1. **What was the most important thing you learned on this project?**

The most important thing I learned from this project is the significance of combining multiple approaches to gain a comprehensive understanding of a complex phenomenon like stock market volatility. By employing both the standard deviation method and the GARCH model, we were able to capture different ways of calculating volatility.

I learned the most effective methods for cleaning data from the CSV file and utilizing it, along with the data extracted from the API. Additionally, I acquired the skills to merge APIs and CSV data into a unified Data Frame, and to work on indexing them so they are properly organized.

The comparison between the two approaches underscored the importance of selecting the right tool for the specific context. Using standard deviation was more approachable, as it considered not only the stock price but also external economic factors. In contrast, the GARCH model focused solely on changes in stock prices without considering the broader picture. This insight is valuable not only for this specific project but also for future endeavors in financial analysis and modeling.

Incorporating external economic indicators, such as unemployment and interest rates, alongside internal company dynamics provided a more holistic view of the factors influencing stock volatility. This holistic perspective is crucial for making informed investment decisions and managing risks effectively.

The project highlighted the intricate relationship between economic indicators and stock market volatility, showcasing the importance of leveraging diverse analytical tools. The experience gained from this project will undoubtedly inform future research and analysis in the field of financial markets.

2. **What would you have liked to have spent more time on or done differently?**
    - Explore the stock volatility of global stocks with global economic data.
    - Use sentiment analysis to analyze news about the company and its effects on the stock price.
    - Understanding the relationship internal factors like unmotivated employees has with stock price.
    - Explore other models to increase accuracy and reliability of the stock volatility.

3. **For each team member, how did they contribute to the project and work with the group? (You must answer this question for everyone on the team.)**

    Raymond Liu: Collection of stock-based information from Yahoo Finance and other sources, implementing any APIs needed, creating the base code, creating the model (part 1), plotting the necessary graphs (part 1), working on the documentation (part 1), re-analyzing the code, model, and graphs if necessary.

    Janav Sama: Collection of data from the federal reserve to get information on different economic indicators, researching and obtaining any necessary APIs needed, creating the model (part 2), plotting the necessary graphs (part 2), working on the documentation (part 2), editing, and cleaning up documentation and the code.

    However, I, Janav Sama, had to present alone on 4th December as Raymond Liu couldn't come to the class due to personal reasons.