# 📊 Bank Customer Churn Analysis - Case Study

\*\*Tools Used\*\*: Microsoft Excel (Power Query, Pivot Tables, Slicers, Charts)

## 🔍 Project Overview

This project analyzes churn behavior among 10,000 bank customers using demographic, financial, and engagement data. The analysis is visualized through two interactive dashboards to help stakeholders identify at-risk segments and optimize customer retention.

## 📊 Dashboard 1: Customer Churn Insight

This dashboard highlights the following:

* • Overall Churn Rate: 20%, with 2,037 customers having left the bank.
* • Churn by Age Group: Middle-aged customers have the highest churn (1,057), followed by Young Adults (538).
* • Balance Category: Medium and High Balance customers each have 746 churned customers, more than Low Balance.
* • Credit Card Ownership: 1,424 churned customers have credit cards, while 613 do not.
* • Churn by Country: Germany has the highest churn (814), followed by France (810), and Spain (413).
* • Tenure: Intermediate customers have the highest churn (625), followed by Established (570) and New Customers (528).

## 📊 Dashboard 2: Customer Demographics

* • Gender Distribution: 55% Female, 45% Male.
* • Age Groups: Majority are Young Adults and Middle-Aged.
* • Balance Distribution: Most customers fall into Low and High balance groups.
* • Country Distribution: France (5,014), Germany (2,509), Spain (2,477).
* • Credit Card Ownership: Most customers have credit cards.
* • Tenure: Largest groups are Established and Intermediate customers.

## ⚠️ Limitation

This analysis reveals who is churning based on customer characteristics but does not explain why they are leaving. The dataset lacks behavioral or feedback-based variables such as:  
- Customer satisfaction scores (e.g., NPS)  
- Complaints or support logs  
- Service quality feedback  
- Exit survey results

## 🔁 Recommendations for Future Work

* • Collect richer data through customer surveys, support logs, and behavioral tracking.
* • Develop a predictive churn model using Power BI, Python, or SQL if behavioral data becomes available.
* • Incorporate qualitative insights from complaint texts or customer interactions.

## ✅ Project Outcome

The dashboards successfully identify high-risk customer segments, offering clarity for targeted retention strategies. With improved data granularity in future versions, the analysis can evolve from descriptive to diagnostic and predictive analytics.