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**L2 Homework Assignment 2 Insights**

I selected the stocks TSLA, PLTR, META, GOOGL, NVDA, AMD, and AMZN due to their high trading volumes and recent volatility. These stocks have experienced significant fluctuations, likely influenced by concerns over the potential economic impacts of tariffs proposed by former President Donald Trump. Additionally, these companies are heavily involved in AI and have seen explosive rallies in recent years, which have been disrupted by competitors in the AI space, such as DeepMind. NVDA and TSLA have displayed the highest volatility among these stocks due to these factors. I also included KR, KO, and COST in my analysis, as these are historically stable, necessity-driven consumer staple stocks. While they did experience some volatility, it was far less pronounced compared to the other seven stocks.

Performance of Bolinger Band Strategy

**Tesla**: The strategy had mixed results due to frequent buy/sell signals from high volatility. It was difficult to capture consistent trends.

**Nvidia**: The strategy performed similarly to Tesla, with high volatility leading to erratic signals and inconsistent returns.

**Palantir**: The strategy worked moderately well, but frequent signals in volatile periods reduced its effectiveness.

**Meta**: The strategy showed better performance with fewer signals due to lower volatility, providing clearer entry and exit points.

**Amazon**: Similar to Meta, the strategy worked reasonably well with moderate volatility.

**AMD**: Frequent buy/sell signals caused inconsistent performance, due to high volatility.

**Kroger**: Showed stable performance due to lower volatility and fewer trading signals.

**Coca-Cola**: Performed fairly well with clear signals, showing steady price movement

**Costco**: Like Kroger and Coca-Cola, Costco showed stable performance with clear signals due to its low volatility.

**Alphabet**: The Bollinger Bands strategy worked moderately, capturing some short-term trends but failing to provide consistently reliable signals due to occasional price fluctuations.

Observations from Visualizations

From the visualizations, it’s clear that the Bollinger Bands strategy generated distinct buy and sell signals for most of the stocks, particularly during periods of high volatility. For the more volatile stocks like NVDA and TSLA, there were frequent price movements that crossed the upper and lower bands, triggering multiple buy and sell signals. This highlighted the sharp price swings in these stocks. On the other hand, the more stable consumer staples like KR, KO, and COST showed fewer crossings, indicating less frequent opportunities for trading signals. Overall, the visualizations helped illustrate how the strategy reacts to price movements, showing the importance of market volatility in triggering signals.