Bank Customer Churn Analysis

Project Name: Bank Customer Churn Analysis

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Objective: Analyzing customer behavior and identifying factors influencing churn using Excel Pivot Tables & Data Analysis ToolPak.

Introduction

Overview:
Banks aim to retain customers, but customer churn remains a challenge. This project analyzes factors influencing churn using customer demographic and financial data.

Key Objectives:

➢ Identify key factors affecting churn.

➢ Analyze trends based on customer demographics.

➢ Provide insights for improving customer retention.

Dataset Description

➢ **Data Overview:**

500 customer records

12 key attributes including demographics, financial status, and churn behavior.

➢ **Key Variables:**

➢ **Credit Score**: Measures creditworthiness.

➢ **Geography**: France, Spain, or Germany.

➢ **Gender**: Male or Female.

➢ **Age & Tenure**: Customer's age and years with the bank.

➢ **Balance & Salary**: Financial status.

➢ **NumOfProducts**: Number of banking products used.

➢ **Churn**: Whether a customer left the bank (1 = Yes, 0 = No).

Data Cleaning

➢Handled missing values in EstimatedSalary using the average.

➢Fixed inconsistent values in Balance.

➢Checked and ensured correct data types

Analytical Questions - Pivot Tables

1. What is the average credit score for each geography?

Germany has the highest average credit score.

2. How does the average account balance vary between genders within each country?

Males have slightly higher balances than females across all countries.

3. What is the distribution of active members vs. non-active members according to credit card ownership?

Majority of active members own a credit card.

4. What is the churn rate per number of products used?

Higher churn rate for customers using only 1 product.

5. What is the average credit score for churned vs. retained customers across different tenures?

Churned customers tend to have slightly lower credit scores.

Research Questions - Data Analysis ToolPak

1. Is there a significant difference in average earnings between churned and non-churned customers?

Conclusion: No significant difference.

2. Is there a significant difference in average credit scores among different geographies?

Conclusion: Yes, geography significantly impacts credit scores.

Key Findings & Insights

➢ Customers using fewer banking products are more likely to churn.

➢ Active customers with credit cards tend to stay longer.

➢ German customers have the highest average credit score.

➢ Salary does not significantly impact churn.

Recommendations

➢ **Increase product engagement:** Offer incentives for customers using only one product.

➢ **Targeted retention programs:** Focus on low-credit-score customers.

➢ **Personalized financial services:** Tailor services based on geographic trends.

Conclusion

What we achieved:

➢ Identified key churn patterns.

➢ Used Pivot Tables & Data Analysis ToolPak to extract insights.

➢ Suggested actionable strategies to reduce churn.

Next Steps:

➢ Implement customer retention strategies.

➢ Further refine analysis with machine learning models.

Thank you!