🏛 Bank Customer Churn Analysis – Power BI Dashboard

Live Dashboard : Churn Analysis

📘 Overview

This Power BI dashboard provides an **end-to-end analysis of customer churn** for a banking dataset.
It helps identify **which customers are leaving**, **why they are leaving**, and **what can be done to retain them**.

The project was built as a hands-on Power BI learning experience to simulate real-world business reporting — from connecting raw data to presenting actionable insights.

🎯 Objectives

- Analyze the churn rate and highlight risk segments.

- Identify behavioral and demographic patterns among churned customers.

- Enable the company to make **data-driven retention strategies**.

- Demonstrate the power of Power BI for **visual storytelling** and **executive decision-making**.

📊 Dashboard Overview

1. KPI Summary

Metric	Value	Description
Customers Lost	2,037	Total customers who left the bank
Churn Rate	20.4%	Percentage of customers lost
Total Customers	10,000	Active and churned combined

Insight:
About **1 in every 5 customers** has churned — a critical level that requires proactive management.

2. Customers by Gender

Male: 45.43% | **Female:** 54.57%

🔍 **Insight:** Gender has minimal influence on churn — the distribution is nearly balanced.

---

3. Customers by Credit Card Ownership

Owned: 70.5% | **Not Owned:** 29.45%

🔍 **Insight:** Most customers own credit cards, but ownership itself does not reduce churn.

💡 *Opportunity:* Increase engagement through card-related loyalty programs.

---

4. Customers by Activity Status

Active: 48.49% | **Inactive:** 51.51%

🔍 **Insight:** Inactive customers are at **higher risk of leaving**.

💡 *Action:* Introduce engagement campaigns to re-activate dormant accounts.

---

5. Customers by Country

France (50.14%), Germany (25.09%), Spain (24.77%)

🔍 **Insight:** Geographic differences show **German customers have the highest churn rate**, indicating a localized service or satisfaction issue.

---

6. Customers by Product

Product 1: 45.9% | **Product 2:** 50.84% | **Others:** <5%

🔍 **Insight:** Customers holding **multiple products churn less frequently**.

💡 *Action:* Focus on **cross-selling** and **bundled service offers** to increase customer retention.

---

7. Customers & Churn Rate by Age Group

- Peak churn in **31–40 age group**

- Churn decreases beyond age 50

🔍 **Insight:** Middle-aged customers are more likely to switch banks — possibly due to evolving financial needs.

💡 *Action:* Offer **customized loan and investment products** for this demographic.

---

8. Customers & Churn Rate by Credit Score

- Highest churn among **601–700** score range

- Lowest churn among **>800**

🔍 **Insight:** Better credit score → higher loyalty.

💡 *Action:* Provide **credit improvement programs** for moderate-score customers.

---

9. Customers & Churn Rate by Account Balance

- Low churn among very high or very low balance accounts

- Peak churn in **₹10K–₹100K** range

🔍 **Insight:** Mid-tier customers may feel undervalued.

💡 *Action:* Create **tier-based rewards or personalized offers** to increase satisfaction.

💼 How This Dashboard Benefits the Company

This dashboard adds **strategic business value** by helping the bank:

1. **Identify At-Risk Customers Early:**
   Visual churn segmentation allows managers to **proactively reach out** to customers showing warning signs.

2. **Prioritize Retention Campaigns:**
   Instead of applying a one-size-fits-all strategy, the bank can focus on **specific customer groups** that contribute most to churn.

3. **Optimize Marketing Spend:**
   Insights from credit score, activity status, and account balance help **target the right customers** for promotions or loyalty rewards.

4. **Improve Product Strategy:**
   Understanding which product combinations correlate with higher retention supports **cross-selling** and **product improvement**.

5. **Support Data-Driven Decision Making:**
   Executives can use this dashboard to **track performance over time**, measure churn impact, and adjust strategy dynamically.

In short, this dashboard acts as a **customer retention intelligence tool**, transforming raw data into clear business actions.

✳️ Key Insights Summary

Category	Key Finding
Churn Rate	20.4% – High churn risk
Activity	Inactive customers churn more
Age	31–40 most likely to churn
Credit Score	Low to mid scores churn more
Balance	Mid-balance customers at risk
Products	Multi-product customers are more loyal

🧠 Learnings from Building This Dashboard

1. **Data Preparation:**
   Learned to use **Power Query** for cleaning and transforming messy datasets into structured models.

2. **Data Modeling:**
   Built relationships and calculated measures using **DAX** (e.g., Churn Rate, Total Customers Lost).

3. **Visualization Principles:**
   Focused on **simplicity and clarity**, using consistent color palettes (orange + gray) for professional aesthetics.

4. **Storytelling:**
   Learned how to arrange visuals in a logical flow — starting with KPIs, then drilling down into key drivers.

5. **Business Thinking:**
   Realized that analytics is about more than charts — it's about **influencing better decisions** and **reducing business risks**.

💼 **Tools & Techniques Used**

- **Power BI Desktop**

- **Power Query Editor**

- **DAX Calculations & Measures**

- **Interactive Filters & Slicers**

- **Card, Donut, Line, and Area Charts**

- **Color Theme:** Warm Neutral (Orange–Gray)

🪶 **Conclusion**

The **Bank Customer Churn Analysis Dashboard** delivers a **comprehensive, insight-driven view of customer retention**.
By pinpointing who is leaving and why, it helps the bank:

- Retain more customers 💡

- Increase loyalty 🔄

- Reduce revenue leakage 💰

- Build long-term trust 🤝

This project strengthened my ability to think like both an **analyst and a business strategist**, connecting **data with impact**.