**Project Report**

Veritas Bank – Customer Churn & Retention Analysis

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# 1. Executive Summary

Veritas Bank, a multinational retail bank with operations in the UK, Germany, and France, sought to understand patterns behind customer churn and retention. This project aimed to identify the characteristics of customers most likely to leave, segment customers by risk level, and uncover insights to inform data-driven strategies. Using SQL Server for data modeling and Power BI for dashboarding, we developed an interactive reporting framework that helps stakeholders visualize risk, identify high-value clients, and track churn trends in real time.

# 2. Project Objectives

1. Identify key churn drivers using demographic and behavioral data.

2. Segment customers based on churn risk and account value.

3. Develop interactive dashboards to explore churn across regions and age groups.

4. Deliver business recommendations to reduce churn and retain high-value customers.

5. Enable data-driven decision-making through KPI-driven reporting.

# 3. Data Sources and Tools

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| --- | --- |
| Component | Details |
| Data Source | SQL Server – Dim\_Customer, Fact\_Account |
| Data Connection | Power BI Desktop |
| Techniques Used | Risk Segmentation, KPI Calculations, Churn Rate Analysis, DAX Measures |

# 4. Methodology

Data Preparation:

Raw customer and account data were staged in SQL Server. We performed data cleaning, enforced referential integrity, created surrogate keys, and built dimensional models. Views were created to simplify analysis: vw\_ChurnByDemographics, vw\_CustomerRiskSegments, vw\_EnhancedChurnSegmentation, vw\_HighValueCustomers.

DAX Measures and Calculated Columns:

Calculated credit score groups, risk segments, churn rate, and balance segmentation. These were used in dynamic Power BI visuals with slicers for gender, country, age, tenure, and status.

Visualization:

Power BI dashboards include KPI cards, bar and pie charts, segmented tables, and risk filters. Dynamic filters and navigation buttons improve usability for non-technical users.

# 5. Dashboard Overview

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| --- | --- |
| Dashboard | Key Focus Areas |
| Home Page | Title, logo, and navigation to main dashboards. |
| Customer Dashboard | Demographics, product usage, risk segments, credit/balance grouping. |
| Churn Analysis Dashboard | Churn rate by country, age group, and risk level. KPIs and trends. |

# 6. Key Insights

• Customers aged 25–44 represented the largest share of churned users.

• Germany and France had higher churn rates than the UK.

• Inactive customers with low balance and one product were at the highest risk of churn.

• High-value customers (high balance, tenure, and product count) were also churning in some cases.

• The majority of churned customers had credit scores below 700.

# 7. Recommendations

• Launch targeted retention campaigns for very high and high-risk segments.

• Use personalized communication to re-engage inactive members.

• Monitor high-value customers closely with early warning alerts.

• Focus on Germany and France with specific customer success strategies.

• Automate churn risk scoring in future Power BI enhancements.

# 8. Conclusion

This project provided Veritas Bank with a robust analytical foundation to understand and manage customer churn. By leveraging SQL views and Power BI visualizations, stakeholders now have clear visibility into customer behavior, risk profiles, and value segmentation, enabling proactive retention strategies and improved decision-making.

# 9. Attachments

Link to Power BI Report: ( https://app.powerbi.com/groups/me/reports/d6b37993-0e6a-4b77-b1ef-fd13637140e4/ReportSection67cd3cce2e8e5239db1f?experience=power-bi