Good evening, respected CEO, CMO, and stakeholders. I appreciate the opportunity to present the insights derived from our analysis of the online retail store's data.my self I am ruthwik devanapalli an aspiring business analyst. Before we dig into the specifics of our findings, it's crucial to highlight the importance of data cleanliness. As the saying goes, "Garbage in, garbage out." Ensuring the quality of our data is a fundamental step to derive meaningful insights. Before beginning the analysis, I make sure that the data is cleaned properly. i have noticed that the data contains some returns to the store which are provided in negative quantities, and there are unit prices that were input in error. We need to perform the following steps to clean this data.

- we Have to check the quantity should not be below 1 unit. And also the Unit price should not be below $0.

Please note that to apply the checks that have been mentioned above, we would need to use conditional formulas where the logic would state that if the conditions are met then the tool should exclude the data from analysis.

"In our data preprocessing stage, we introduced two new columns to enhance the clarity of our analysis. The first column, named 'FilteredQuantity,' was created by applying conditional formatting. We set a condition: if the quantity is greater than or equal to zero, the original quantity value is retained; otherwise, we keep the field blank. The formula applied is as follows:

```DAX

FilteredQuantity = IF('Online Retail'[Quantity] >= 1, 'Online Retail'[Quantity], BLANK())

We applied a similar approach to the 'Unit Price' column, resulting in the creation of the 'FilteredUnitPrice' column. If the unit price is greater than or equal to zero, the original unit price value is preserved; otherwise, the field is left blank. The formula for this transformation is:

```DAX

FilteredUnitPrice = IF('Online Retail'[UnitPrice] >= 0, 'Online Retail'[UnitPrice], BLANK()

This meticulous conditioning ensures that only relevant and non-zero values are retained for subsequent analysis. Later in our process, we will filter the data to include only non-blank values, streamlining our dataset for a more focused and insightful examination."

By this we are excluding all values which are less than 1 unit for quantity and less than $0 for unit price

Now, let's proceed to the specific insights we've gained from our analysis.

Slide 1: Question 1

Our first question comes from our CEO, who's keen on understanding the time series of revenue for the year 2011. Let's take a closer look.

"As we analyze the line chart, we observe distinct trends in the revenue throughout 2011. The initial months, from January to February, portray a downward trajectory. However, from March onwards, there's a significant upward trend, continuing same trend until May. Beyond May to August, the revenue maintains a relatively stable plateau. Interestingly, from August to November, there's a notable and rapid increase. The year concludes with a decrease in December. This view of the monthly revenue allows us to pinpoint key periods of growth, stability, and areas that may require further investigation."

Slide 2: Question 2

Moving on to Question 2, our Chief Marketing Officer (CMO) is interested in the global perspective of our revenue. The CMO wants to see the top 10 countries generating the highest revenue and quantity sold, excluding the United Kingdom.

"As evident from the dual-axis bar chart, highlighting both revenue and quantity sold for the top 10 countries (excluding the UK), we can pinpoint the standout performers. Notably, Netherlands , EIRE, GERMANY, and France emerge as the top countries, excelling in both revenue generation and quantity sold. Additionally, the Belguem , Sweden, and japan also demonstrate robust performance in contributing to our global success.

Now, for our Chief Marketing Officer (CMO), this rich data offers strategic insights. By leveraging the success of these top-performing countries, the CMO can tailor marketing campaigns to capitalize on the existing demand. This may involve targeted promotions, localized advertising, or further engagement strategies to solidify our presence in these high-performing markets. Understanding the correlation between revenue and quantity sold in different countries enables the CMO to craft nuanced and effective marketing strategies for each region, ultimately driving global growth.

Slide 3: Question 3

Now, the CMO of our online retail store wants to focus on our top customers by revenue. The visual we've prepared displays the hierarchy of the top 10 revenue-generating customers.

"As revealed in our visual representation of the top 10 customers by revenue, the foremost contributor is Customer ID 14646, making a substantial impact with a revenue of $280,206. Following closely behind are Customer IDs 18102 and 17450. Conversely, we note the lower revenue-generating customers, including Customer IDs 17511, 16029, and 12346.

This visual hierarchy aligns perfectly with the CMO's objectives. By focusing on the top revenue-generating customers, the CMO can develop targeted strategies to maintain and enhance their satisfaction with our products. This approach ensures that our efforts are directed towards cultivating strong relationships with our key clients, fostering loyalty and sustained business growth."

Slide 4: Question 4

Lastly, our CEO is eager to gain insights into the demand for our products across different regions. The goal is to identify areas for potential expansion.

As observed in the tree map, a comprehensive view of product demand across all countries reveals significant opportunities for expansion. Notably, Netherlands, EIRE, Germany, and France emerge as regions with the highest demand for our products. Conversely, lower demand is noted in Switzerland, the United Arab Emirates, and Switzerland.

This single-view visualization aligns perfectly with the CEO's objective to swiftly identify areas with the greatest demand without the need for extensive scrolling or data point analysis. Armed with this valuable insight, the CEO can initiate a targeted expansion strategy, focusing on regions that present substantial business opportunities and paving the way for enhanced growth and market penetration.

In conclusion, these visualizations not only provide insights into our past performance but also pave the way for strategic decision-making to drive our future success. Thank you for your attention.