

A Model of Commercial Bank Customer Profit Contribution Based on Computer-Aided Credit Scoring Model

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Abstract: In the increasingly fierce market competition environment, commercial banks have adopted a "customer-centric, market-oriented" business development strategy. For different customer groups, provide differentiated services to fully meet the individual needs of customers, and at the same time provide better financial services, and then construct a basic bank profit contribution model macroscopically, and then use a state-owned commercial bank. The establishment of UML modeling and multi-dimensional data model of contribution analysis for some asset data of sub-branches is a solution for customer profit contribution based on the powerful processing capability of modern highly developed IT technology.

Keywords: Commercial Bank, Customer Profit Contribution, Computer-Aided, Credit Scoring Model

1. INTRODUCTION

In recent years, in order to adapt to the increasingly fierce market competition environment, various commercial banks have changed their product-centric business models [1], and began to develop and nurture those customers that are of great significance to their own development in a planned and step-by-step manner. On the basis of differentiated [2] marketing, avoid wasting direct costs on low-value transactions, and invest more energy in high-value customers [3]. To do this, commercial banks must first truly understand customers. The 20/80 rule proposed by economist Pareto (Pareto) points out that 80% of the results of things are due to 20% [4] of the causes. If this rule is applied to the customer management work in the commercial banking market, it means that 80% of the income comes from only 20% of the customer's contribution [5].

Now with the continuous improvement of informatization in all walks of life [6], experts estimate that the amount of information doubles every 18 months on average, and our utilization rate of this information is only 5%-10%, and some industries are even far lower than this ratio [7]. How to mine useful and effective information from a large amount of data has become an urgent practical need. The author observes the current situation of data management in Chinese banks. my country's banks have the world's most advanced hardware facilities and data warehouses [8], and collect a large amount of data. ". Due to the homogeneity of banking products, such a bank's competitive advantage often lies in whether it can grasp the business rules behind the massive [9] business and customer information from a large amount of data, and make various reasonable decisions in order to compete in the fierce market competition. win. The consumer finance [10] business has the characteristics of risk diversification, light capital, and high technology content, which is beneficial for commercial banks to cope with the challenges brought [11] about by the narrowing of interest margin space. Relevant data shows that my country's consumer finance market has been heating up in recent years, and consumer finance business has gradually become a new profit growth point for commercial banks [12].

Different from the traditional credit business of commercial banks, consumer finance business mainly meets customers' demand for "small", "short-term" [13], "high-frequency" and "fast" consumer loans: the amount of a single loan is relatively small, generally ranging from several thousand to several dozen. The loan period is short [14], and the single profit is relatively low; it is basically a pure credit loan without collateral; the customer loan frequency is high [15], and the number of loans is far more than the traditional credit business; customer requirements for loan review efficiency higher [16]. Data mining technology plays an important role in data collection, data preprocessing, classification and prediction in the management of household profit contribution model [17]. In order to efficiently and accurately mine potential useful information in customer historical transaction data information, we need to use data mining information technology to conduct analysis and demonstration [18]. Banking financial institutions have a great advantage in storing customer historical data information, and each bank already has its own huge database or data warehouse [19]. Banks can use data mining technology to extract and classify the effective data of these data and build models, and mine useful information for banks to guide the bank's marketing activities, customer maintenance strategies and product decision-making [20].

Therefore, customer profit contribution is an important part of customer relationship management, and it has become more meaningful and valuable to conduct deeper analysis and research on it. Through a transparent [21], accurate and consistent contribution analysis, commercial banks can improve their understanding of the profit drivers of their customers, and at the same time provide [22] help for the above strategic thinking. The key to success in the future financial industry lies in how banks can fully grasp the understanding of their own customers/products [23], and find their own core competitiveness from them, so as to gain market leadership and establish and maintain a high-yield business model. Among them, the establishment [24] of the customer contribution analysis module is the most important basis for us. Whether it is the implementation of customer-centric business strategies, or how to select and manage

customers during marketing, in order to maximize their lifetime value, only the Through a transparent, accurate, and consistent contribution analysis, and all members practice, can we grasp the trend and strengthen the competitive advantage.

2. THE PROPOSED METHODOLOGY

2.1 The Computer Aided Credit Model

The personal credit reporting system is a complete set of systems for confirming personal credit history, credit status, and credit level. It is the institutional basis of a country's economic and financial development, including personal credit files, personal credit assessment, personal risk early warning and personal credit risk management. Its establishment and development play a vital role in boosting the development of a country's personal banking business. The FICO model is the most authoritative personal credit scoring model in the world today. The model first describes the indicators of consumers' credit, morality and ability to pay, and then divides each indicator into several grades to determine the score of each grade, then calculates the weight of each indicator, and finally obtains the total score of consumers.

The FICO score ranges from 325 to 900. The basic idea of its calculation is to compare the borrower's past credit history data with the credit habits of all borrowers in the database to check whether the borrower's development trend is consistent with frequent defaults, random defaults are there similar trends among various financially distressed borrowers, such as overdrafts and even bankruptcy filings? The object of personal customer relationship management of commercial banks is the personal customers who receive bank financial services or have bank financial products. A stable customer relationship is the primary goal of customer relationship management. A comprehensive and complete understanding. For example, in the customer list stored in the mass storage of commercial banks, who are the key customers who are bringing profits to the bank, who are the customers with development potential that can bring profits to the bank in the future, who are the general contributing customers, and who should quit customer. It is only a wish to establish a good and stable customer relationship with all customers. In fact, it is difficult to achieve and there is no need to do so. It should be classified and treated differently.

At present, commercial banks generally use the following methods to classify individual customers. The identification of applicant information and loan review have high requirements on the business experience of credit reviewers. In recent years, the consumer finance business of commercial banks has developed rapidly, and it is difficult to train enough loan review experts in a short period of time. 2. With the continuous introduction of business model innovations such as "Internet+Consumer Finance", small and multiple loan applications are becoming more and more common.

2.2 The Commercial Bank Customer Profit

According to the customer's contribution to the bank's profit, customers can be divided into gold customers, potential customers and ordinary customers. "Golden customers" generally have cooperated with commercial banks for a certain period of time, have considerable financial assets, good credit records, relatively frequent financial activities, and have established mutual trust and relatively fixed relationships with commercial banks. main source. Usually 80% of the operating income comes from these top customers. The contribution of "potential customers" to commercial

banks is lower than that of "golden customers", but they have the potential to further develop into "golden customers". Banks, like ordinary enterprises, must take into account the calculation of income and cost when studying profit contribution, and assess whether the income is satisfactory under the condition of investing a fixed cost.

However, a bank is also a special enterprise. First of all, all banks operate through accounts as the most basic assessment unit. Each of us can open multiple accounts in the bank, including fixed accounts or current accounts. These accounts Corresponding to a customer's customer number or corresponding to a customer's ID card number, secondly, the carrier of the relationship between the customer and the bank is the banking business. Different, the income generated is also different. Therefore, according to the above characteristics, we must carry out graded research on the bank customer profit contribution according to the type of account. When studying the customer profit contribution of the next level, it is automatically classified into the upper level and becomes a part of its composition, and the last level is the specific Analyze data to operate.

As we all know, most of the funds needed in the bank's asset business come from the bank's liability business. After a bank absorbs deposits, increases investment and attracts foreign capital through various channels, it can use it as its own capital to carry out external loans and maintain normal internal operations of the bank. Therefore, for a commercial bank, the liability business also contributes to its profit, and the contribution should be positive. In order to scientifically measure the profit contribution of liability business and more reasonably divide the profit contribution of asset business and liability business, we introduce the concept of capital transfer pricing when calculating the contribution. The so-called capital transfer pricing refers to the settlement price of products or services provided by each branch or department within a bank.

2.3 The Modelling of Bank Customer Profit Contribution Based on Credit Score

The current research has not established an evaluation standard of customer value that can be recognized by most scholars. Most scholars believe that several factors should be considered in establishing the measurement standard of customer value: first, the understanding of the concept and connotation of customer value; second, the macro and micro environment that affects the judgment of customer value; third, the customer is in a process of consumption behavior , in the pre-purchase selection stage, the purchase behavior itself and the post-purchase stage of the perceived value evaluation; the fourth is to study the market perspective of choice. A combination of the above factors can result in a measure of a specific good or service. Considering the large differences in customer selection, customer positioning, and value perception between companies in the commodity market and service market, there must be big differences in measuring the customer contribution of the two types of companies.

Based on the reality of commercial banks, this paper evaluates the contribution of individual customers. With the development of the national economy, the types of bank customers and business types continue to increase, and the needs of the times tend to improve. However, the data related to customer profits between different banks is incomplete, or even some inconsistent dirty data. At the same time, the noise in these data may be very large, resulting in different degrees

of deviation in the data mining process, and even the obtained results do not match the actual results. Therefore, in order to improve the quality of data mining of bank customer profit contribution, we need to perform data preprocessing on the collected source data. The efficiency of data mining process and the quality of data mining analysis can also be improved by performing basic data preprocessing on bank customer profit contribution.

my country's commercial banking business is managed in the form of bank accounts, and every customer handling banking business needs to have at least one account. Enterprises can choose their own banks, and banks can also choose depositors voluntarily. However, an enterprise can only open a basic deposit account at one business institution of a bank, and shall not open a basic deposit account in multiple banking institutions.

3. CONCLUSIONS

This paper attempts to draw lessons from the customer profit contribution calculation model of marketing companies and formulate a bank customer profit contribution calculation model according to the cost-benefit accounting method of cost accounting. For bank contribution, the article divides it into three levels: business-level profit contribution, account-level profit contribution, and customer-level profit contribution. For the three levels of contribution, we introduce the interrelationships among them, and summarize the calculation method of each level of contribution. The profit contribution of the business layer is the basis of the bank customer's profit contribution and other profit contributions. As a component of the lowest contribution, it plays a decisive role in the research.

4. REFERENCES

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