**Credit Card Analysis of Czech Bank Using Power BI**

In this analysis, we leveraged Power BI to visualize and interpret the customer and credit card data from a Czech bank, sourced from the Berka dataset. The visualizations provide insights into credit card distribution, client demographics, transaction types, and loan patterns. Here are the key findings and visualizations created using Power BI:

***1. Total Accounts Created and Total Cards Distributed by Year (Line Graph):***

- Visualization: A line graph was used to depict the number of accounts created and credit cards distributed each year.

- Insights: The line graph shows trends over time, allowing us to observe peaks and troughs in account creation and card distribution. This helps identify any correlation between the number of new accounts and the issuance of credit cards, possibly reflecting the bank’s marketing efforts or economic factors influencing customer behaviour.

***2. Total Clients by District Name and Gender (Filled Map):***

- Visualization: A filled map was used to display the distribution of clients by district and gender.

- Insights: The filled map reveals geographical trends and gender distribution across different districts. This visualization helps identify which districts have a higher concentration of male or female clients, providing valuable insights for targeted marketing campaigns and customer relationship management strategies.

***3. Total Transactions by Operation Type (Pie Chart):***

- Visualization: A pie chart was created to represent the total transactions by different operation types (e.g., withdrawals, deposits, payments).

- Insights: The pie chart illustrates the proportion of each transaction type, highlighting the most common types of financial activities among customers. This can guide the bank in optimizing its services to better cater to customer needs based on prevalent transaction behaviours.

***4. Total Clients by Card Type (Treemap):***

- Visualization: A treemap was used to display the total number of clients segmented by card type (e.g., Junior, Classic, Gold).

- Insights: The treemap provides a clear view of the distribution of clients across different card types. This helps the bank understand the popularity of each card type and assess the potential need to introduce new card categories or modify existing offerings to better meet customer preferences.

***5. Maximum Loan Amount by Duration (Stacked Column Chart):***

- Visualization: A stacked column chart was created to show the maximum loan amounts distributed over different durations (e.g., 12 months, 24 months).

- Insights: This chart highlights the bank’s loan distribution strategy over time. By analysing the loan amounts and their respective durations, the bank can identify trends and tailor its loan products to match customer demand and risk profiles.

***Conclusion***

By utilizing Power BI's advanced visualization tools, the "Credit Card Analysis of Czech Bank" provides a comprehensive overview of customer behaviour, credit card distribution, and financial transactions. These insights enable the bank to make data-driven decisions regarding marketing strategies, customer segmentation, and product offerings. The visualizations also help identify opportunities for targeted interventions to enhance customer satisfaction and optimize financial performance.