**Bank churn 10K Report**

**Findings**

# TLDR;

🔹 **High Churn Rate in Germany** → Targeted customer retention strategies.

🔹 **Younger customers churn more** → Offer loyalty programs for young professionals.

🔹 **Inactive members leave despite high balance** → Improve engagement & personalized services.

🔹 **Credit Score plays a role in churn** → Provide financial advisory & tailored loan offers.

🔹 **Customer complaints → Higher churn** → Improve complaint resolution processes.

Kaggle dataset link: <https://www.kaggle.com/datasets/radheshyamkollipara/bank-customer-churn>

# **Bank Churn Analysis Report**

## **1. Introduction**

### **Objective:**

This report aims to analyze customer churn in a bank, identify key factors influencing churn, and provide actionable recommendations to improve customer retention. The analysis is based on a dataset of 10,000 bank customers, using MySQL for data processing and Tableau for visualization.

### **Key Business Question:**

* Why do customers leave the bank?
* What are the primary factors influencing churn?
* How can the bank reduce churn and improve customer retention?

## **2. Data Overview**

### **Dataset Information:**

The dataset contains **10,000** customer records with **14 Columns** related to demographics, account details, and customer activity.

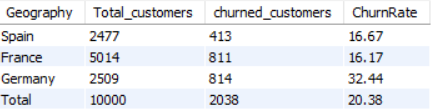
| **Feature** | **Description** |
| --- | --- |
| **CustomerID** | Unique customer identifier (not used in analysis) |
| **CreditScore** | Customer's credit score (higher = more creditworthy) |
| **Geography** | Customer's country (France, Germany, Spain) |
| **Gender** | Male or Female |
| **Age** | Customer's age |
| **Tenure** | Years as a bank customer |
| **Balance** | Account balance |
| **NumOfProducts** | Number of bank products held |
| **HasCrCard** | Whether the customer has a credit card (1 = Yes, 0 = No) |
| **IsActiveMember** | Whether the customer is an active member (1 = Yes, 0 = No) |
| **EstimatedSalary** | Estimated annual salary |
| **Exited** | Whether the customer churned (1 = Yes, 0 = No) |
| **Complain** | Whether the customer has filed a complaint |
| **Satisfaction Score** | Rating given by the customer |

## **3. Data Analysis & Findings**

### **A. Overall Churn Rate**

📌 **Finding:** The overall churn rate is **20.38%**, meaning approximately 2,038 customers left the bank.

### **B. Churn by Geography**



📌 **Finding:** **Germany has the highest churn rate (32.4%)**, which is nearly **twice** the rate of France and Spain.

🔹 **Possible reasons:**

* Different banking policies or fees in Germany.
* Customer dissatisfaction in that region.

📌 **Recommendation:** The bank should **investigate customer complaints in Germany** and improve its offerings.

### **C. Impact of Age on Churn**

📌 **Finding:** Younger customers (18-45) have a **higher churn rate** , while customers **above 50 churn less**.

🔹 **Possible reasons:**

* Younger customers are more likely to switch banks for better deals.
* Older customers have **higher loyalty and tenure**.

📌 **Recommendation:** Develop **loyalty programs for younger customers** (e.g., discounts on loans, higher savings interest rates).

### **D. Customer Activity & Churn**

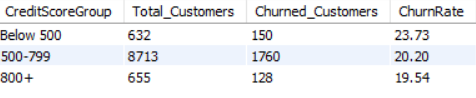


📌 **Finding:** **Inactive customers churn at a significantly higher rate** (26.87%) compared to active customers (14.27%).

📌 **Recommendation:**

* Implement **customer engagement strategies** (e.g., personalized product offers, reward programs for active members).
* Offer **incentives for customers to engage more with banking services**.

### **E. Churn by Credit Score**



### **📌 Finding:**

* Customers with a **credit score below 500** churn at **23.73%**.
* Customers with a **credit score between 500 and 799** churn at **20.20%**.
* Customers with a **credit score above 800** churn at **19.54%**.

📊 **Key Takeaways:**

* While churn **does decrease** as credit score increases, the difference **is not as drastic** as expected.
* Customers with **very low credit scores (<500)** have the **highest churn rate** (23.73%), but it's only about **3.5% higher** than those with scores above 800.
* The **500-799 range**, which includes most customers, has a **moderate churn rate (20.20%)**.
* Even **high-credit-score customers (800+)** still experience churn (19.54%), meaning other factors (such as tenure, income, and engagement) might play a role.

✅ **Business Action:**

* Focus **retention strategies** more on customers **with credit scores below 500** since they have the highest churn.
* Investigate **other influencing factors** (e.g., product usage, complaints, or satisfaction scores) to reduce churn further.

### **F. Churn by Balance & Products Held**

📌 **Finding:**

* Customers with **zero balance churn at 13.82%**, indicating **low engagement with the bank**.
* Customers with **multiple products (2-3) churn less** than those with only **one product**.

📌 **Recommendation:** Encourage customers to use **multiple financial products** (e.g., savings, loans, insurance) to increase retention.

* If a customer has no money in their account, it may mean:
  + They **use another bank as their primary financial institution**.
  + They **signed up but never fully engaged** with the bank's services.
  + They are **dissatisfied with the bank** and **planning to leave**.

📌 **Recommendation:**

* **Encourage deposits** by offering incentives like:
  + Higher interest rates on savings accounts.
  + Cashback offers or rewards for maintaining a balance.
  + Personalized promotions based on spending behavior.
* **Engage inactive customers** through targeted campaigns:
  + Send reminders about unused account benefits.
  + Offer easy savings plans or automatic transfers.

#### **Why might Customers with Multiple Products Churn Less?**

* Customers who use **2 or more products** (e.g., checking + savings account, credit card + loan) tend to be **more loyal**.
* If a customer **only has one product**, they have **less incentive to stay** and may leave for a competitor offering better terms.
* Customers with multiple financial products **interact with the bank more frequently**, making them feel more committed.

📌 **Recommendation:**

* **Cross-sell products to single-product customers**:
  + If they only have a **checking account**, offer a **savings account** with interest benefits.
  + If they only have a **credit card**, suggest a **loan** with a lower interest rate for existing customers.
  + If they use **only a savings account**, offer an **investment or insurance plan** to enhance their banking relationship.
* **Introduce bundling discounts**:
  + Provide **discounts on loans** for customers with a checking + savings account.
  + Offer **higher rewards on credit cards** for customers with multiple products.
* **Educate customers on financial benefits**:
  + Send personalized recommendations based on their banking activity.
  + Use **email marketing and SMS alerts** to promote financial literacy and investment benefits.

## **4. Key Insights & Business Recommendations**

Based on the findings, the following **actionable strategies** are recommended:

### **🔹 A. Target High-Churn Regions (Germany)**

* Investigate **customer dissatisfaction reasons** (e.g., fees, service quality).
* Offer **Germany-specific retention programs** (discounted services, improved support).

### **🔹 B. Improve Retention for Younger Customers**

* Create **personalized banking products** for young customers.
* Offer **loyalty rewards for long-term banking relationships**.

### **🔹 C. Engage Inactive Customers**

* Send **personalized engagement emails**.
* Offer **bonus interest rates** or **cashback incentives** for active transactions.

### **🔹 D. Financial Advisory for Low Credit Score Customers**

* Provide **credit-building programs**.
* Offer **discounted loan rates** to encourage customer retention.

### **🔹 E. Promote Multi-Product Usage**

* Encourage customers to use **two or more products** to increase loyalty.
* Bundle **savings, credit, and investment options** into attractive packages.

## **5. Conclusion**

This analysis reveals that **customer churn is influenced by location, age, activity level, credit score, and product usage**. By implementing targeted **retention strategies**, the bank can reduce churn, increase customer satisfaction, and improve overall profitability.

📌 **Next Steps:**

1. Implement **churn prevention programs** in Germany.
2. Develop **loyalty strategies for younger customers**.
3. Improve **customer engagement and financial advisory services**.
4. Monitor results and iterate strategies based on ongoing data analysis.

📊 **Final Deliverables:**

* **SQL Database & Queries** for churn analysis.
* **Tableau Dashboard** for visual insights.
* **Business Recommendations Report** (this document).

### **🎯 Final Thoughts**

By leveraging **MySQL for data analysis and Tableau for visualization**, we can make **data-driven decisions** to **reduce churn and increase customer retention**. Continuous monitoring and strategy refinement will be essential for long-term success.