

# Final Recommendations

## **Economic Environment Analysis**

The overall economic environment appears stable, as indicated by a high employment variation rate and consumer prices that approximate a normal distribution. This stability provides a favorable operational foundation for the bank, enabling it to attract more customers and investments.

## **Market Risk Appetite Analysis**

From a market perspective, the majority of customers are risk averse. This directly affects the bank's potential target customer group. Therefore, it is important to consider a number of subjective factors when assessing whether customers are risk averse, including income level, job type, age and marital status. In particular, the variables of job type, age, and marital status require special attention.

Furthermore, the potential interest rate risk is a significant issue. One of the key factors driving customers' risk aversion is the severity of interest rate risk. It is therefore essential to combine the subjective factors with the potential interest rate risk in order to ascertain whether the customer group in question is risk averse.

## **Customer Communication Preferences Analysis**

The bank can enhance service efficiency by focusing on customer communication preferences. There are two main communication methods: telephone and cellular. Based on our research, most customers prefer cellular, but the usage of telephone and cellular is nearly equal among those with lower educational levels. Therefore, in the model construction, it is advisable to classify based on age and education level to determine which communication method has a higher success rate.

## **Customer Segmentation and Analysis**

The data indicates that the majority of the population comprises highly educated individuals, married people, and office workers. However, these three groups are also highly likely to churn. Clustering models can be used to segment the market based on different job types and then predict subscription intent based on risk levels and preferred communication methods.

## **Potential Market Analysis**

The potential market is primarily comprised of students. While both communication methods are utilized equally, students appear to be more inclined to purchase financial products. Banks should develop professional financial products and marketing activities targeting students to effectively attract this group. Therefore, in the modelling, the student group can be appropriately given a certain weight.

## **Customer Churn Prediction**

The primary groups at risk of churning are highly educated individuals, office workers, and married people. These groups are significant in society and require special attention.

Classification models can be used to predict churn probability, combining risk levels and past experiences. Past experiences, especially whether the customer has previously heard of the product, play a critical role in this process. EDA analysis indicates that individuals who have not previously subscribed to the service are unlikely to do so in the future. Conversely, those who have successfully subscribed are more likely to continue doing so. Therefore, it is recommended that the 'outcome' variable, representing past outcomes, be combined with risk levels to predict customer churn probability.

### **Final Comprehensive Recommendations**

- Economic Environment: Leverage the stable economic environment to expand banking services and products.
- Risk Appetite: Develop low-risk financial products to cater to risk-averse customers.
- Interest Rate Risk: Enhance risk management strategies to mitigate the impact of interest rate fluctuations on customers.
- Communication Preferences: Optimize communication channels based on customers' age and education level to increase success rates.
- Customer Segmentation: Use clustering models to segment the market and develop personalized marketing strategies for different customer groups.
- Potential Market: Develop specialized financial products and marketing campaigns targeting students.
- Customer Churn: Use classification models to predict customer churn probability and develop retention strategies to improve customer loyalty.