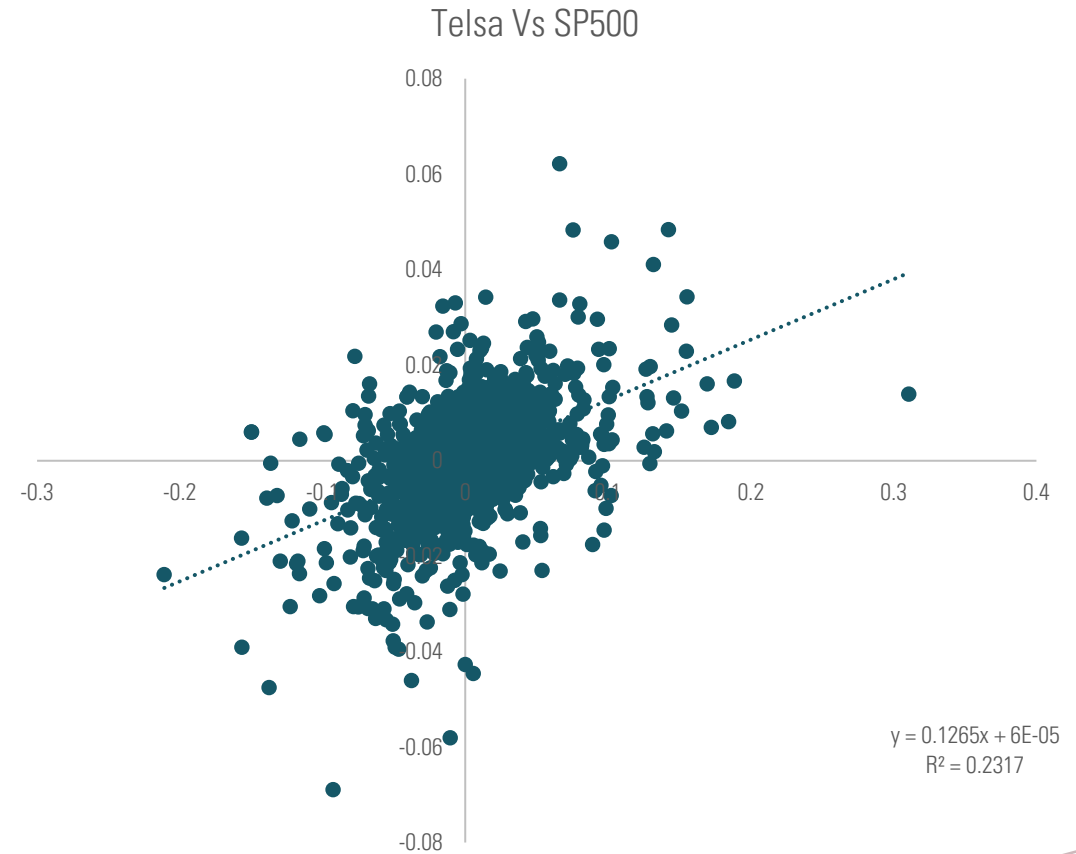
# *PERFORMANCE ANALYSIS WITH S&P 500*

The R-squared value ( $R^2 = 0.604$ ) obtained from the linear correlation of Microsoft's stock prices and the S&P 500 suggests a moderately strong relationship between the company's stock and the overall market. This implies that approximately 60.4% of the variability in Microsoft's stock prices can be explained by the movement in the S&P 500.



# *PERFORMANCE ANALYSIS WITH S&P 500*

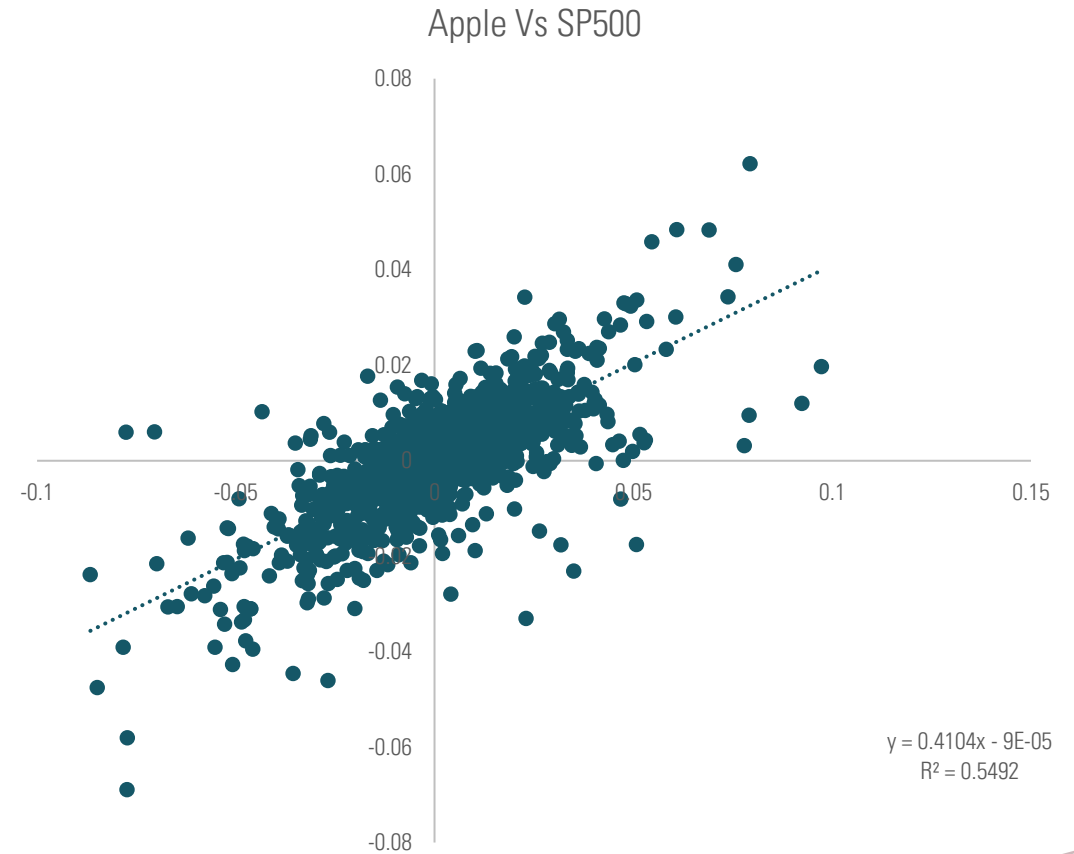
From the analysis, only 23.17% ( $R^2 = 0.2317$ ) of the variability in Tesla's stock prices is explained by the price trend in the S&P 500. This reveals a weaker relationship between Tesla's stock price and the S&P 500 compared to Microsoft. Other factors beyond the S&P 500 may impact the variability in Tesla's stock price movement





# *PERFORMANCE ANALYSIS WITH S&P 500*

In contrast to Tesla, the R-squared value for Apple is much higher ( $R^2 = 0.5492$ ), revealing that Apple's stock price movement is influenced to a significant extent by the overall market conditions reflected in the S&P 500. This suggests a moderate relationship, wherein approximately 54.92% of the variability in Apple's stock prices is explained by the movements in the S&P 500.



# *SUMMARY*

The extensive analysis conducted on Tesla, Microsoft, and Apple's stock data reveals distinct characteristics in their respective market behaviours. Tesla emerges as the most volatile, showcasing wide price fluctuations and weaker correlation with the S&P 500. Microsoft demonstrates relative stability, with a moderately strong correlation to the market. Apple, while stable, maintains a moderate relationship with the S&P 500. These summarized findings shed light on the diverse risk profiles, stability levels, and market dependencies inherent in the stock performances of these prominent companies.





*THANK YOU*