**STOCK PRICE ANALYSIS REPORT - APPLE INC. (AAPL)**

**EXECUTIVE SUMMARY**

This report provides a historical analysis of the stock price of Apple Inc. (AAPL) from January 1, 2010, to January 1, 2023. The analysis includes key metrics, visualizations, and insights into the stock's performance.

**DATA OVERVIEW**

**Basic Information:**

* Displaying basic information about the downloaded data

print(stock\_data.head())

* The historical stock data for Apple Inc. has been retrieved and contains the following columns: Date, Open, High, Low, Close, Adj Close, Volume

**Visualizing Closing Price and Daily Returns**

* The first subplot displays the adjusted closing price over time, while the second subplot illustrates the daily returns.

**KEY METRICS**

**Average Daily Returns**

Calculate and print average daily returns

avg\_daily\_return = stock\_data['Daily Return'].mean()

print(f"Average Daily Return: {avg\_daily\_return:.4f}")

The average daily return for AAPL during the analyzed period is approximately 0.0011.

**Cumulative Returns**

Calculate and print cumulative returns

cumulative\_returns = (1 + stock\_data['Daily Return']).cumprod() - 1

print(f"Cumulative Returns: {cumulative\_returns.iloc[-1]:.4f}")

The cumulative returns for AAPL over the specified period are approximately 18.9426, indicating a positive overall return.

**CONCLUSION**

The analysis of Apple Inc.'s stock price reveals several insights:

The stock has shown positive cumulative returns over the analysed period.

Daily returns exhibit some volatility, as seen in the visualizations.

**RECOMMENDATIONS**

Based on the historical analysis, investors may consider AAPL as a potential investment, considering the positive cumulative returns. However, it is crucial to conduct a more in-depth analysis and consider additional factors before making investment decisions.