

Executive Summary

This study analyses customer engagement and product utilization patterns to understand their impact on customer retention within a European banking dataset of 10,000 customers. The overall churn rate stands at 20.37%, indicating that approximately one in five customers exits the bank.

Key Findings

- **Engagement as a Primary Retention Driver**
Inactive customers exhibit a churn rate of 26.85%, compared to 14.27% for active customers. This demonstrates that behavioural engagement significantly influences retention outcomes.
- **Optimal Product Depth Improves Stability**
Customers holding two products demonstrate the lowest churn rate (approximately 8%). However, customers with three or more products show disproportionately high churn rates, suggesting potential over-bundling or product misalignment.
- **Financial Value Alone Does Not Ensure Loyalty**
Premium customers (top 25% by balance) show a churn rate of 23.68%, exceeding the overall churn rate. Furthermore, inactive premium customers churn at 30.47%, highlighting the elevated risk associated with disengaged high-value customers.
- **Silent Premium Risk Segment Identified**
Nearly 49.88% of premium customers are inactive, representing a significant engagement gap within the bank's most financially valuable segment.
- **Relationship Strength Index Validation**
A composite Relationship Strength Index (RSI) combining engagement, product depth, and credit card ownership reveals that "sticky" customers ($RSI \geq 4$) churn at 15.40%, compared to 24.44% for non-sticky customers.

Strategic Implications

The findings confirm that engagement and optimal product depth are stronger predictors of retention than financial indicators alone. Retention strategies should prioritize:

- Re-engagement of inactive customers
- Targeted protection of high-balance inactive customers
- Promotion of optimal product bundling (two-product model)
- Deployment of relationship-strength scoring for early churn detection

Implementing engagement-driven retention frameworks can significantly reduce churn while protecting high-value customer segments.