Slide 1
Good afternoon. My name is Yash Singhal, and today I will be presenting my BDM capstone project titled 'Navigating Financial Obstacles: Leveraging Data in Vegetable Business.' This project focuses on analyzing the financial performance and credit practices of 'Raj Kishore Kumar Gupta and Sons,' a long-standing vegetable business in Delhi. Let's dive into the details.

Slide 2
The business has been operating in the Nangloi area of Delhi for the past 20 years, serving both small retail vendors and individual consumers with fresh vegetables that are brought from the Azadpur Sabzi Mandi. It started as a family venture but is now managed solely by Mr. Raj Kishore Gupta.

Slide 3
Despite its success, the business faces several challenges. Mr. Gupta lacks comprehensive financial knowledge about the business, making it difficult to determine monthly turnover and appropriate profit margins. Additionally, the business does not have structured credit practices, which impacts financial stability and growth.

Slide 4
To address these challenges, I collected data over a one-month period, from January 15 to February 15, 2024. The data includes detailed records of vegetable transactions and credit information, providing a comprehensive view of the business operations.

Slide 5: Financial Overview
To address the first challenge, I collected data, considered all spending and earnings, and created visualizations to provide a financial overview of the business. Through this analysis, we found the following:

- The average cost of vegetables was around ₹13,161.
- Other costs, such as transportation and storage, were ₹800 for January and ₹850 for February.
- The average revenue was ₹15,233.
- The average daily profit was ₹1,246, with the maximum profit being around ₹1,963 and the minimum profit being ₹914.

Slide 6: Profit Analysis
A high correlation of 0.65 suggests that selling a higher variety of vegetables on a given day results in higher profits. By analyzing the correlation between margins and profits, I found a significant relationship. I used regression analysis to determine that a 35% profit margin would yield a profit of

₹1,419.31, providing a clear target for pricing strategies. We can further filter days within the desired profit range and analyze their margins to develop an effective margin strategy.

Slide 7: Credit Analysis
This slide summarizes the credit analysis. I analyzed the total credit extended, repayments received, and interest costs. Proper management of credit is crucial for maintaining profitability, as highlighted by the findings.

Due to one of the customers who was extended credit, we face a loss if we account for interest rate costs on the credit extended. Thus, we need to analyze this customer's credit activity to identify the issues. The irregularities, including skipped repayment dates and consistently low repayment amounts observed from February 6 to February 14, have significantly contributed to the notable increase in the outstanding balance. Such practices not only disrupt the expected cash flow but also elevate the financial risk for the business.

Slide 8: Results and Recommendations
Based on our calculations and analysis, we arrive at these results, showing both the financial overview and the credit overview of the business. We can also see the ideal margins for each vegetable, calculated by averaging the filtered days with ideal profits.

However, profit margins are often irregular due to factors like pricing strategies, market dynamics, and competition. For example, if a vegetable's cost price is ₹28, setting the selling price at ₹30 may not be viable. Non-rounded figures like ₹33 or ₹37 might confuse customers, so we might set the price at ₹40, yielding a margin of about 42.85%. This demonstrates that fixed margins aren't always practical; flexibility is crucial to adapt to market conditions.

Slide 9: Recommendations
Finally, let's discuss some recommendations for the business. Firstly, expanding the product variety can attract more customers and increase sales. Secondly, implementing structured credit management practices will help in maintaining financial stability. Lastly, enforcing strict repayment practices will ensure timely recovery of credit, enhancing overall profitability.

In conclusion, our analysis has provided a comprehensive financial overview of 'Raj Kishore Kumar Gupta and Sons,' highlighting key areas such as profit margins, credit practices, and overall financial health. By addressing the identified challenges and implementing our recommendations, the business can achieve greater financial stability and profitability.