Good morning Today, I'll be sharing insights from my data analysis project on returns in the superstore data set. This research explores how returns vary and aims to uncover meaningful patterns that can help us understand how we can improve.

Let me start by providing some context. Our dataset comes from excel, and it contains information regarding consumer spending and return patterns. The primary goal of this analysis was to understand the dataset and give insight as to how the superstore can improve profit margins. By diving deep into this data, we can gain valuable insights into the consumers habits.

As will be seen across this presentation the main metric being used is the rate of return. The rate of returns provides more meaningful context compared to just the raw numbers. The total returns cost or total number of returns can be influenced by the overall sales volume. The rate of returns accounts for this and gives a standardized metric to compare performance across different sales levels

Let me walk you through some of the most compelling visualizations. This first chart shows a Positive Correlation between the count of sales and the total returns. As the count of sales increases, the total returns also tend to increase.

Overall, this scatter plot provides a comprehensive visual representation of how the sales and returns are correlated across the different product categories. It allows for easy identification of high-performing and low-performing product segments based on this sales-returns relationship.

Notice how in the graph detailing the return rate by month What's particularly interesting is September has the highest return rate, which can possibly be attributed to parents returning item at the beginning of the school year, while July has the lowest .

Through my analysis, I discovered another critical insight

In the graph showing the correlation between total sales and return rate by order month and category it reveals that in the month of september the highest total sales for technology was recorded although the return rate for the same variables is almost half while november had the second highest total sales with one of the lowest return rates

What is also very interesting is that some customers have a return rate of almost 100% this in itself is a big issue that requires further data to understand why certain people have a higher tendency to return than others

Carrying on we can see on the map that the western coast states have a higher average return rate than on the east coast. A factor that could contribute to this is socio-economic backgrounds of the customers.

In conclusion, our analysis reveals the habits of the consumer. This research not only provides insights into the rate of returns but also opens up new questions for future investigation for example what is the cause of the returns rate in september being so much higher than july

To approach this analysis, I used Tableau as my primary visualization tool and My process involved three key steps:

* First, I cleaned and preprocessed the data to ensure accuracy
* Then, I developed a series of interactive dashboards to explore the data
* Finally, I identified and validated the most significant trends and patterns