Customer Churn Report

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Contents

Objective

The primary objective of this **Customer Churn Analysis** is to understand the factors driving customer attrition in the bank and develop data-driven strategies to improve retention.

1. Quantify Customer Churn

2. Identify Key Factors Influencing Churn

3. Provide Actionable Insights for Business Strategy

Introduction

What is Customer Churn?

Customer churn, also known as **customer attrition**, refers to the percentage of customers who stop using a company's services over a given period. In the banking sector, churn typically occurs when a customer:

- Closes their bank account.

- Moves their deposits, loans, or investments to a competitor.

- Stops using the bank's services for a prolonged period.

Customer Churn Distribution

Churned Customers

20.4%

79.6%
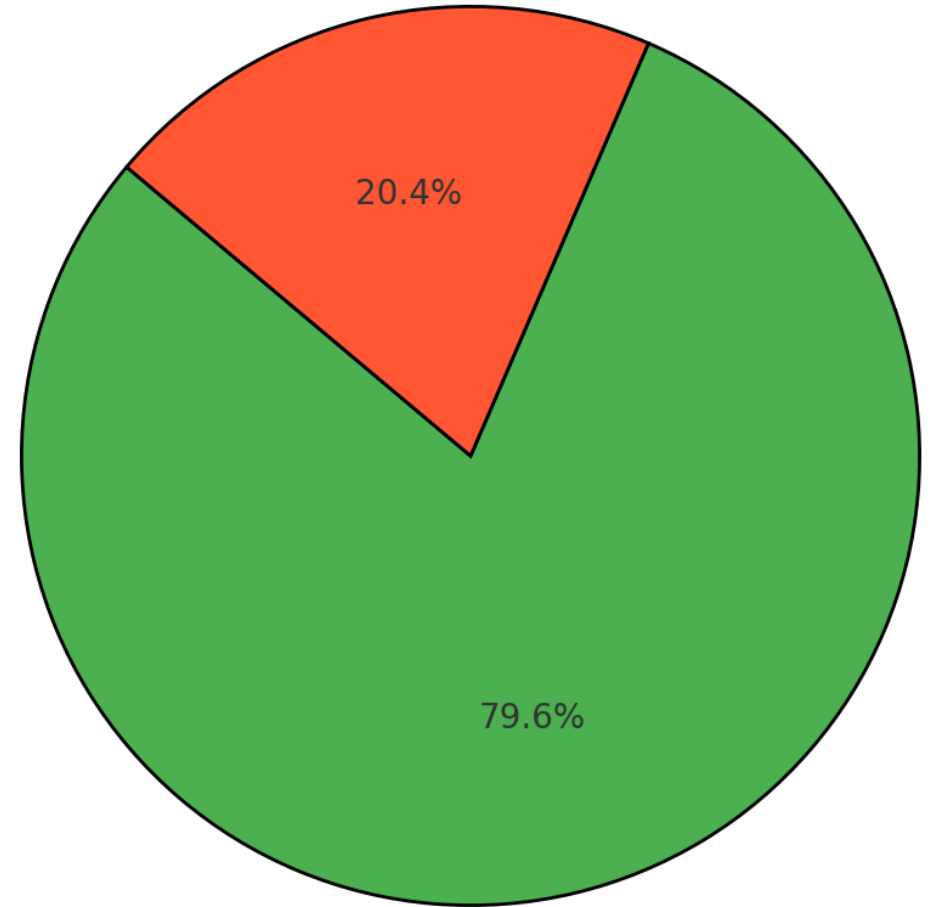
Retained Customers

Why is Customer Churn Important for the Bank?

1. **Revenue Impact:**
   1. Losing customers directly reduces the bank's revenue from deposits, loans, and transaction fees.
   2. The cost of acquiring new customers is **5–7 times higher** than retaining existing ones.

2. **Customer Lifetime Value (CLV):**
   1. Retaining customers ensures continued profitability from long-term relationships.
   2. A high churn rate means lower CLV and reduced future earnings.

3. **Competitive Positioning:**
   1. High churn rates indicate that competitors may be offering **better products or services**.
   2. Understanding why customers leave helps banks improve offerings and stay competitive.

4. **Customer Satisfaction & Trust:**
   1. High churn can be a sign of **poor customer service, product dissatisfaction, or lack of engagement**.
   2. Monitoring churn helps banks refine their customer experience strategies.

Data Overview

Variable

- RowNumber
- CustomerId
- Surname
- CreditScore
- Geography
- City_Category
- Gender
- Age
- Tenure
- Balance
- NumOfProducts
- HasCrCard
- IsActiveMember
- EstimatedSalary

- **Exited**

Definition

- Unique Row Number
- Unique Customer Id
- Surname of a customer
- Credit Score of each Customer
- Geographical Location of Customers
- Category of the City (A,B,C)
- Sex of Customers
- Age of Each Customer
- Number of years
- Current Balance of Customers
- Number of Products
- If a customer has a credit card or not
- If a customer is active or not
- Estimated Salary of each Customer

- **Customer left the bank or Not (Target Variable)**

Exploring The Data

Churn Rate: In the **banking sector**, churn rate represents the proportion of customers who close their accounts, stop using financial products, or switch to competitors.

Types of Churn

1.Voluntary Churn: Customers who leave due to dissatisfaction, high fees, or better offers elsewhere.

2.Involuntary Churn: Customers lost due to external reasons like financial difficulties, death, or regulatory actions.

```
1    SELECT ROUND(AVG(Exited) * 100, 2) AS Churn_Rate
2    FROM customer;
```

Data Output   Messages   Notifications

	churn_rate 🔒 numeric
1	20.37

Descriptive Statistics

Feature	Mean	Min	25%	50% (Median)	75%	Max
Credit Score	650.53	350	584	652	718	850
Age	38.92	18	32	37	44	92
Tenure (Years)	5.01	0	3	5	7	10
Balance ($)	76,485.89	0	0	97,198.54	127,644.24	250,898.09
Number of Products	1.53	1	1	1	2	4
Estimated Salary ($)	100,090.24	11.58	51,002.11	100,193.91	149,388.25	199,992.48
Exited (Churned Customers)	20.37%	0	0	0	0	1

Categorical Insights And Correlation Matrix

- **Gender:**
  - 5,457 **Male** (54.57%)
  - 4,543 **Female** (45.43%)
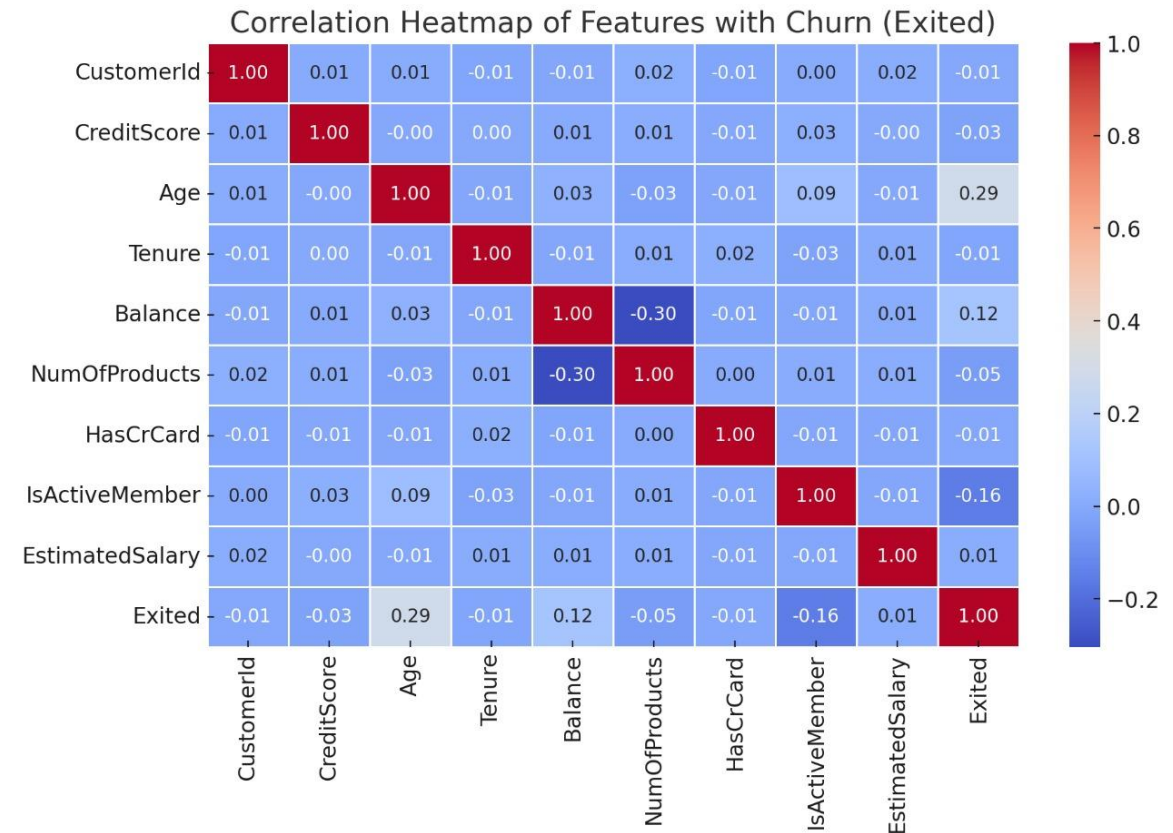- **Geography:**
  - **France:** 5,014 customers (50.14%)
  - **Germany:** 2,508 customers (25.08%)
  - **Spain:** 2,478 customers (24.78%)
- **Active Membership:**
  - 51.51% are **Active Members**, while 48.49% are **Inactive Members**.
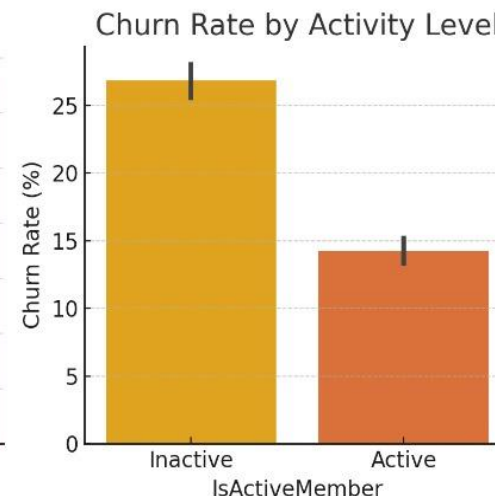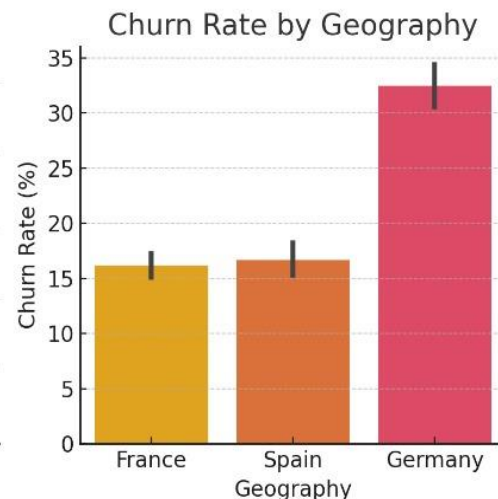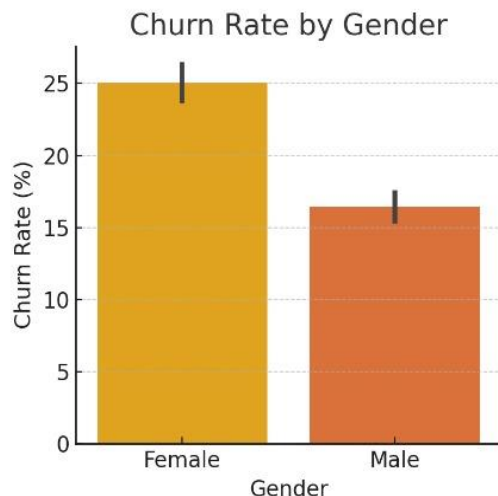- **Churn Rate:**
  - **20.37% of customers have exited the bank**.

Correlation Heatmap of Features with Churn (Exited)

Churn Trend Analysis

- **Gender-Based Churn**:- Female customers have a higher churn rate than males.- This suggests that female customers might be less satisfied with the bank's services.

- **Geography-Based Churn**:- Customers from France have the lowest churn rate. Customers from Germany have the highest churn rate.- This could indicate regional differences in banking competition or customer satisfaction.

- **Activity-Based Churn**:-Inactive members have a significantly higher churn rate. Active members are more likely to stay. - Engagement is a strong factor in customer retention.

Churn Trend Analysis

- **Churn Rate by Age Group: -** Customers aged 41-50 and 51-60 have the highest churn rates.
  - Young customers (18-30) have the lowest churn rate.
  - Older customers may be switching to competitors offering better financial services.

- **Churn Rate by Income Group: -** Income level does not significantly impact churn.
  - Medium-income customers (₹50K-₹100K) have slightly higher churn rates.
  - This suggests that customer experience and engagement matter more than income.

Churn Rate by Age Group

Churn Rate by Income Group
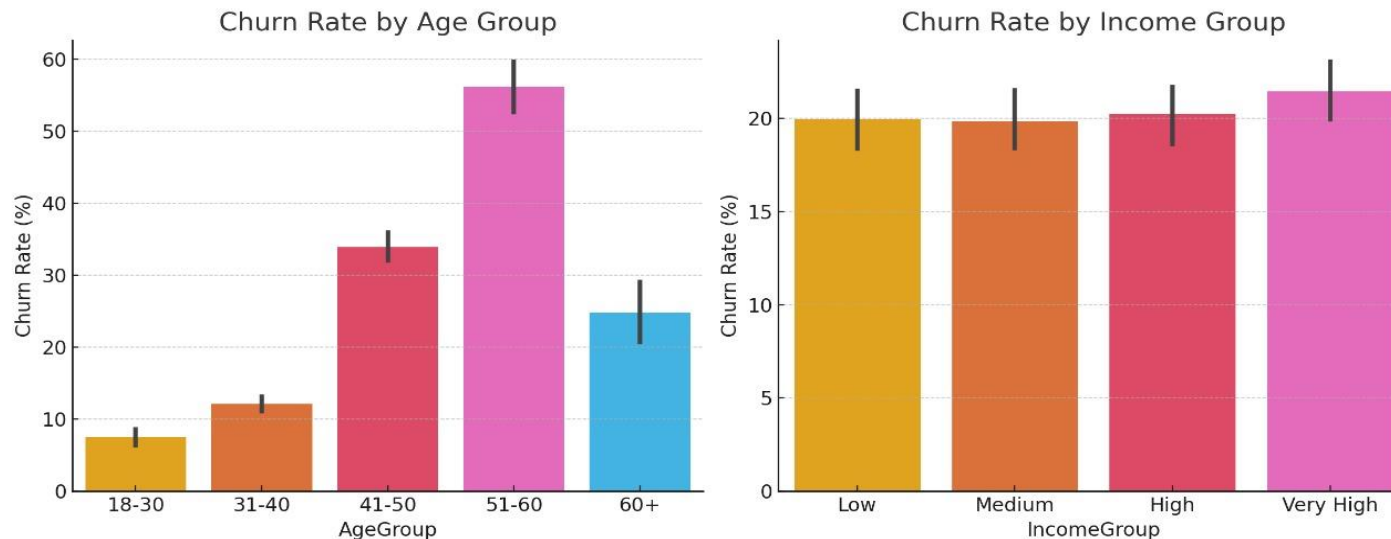
Recommendations & Business Impact

Target High-Risk Segments:
- Focus on customers in high-churn **geographies (Germany)** and those with **low engagement**.
- Offer **personalized incentives** for high-value but inactive customers.

Improve Customer Engagement & Retention:
- Implement **loyalty programs** for long-term customers.
- Enhance **customer support** and proactive outreach for inactive users.

Operational Improvements
- Enhance **customer support** and follow-up calls.
- Improve **digital banking experience** for target segments.

Optimize Product Offerings & Services:
- Encourage **multi-product adoption** to increase stickiness.
- Provide better **interest rates or perks** to retain customers with high balances.

Conclusion

The Customer Churn Analysis provides valuable insights into the factors influencing customer attrition at the bank. Through exploratory data analysis, we observed that 20.37% of customers have exited, highlighting the need for targeted retention strategies. Key findings include:

Demographic Trends:
- Churn is higher among **older customers** and varies significantly across **geographic regions** (Germany has a higher churn rate compared to France and Spain).
- Female customers show slightly higher churn rates than males.

Account & Financial Insights:
- Customers with **zero balance** and **multiple products (3 or more)** are more likely to leave.
- **Credit score alone** does not have a strong correlation with churn, but a combination of **low credit score and inactivity** increases churn risk.

Engagement & Activity Patterns:
- **Inactive members** have a higher probability of churning compared to active members.
- Customers with **fewer banking products (1 product only)** are more likely to leave.
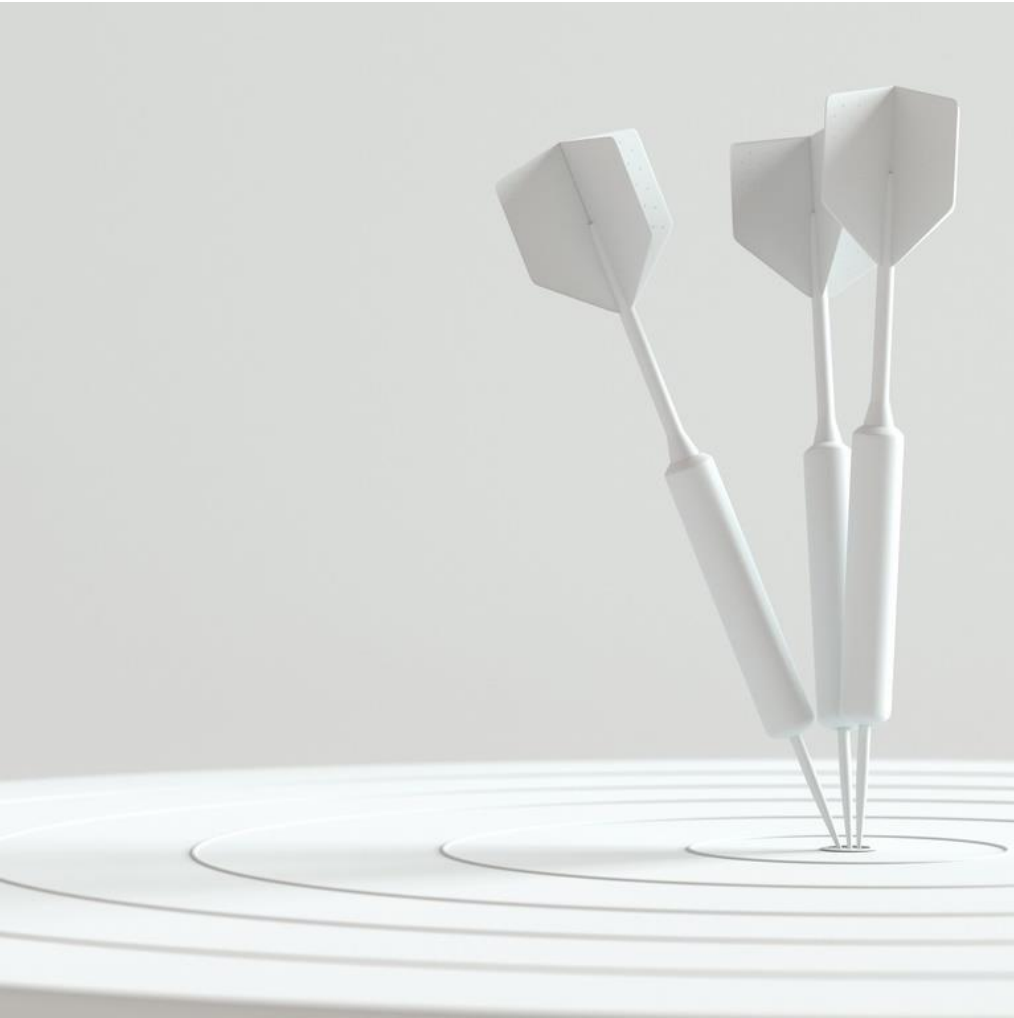
Thank you

By leveraging these insights, the bank can design **data-driven customer retention strategies** to lower churn, improve customer satisfaction, and enhance overall profitability. Future steps may include **advanced predictive modeling** to proactively identify customers at risk of leaving and implementing real-time interventions.