Customer Engagement & Financial Performance in Banking

Analyzing how customer behavior drives profitability, risk management, and long-term banking relationships through data-driven insights.

The Business Problem

The Gap
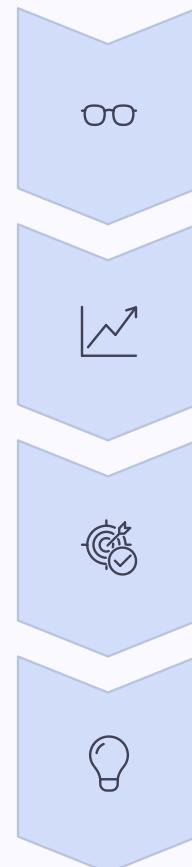
Banks lack consolidated insight into how customer engagement translates into financial performance.

Key Issues

- High-value customers remain unidentified
- Engagement-driven revenue trends stay hidden
- Financial products aren't optimally targeted
- Decision-making becomes reactive, not strategic

Our Solution Approach

Analyze Engagement
Measure customer behavior across banking products

Evaluate Performance
Track loans, deposits, and fees by segment

Identify Value
Pinpoint high-value and long-term customers

Drive Insights
Enable data-driven strategic decisions

Dataset Foundation

Scale
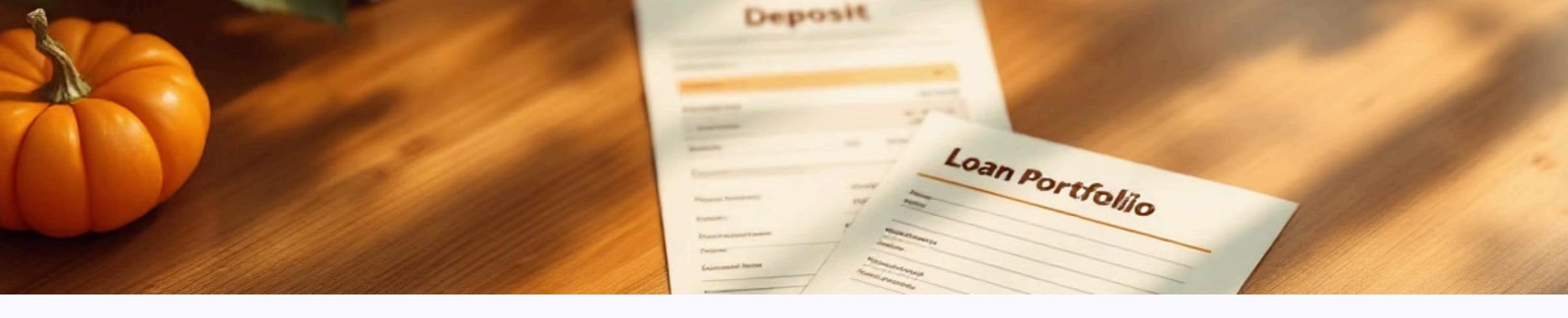
~3,000 records covering 2,940 unique customers

Categories

Customer demographics, engagement details, financial products, account types, performance metrics

Quality

Cleaned, validated, and standardized for analysis

Financial Performance Snapshot

2,940

Total Clients

Active customer base

$4.38B

Loan Portfolio

Total loan value across all products

$3.77B

**Deposit Portfolio**
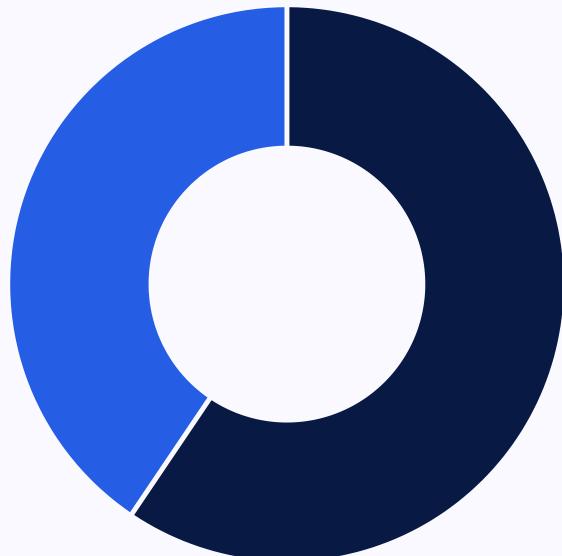
Total deposits providing liquidity

$158M

Fee Revenue

Total fees collected

Loan Portfolio Breakdown

Business Lending ■ Bank Loans

Business Lending Dominates

Business lending accounts for 59% of total loan exposure at $2.60 billion, highlighting its critical importance in revenue generation.
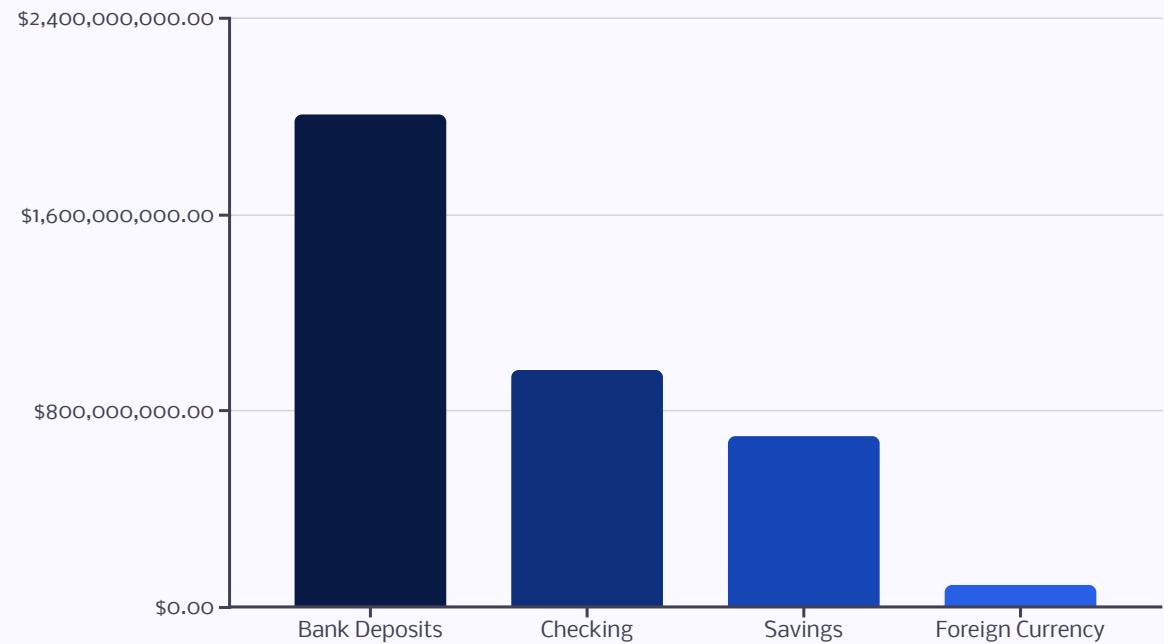
🗋 **Strategic Priority:** Retain long-term business clients to maintain loan portfolio strength and minimize risk exposure.

Deposit Distribution

Deposit Stability

Savings and checking accounts form a stable $1.66 billion deposit base, providing essential liquidity. Foreign currency deposits ($89.65M) indicate diversified, cross-border customer profiles.

Key Insight: Improving customer engagement directly increases deposit stability and long-term liquidity.

Engagement Drives Value

1 **Short-Term**

Limited financial contribution, lower deposits and loans

2 **Medium-Term**

Growing engagement, increasing product usage

3 **Long-Term**

High-value customers with larger loans and stable deposits

Customer engagement duration acts as a leading indicator of financial performance. Longer relationships correlate strongly with higher loans, deposits, and overall value.

Key Business Insights

Engagement Correlation

Duration strongly correlates with financial value and customer lifetime worth

Revenue Driver

Business lending is the primary revenue source at $2.60B

Deposit Stability

Deposits provide long-term financial stability and liquidity management

Segmentation Power

Customer segmentation enables precise, targeted strategies

Data-Driven Decisions

Analytics reduce reliance on intuition, improve outcomes

Conclusion & Future Roadmap

Project Impact

This analysis demonstrates how customer engagement influences financial performance in banking. By combining Python-based EDA with structured analytical modeling, we've provided deep visibility into customer behavior and financial trends.

The findings emphasize the importance of long-term relationships, targeted engagement strategies, and data-driven decision-making in modern banking.

Next Steps

01

Churn Prediction

Model customer retention risk

02

CLV Estimation

Calculate Customer Lifetime Value

03

Risk Scoring

Predict default probability

04

Recommendations

Build product recommendation systems