**HR Dashboard - Excel & Power BI**

**1. Project Overview**

This project focuses on analyzing **bank customer attrition** using a dataset containing **10,000 records**. The goal is to identify key trends in customer behavior, financial engagement, and complaint rates to help optimize banking services and retention strategies.

**Tools Used:**

* **Data Cleaning & Analysis:** Excel
* **Data Visualization & Dashboarding:** Power BI

**2. Key Business Questions & Insights**

**1. Customer Breakdown by Card Type**

|  |  |  |
| --- | --- | --- |
| **Gender** | **Customers with Credit Card** | **Customers without Credit Card** |
| Male | 3,900 | 1,600 |
| Female | 3,200 | 1,400 |

**Insights:**

* **71% of customers** own a credit card (**7,100 out of 10,000**).
* More **male customers own credit cards (3,900 vs. 3,200 females).**
* The trend suggests that **males may be more inclined to credit-based transactions**.

**2. Card Type Breakdown by Percentage of Total Revenue**

|  |  |
| --- | --- |
| Card Type | Revenue Percentage (%) |
| DIAMOND | 25.93% |
| GOLD | 25.09% |
| PLATINUM | 24.69% |
| SILVER | 24.29% |

**Insights:**

* **DIAMOND cardholders generate the highest revenue (25.93%)**.
* **Minimal variation across card types** (only **1.64% difference** between the highest and lowest revenue generators).

**3. Salary Breakdown by Age**

|  |  |
| --- | --- |
| Age Group | Avg Salary ($) |
| 18-24 | 47,165.18 |
| 25-34 | 322,471.05 |
| 35-44 | 396,054.18 |
| 45-54 | 150,878.20 |
| 55-64 | 56,029.49 |
| 65+ | 28,304.30 |

**Insights:**

* **Peak salary occurs at ages 35-44 ($396K)**.
* **Sharp decline in income after 45+**, suggesting a shift in financial stability.

**4. Card Type Breakdown by Salary**

|  |  |
| --- | --- |
| Card Type | Total Salary ($) |
| SILVER | 252,326,935 |
| GOLD | 251,578,501 |
| PLATINUM | 249,992,874 |
| DIAMOND | 247,004,089 |

**Insights:**

* **SILVER cardholders earn the most collectively ($252M).**
* **DIAMOND cardholders have the lowest total salary**, yet generate the highest revenue.

**5. Credit Score Breakdown by Age**

|  |  |
| --- | --- |
| Age Group | Credit Score |
| 18-24 | 457 |
| 25-34 | 3,222 |
| 35-44 | 3,981 |
| 45-54 | 1,458 |
| 55-64 | 600 |
| 65+ | 282 |

**Insights:**

* **Customers aged 35-44 have the highest credit scores.**
* **Older customers (55+) and young adults (18-24) struggle with creditworthiness.**

**6. Complaint Rate by Gender**

|  |  |  |
| --- | --- | --- |
| Gender | Complaining Customers (%) | Non-Complaining Customers (%) |
| Male | 16.53% | 83.47% |
| Female | 25.14% | 74.86% |

**Insights:**

* **More female customers report complaints (25.14%) compared to males (16.53%).**
* **The majority of customers do not complain (74-83% satisfaction levels).**

**3. Key DAX Measures**

**Active = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[IsActiveMember] = 1)**

**Active Member Percentage = DIVIDE([Active], COUNTROWS(HR\_Banking\_Analytics), 0)**

**Attribute = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[IsActiveMember] = 0)**

**Average Credit Score = AVERAGE(HR\_Banking\_Analytics[CreditScore])**

**Avg Salary = VAR a = CALCULATE(AVERAGE(HR\_Banking\_Analytics[EstimatedSalary])) RETURN a**

**Complain Customer = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[Complain] = 1)**

**Customer with Credit Card = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[HasCrCard] = 1)**

**Customer without Credit Card = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[HasCrCard] = 0)**

**Headcount = DISTINCTCOUNT(HR\_Banking\_Analytics[CustomerId])**

**Not Complain Customer = CALCULATE(COUNTROWS(HR\_Banking\_Analytics), HR\_Banking\_Analytics[Complain] = 0)**

**Total Balance = SUM(HR\_Banking\_Analytics[Balance])**

**Total Customer Salary = SUM(HR\_Banking\_Analytics[EstimatedSalary])**

**Total Points Earned = SUM(HR\_Banking\_Analytics[Point Earned])**

**4. Recommendations**

1. **Increase Credit Card Adoption:**
   * Target female customers with promotions to boost credit card usage.
2. **Revenue Optimization:**
   * Offer incentives on **SILVER & PLATINUM** cards to increase spending.
3. **Age-Based Financial Strategies:**
   * Provide tailored financial products based on salary trends.
4. **Credit Education & Support:**
   * Launch credit-building programs for younger and older customers.
5. **Enhance Customer Satisfaction:**
   * Improve service quality to reduce **female customer complaints**.

**5. Conclusion**

This analysis provides critical insights into **customer behavior, financial trends, and attrition risks**. By leveraging these findings, banks can refine their strategies to **boost engagement, optimize revenue, and enhance customer retention.**