

# Tesla, Apple, Microsoft — Price Trends, Volatility & Correlation (Sep 2024 – Sep 2025)

## Overview

Analyzed the performance of Tesla (TSLA), Apple Inc. (AAPL), and Microsoft Corporation (MSFT) over the past year. Examined price trends, moving averages, volatility, correlations, and candlestick patterns to generate useful insights. All prices are reported in USD, consistent with data from Yfinance.

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### 1. Tesla (TSLA)

- Price Range: \$205.75 – \$479.86
- Average Price: \$307.84
- Trend: Clear upward trajectory

#### Moving Averages:

- 20-day (MA20): Reflects short-term market movements and momentum shifts
- 50-day (MA50): Serves as a gauge for broader, longer-term support trends

#### Key Insights:

- Tesla exhibited the highest volatility, with sharp rallies and frequent pullbacks.
- The stock often crossed the MA20, signaling momentum shifts.

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### 2. Apple Inc. (AAPL)

- Price Range: \$172.00 – \$258.10
- Average Price: \$221.58
- Trend: Moderate upward slope, reflecting steady growth

#### Moving Averages:

- 20-day (MA20) and 50-day (MA50) remained closely aligned, indicating stability

#### Key Insights:

- Apple traded within a relatively tight range, showing fewer extreme movements.
  - The price frequently hovered around the average, suggesting consolidation.
  - Well-suited for long-term investors seeking consistent performance.
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### 3. Microsoft Corporation (MSFT)

- Price Range: \$353.91 – \$535.64
- Average Price: \$433.70
- Trend: Strong bullish trajectory

Moving Averages:

- 20-day (MA20) captured short-term volatility
- 50-day (MA50) confirmed long-term upward momentum

Key Insights:

- Microsoft consistently traded above its average price.
  - Minimal retracements reinforced investor confidence.
  - Performance reflects robust fundamentals and sustained growth.
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### 4. Correlation Analysis

- Apple–Microsoft: 0.54
- Apple–Tesla: 0.48
- Microsoft–Tesla: 0.45

Interpretation:

- Apple and Microsoft showed the strongest relationship, likely due to shared sector dynamics.
  - Tesla demonstrated lower correlation, reflecting greater independence and potential diversification benefits.
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### 5. Volatility Analysis (50-Day Window)

Volatility Overview:

- Tesla: Highest volatility across the past year
- Apple & Microsoft: More stable, with lower volatility profiles

Takeaway:

- Tesla is more suitable for active traders seeking higher risk/reward.
  - Apple and Microsoft provide steadier returns, aligning with risk-averse strategies.
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## Conclusion

This analysis provides a comprehensive view of Tesla, Apple, and Microsoft's stock performance:

- Tesla offers growth potential but with significant volatility.
- Apple delivers consistency and stability, appealing to long-term investors.
- Microsoft demonstrates strong fundamentals and sustained bullish momentum.

A diversified allocation across these stocks can balance growth, stability, and risk management depending on investor objectives.