Fairway Bank Customer Retention: Capstone 3 Project Proposal

Problem statement

Fairway Bank seeks to increase customer retention by 10% over the next year. To do so, Fairway must identify key features associated with whether a customer retains or churns, and build a model to predict the binary outcome. Fairway can leverage these insights to improve the experience of existing customers, and to strategically target the acquisition of future customers that are similar to a retained customer. Both data-driven implementations will increase Fairway's chances of customer retention in the future.

Context

Fairway Bank is a multinational bank with locations in France, Germany, and Spain. It is currently worth 2.3 billion euro and has over 1 million customers. Next year, Fairway will open additional locations, including branches in Belgium and Holland, as well as make significant investments in its online platform. On the precipice of expansion, Fairway noticed a distinct hurdle along its path to successful growth. After assessing year end reports, the analytics department discovered that about 20% of Fairway's customers churned last year. This proportion significantly outweighs Fairway's target of 90% retention. Subsequently, management has asked the company's data science team to review last year's customer records, to identify factors associated with churn, and to build a model that predicts whether a customer retains or churns. These insights will help leverage Fairway to make strategic adjustments to keep existing customers. Additionally, understanding the features associated with its retained customers will help Fairway create a profile of the 'ideal' customer. This can be used to make tactful marketing decisions to acquire new customers, by targeting segments that align with the profile of a retained customer. Upon these implementations, Fairway hopes to reduce customer churn by 10% by this time next year.

Criteria for success

Fairway will identify features associated with customer retention and aim to adjust any discrepancies in these features with current customers, as well as target potential new customers in expanded territories that meet similar criteria of a retained customer. Churn rate will be monitored on a quarterly basis, with an aim to decrease churn rate from 20% to 10% over the course of a year. This will entail an average of 2.5% decrease per quarter.

Scope of solution space

The solution applies to both current customers and new customers in all of Fairway's present and future territories. Features to review will include credit score, gender, age, location by country, tenure, salary, account balance, number of products purchased through the bank, card type, whether or the customer has a credit card, credit points earned, whether or not the customer is an active member, and whether or not a

customer complained along with their resolution satisfaction score. Identifying these features' relative associations with churn will help Fairway adjust its interactions with current customers that are predicted to churn, and to target future customers with a profile that aligns with that of customers that are predicted to retain.

Constraints

The greatest limitations come from the lack of available data. The sample dataset only consists of 10,000 customers, which is less than 1% of Fairway's total customers. Nonetheless, the sample was drawn at random to derive the most accurate possible representation of Fairway's entire customer base. Also, while the data include 14 features that might be relevant to understand and predict customer churn, additional features could help improve the model and the ability to predict churn. The output is only as strong as its input. In understanding current customer retention, it might be helpful to consider other factors such as if / how often the customer visits an ATM, if / how often they visit a physical bank location, if / how often they use a mobile banking app, as well as how many accounts they have with the bank and the variation of their account balance over time. In maximizing future customer acquisition, it might be helpful to understand other profile factors of existing retained customers, such as education, marital status, number of kids, occupation, etc. It would also be valuable to evaluate customer data going back further than one year, to identify any changes that might have led to the increase in churn over the past year.

While the initial model will be built on the data presently available, these limitations will be brought up to management in hopes that future modeling might include access to additional customer data. Another possible constraint is that the accuracy of generalizations drawn from these data may lose merit when transferred to different contexts. These generalizations are based on customers at current Fairway locations in France, Germany, and Spain. The segment of retained customers from these locations might look different than that of new customers in Belgium and Holland. As Fairway expands its locations, it will be important to continually monitor customer retention and to tune the model accordingly.

Stakeholders

Chief Executive Officer
Chief Data Officer
Head of Marketing
Senior Customer Loyalty Ambassador

Data source

CSV file read as Pandas Data Frame:
https://www.kaggle.com/datasets/radheshyamkollipara/bank-customer-churn

Additional sources

https://uxpressia.com/blog/how-to-approach-customer-churn-measurement-in-banking#:~:text=The%20average%20churn%20rate%20for,10%25%20is%20acceptable%20for%20banks