

Study on Customer Relationship Management of Commercial Banks in The Background of Big Data

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Abstract

In view of current banking competition and lower customer satisfaction, this paper analyzed the characteristics of big data and discussed the commercial banks under the era of big data. Customer relationship management (CRM) face challenges, such as data scattered and leaked. This paper proposed such policies as customer information platform, technical defense and differentiated marketing.

Key words: *big data; commercial banks; customer, relationship management, challenges*

In the era of financial market opening, Chinese commercial banks become increasingly intense with the development of foreign banks in China. Bank serves for Customer who is the most important object for competition between banks. So in the present, banks who are accustomed to traditional business find customer relationship management difficult.

While internet and e-commerce are rapidly developing, a growing number of people of insight in academia and industry realized that human being have entered the “big data” era and big data can efficiently solve asymmetric information problems. At present, study on big data focuses on the concept; some representative cases and application in the industry while less on the application in the commercial banks for high-value customers. Therefore, it needs for commercial banks that how big data can be used in an efficient way to plan customer relationship management.

1. Big data

Big data, proposed in 1978 by Esther Surdden, is composed of huge-volume, complex, rapid growing datasets which are numerous, autonomous and independent sources. Big data demands new methods and new models to finish the conceptual modeling phase. In this new era of the data-drive paradigm, how to manage and applicate the big data is a lifeline for enterprises. So big data becomes a new driving force for enterprise development.

Gartner holds big data has such three vs as volume, velocity and variety. The software company has added variability and complexity as the characters of big data.

Volume: There has been a largely increase in the digitization rate in China, which means the readiness of a big amount of data and information to evaluate the creditworthiness of individuals and enterprises. For example, China's internet companies, Alibaba and Tencent have large amount of data which reveals customer's online purchasing habits and evaluates the creditworthiness of businesses and consumers¹.

Velocity: Data is time-sensitive, so speed is prior to volume. Data is demanded to be stored, processed and analyzed fastly. The creation of high velocity data has made increase the availability of financial services among a poor people group. For example, Alibaba's systems make some decisions excluding human intervention, which facilitates decisions made.

Variety: It is crucial to first give definition of structured and unstructured data. Structured data can be meant in formats that can be managed by a database management system. Some examples refer to histories of mobile payment transaction and the date of a Twitter account creation. The data can be managed in a list. While unstructured data is unformatted and has less predefined standard structures (e.g., cannot be managed in terms of rows and columns). These data include email messages, social media posts, pictures, video and etc. Structured and unstructured data are being increasingly combined to not only access creditworthiness, but make more access for financial products among low income families and micro-enterprises. For example, technology developed by the Brazilian company can recognize forms in consumers' calls, text messages and data usage, which are used to know lifestyle and credit risk profile². While various kinds of structured data such as large amount of transaction are obviously important and necessary to assess creditworthiness of potential borrowers, China's more and more big data companies and traditional banks are increasing using unstructured data for this aim.

Variability: This kind of data flows can change greatly with periodic peaks and troughs. These are in relation with such factors as social media trends, daily, seasonal and event-triggered peak data loads. For instance, on February 7, 2014, there was a daily peak of 2.62 million taxi rides via WeChat, among which, two million were paid by WeChat payments³.

Complexity: It would be beneficial to first denote that the really large differences between variety and complexity includes multiple data types (variety) versus multiple sources of data (complexity). Matching and linking data from multiple sources such as social media, call detail records (CDRs) and big data corporations can offer more information for the potential borrowers' economic and social conditions.

2. Customer Relationship Management

Customer Relationship Management is proposed by Gartner Group in the 1990s. It follows the management idea of “customer as the center.” Based on the clear business development goals, enterprise can form core competency by coordinating with internal resources, developing business process, relying on IT systems, improving internal marketing organization, specifying customers, maintaining and expanding customer base⁴. Customer is God and its interests above anything else, which become the center idea for more and more enterprises. For commercial banks, the most important thing is to practice the customer-centered idea for customer’s satisfaction and loyalty in order to bring more wealth.

However, in commercial banks, there are more problems about customer relationship management (CRM), such as less market analysis and differentiation marketing, so it is hard to meet the needs of customers. In the era of big data, to strengthen the research on commercial bank is significant for fine management, service innovation and competitiveness of banks.

3. The advantages and disadvantages of big data used in commercial bank’s CRM

It is generally believed that CRM connotation includes customer value, relationship value and information technology. Of these, the cultivation and maintenance of relationship value is the focus in CRM. Big data can enhance the value of the relationship between commercial banks and customers, in which business value of big data is partially embodied.

3.1 The advantages:

Big data can provide a reliable and objective policy-making basis for commercial banks. Firstly, structured and unstructured data can be integrated and processed for subdividing customer groups; Secondly, data can be transferred into business results to promote sharing and application of business knowledge and market law in the group organizations and departments; Thirdly, data can help commercial banks evaluate objectively the life cycle of the product, which makes the distance between the expected and the actual demand of the client shortened to improve the ability of multi-channel marketing for financial product and service. Therefore, commercial banks must follow the pace of the times to apply big data to strategic management in order to enhance customer relationship management.

3.2 The disadvantages:

Firstly, empty of credibility. Because of different degree of business management, 80%

accounts for credible information of the credit customers and 50% accounts for the deposit customers. Secondly, data dispersity. The diversity of the data is bound to bring about some problems about data management and data sharing, in which the reluctance of business data sharing among the different sectors make data explained incorrectly. Thirdly, data leak risk. In the future, the commercial banks may get data by adoption of cloud computing technology or a third party server, through which it will bring great threat to bank customer information if data is leaked.

4. Suggests on CRM based on big data

4.1 Establish a unified customer information platform

From the survey of American bankers, more than 30% of American commercial Banks know what customers can create more profits, while 20% can pull information about bank products used by high quality clients within 10 minutes. Because these banks have advanced and efficient customer database as their comparative advantages⁵. So learning from foreign experience, commercial banks in China can build a perfect customer analysis system. Commercial bank can collect the customer needs through deep communication with customers. After providing the bank products and services, commercial banks should continually trace the product using to know the degree of customer's satisfaction further to establish dynamic data warehousing by CRM software and technology.

4.2 Attach importance to customer data analysis and innovate protecting technology

Customer data should be stored by business intelligence and data mining instead of existing system data stored by the scope of business⁶. Commercial banks should know not only customer itself, but the relationship between customers. The process of big data challenges CRM, so protecting technology should be leakproof, anti-virus, anti – invasion, protected for safety. Meanwhile emergency plan, disposal flow, external risk monitoring mechanisms should be also demanded.

4.3 Implement differentiated marketing policy

Data mining in the era of big data makes the analysis of customer demand preference possible by the transaction. From the perspective of CRM, commercial banks should know accurately what are the basic needs or special needs for customers. Basic needs can be met in any commercial bank, while special needs met is an absolute advantage for one commercial bank. Different special needs can be judged by ages, preferences, occupation, and educational degree, based on which differentiated marketing can be realized.

4.4 Realize full-flow service for customer based on the technology of big data

It is very important for the customers to be provided good services and feelings that can make customers more loyal. To arrive at this goal, full-flow service and management may offer customers' service experiment at all times and places. In product design, differentiated product should be designed through modeling the data of customer behavior. In the loan application, the change of customer credit should be predicted according to customer's income, education, household assets to support customer loan paperless and online application. In the credit warning, risk should be predicted through trading record and indirect transaction data and the profile of customer .

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