

## A Study on Performance of Banking Services in View of Customer Relationship Management

R.S. Devi<sup>1</sup>, A. Rama<sup>2</sup>, S. Banumathi<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Commerce (CA), ANJA College, Sivkasi, INDIA

<sup>2,3</sup>Reader, Department of commerce, VVV College for women, Virudhunagar, INDIA

### ABSTRACT

Banks have been rapt by broadening international economy and market competitiveness that initiated the remarkable change of banking industry in the past two decades. Application of customer relationship management in banks to improve services has been increased all over the world. These banking innovations have served in managing the logistics and other activities involved in serving customers, nevertheless it has also affected the supplier-customer relationship in other ways. For instance customers' doubts clarification through teleworking has resulted in less personal contact between bank interface personnel and customers. Banking service in a way is more related to personal relationship in order to gain trust and loyalty among customers. In the present study despite having advancement in technology and adoption of CRM in banking, did it help in improving or not, that has been studied by the analysis of performance of banks on the following underpinnings, such as branch expansion, deposits incurred, target achievement in advances and credit to deposit ratio in the chosen region with the well-established two public sector banks during the specific study period. The study has been done by primarily collecting the data with the banks and its further analysed using linear regression model.

**Keywords**— Banking, CRM, Growth rate, Public sector bank, Trend coefficients.

### I. INTRODUCTION

Customer relationship management (CRM), in general, is operationally termed as a management focuses of acquiring customers by understanding and fulfilling their requirements through quality service [1]. In addition it also attracts new customers and withstands existing customers through specific marketing strategies [2]. This process involves a total commitment on the part of the entire organization in evolving and implementing the

relationship strategies that would be rewarding to all concerned. In transactional approach, which is used to be before 1990s, customers view of decision making was give less significance, perhaps very little attention is paid to customer oriented services and customer commitment [3]. Growing concern of major banks of various countries to bank servicing through technologically advanced channels, in addition the development of virtual banks and financial institutes have caused tremendous competition changes from transactional approach to modern approach from the late 1990s [4]. In deed the nationalized banks are left with no option to withstand the market pressure due to raising costs, meeting customers' demand which is exponentially enhancing due to information technology impact. Thus to maintain profitability and to withstand market pressure, the banks are invested on new, innovative servicing channels, such as CRM implementation, relationship management strategies as a consequence, flexible banking, virtual banking and electronic banking have been in place to meet the customers demand in more effective manner [5].

Though the strategies of CRM seems similar in approach theoretically, it differs largely based on several factors, such as nature of business, its size, its market share, nature of product and its type, volume of sales, geographic concentration, socio-economic status, life style of the customers' and competitors strength etc [6][7]. Thus the organization must periodically analyse or revisit to check; whether the strategies are yielding targeted benefit. With the banks, for instance, building a trust and long standing relationship with customers that could directly proportional to generate profit and productivity. It is stated that to optimize the success of the CRM efforts, first there needs to be a clear customer focused vision in order to build trust and customer loyalty along with design of the business processes and technological solutions as a means of attaining the objectives of organizations through total involvement and commitment [8]. A competitive market position and good reputation of a concern could

eventually be converted into better market share and profit; however this merit is obviously earned only by means of philosophical commitment to service piggybacked by diligent attention to the customers want and need [9]. Banking industries are not only selling their products and services, like manufacturing and other service industries. In other words, banks are selling their industries reputation with every customer relationship. The best customer relationship needs the marketer to develop custom efforts to craft, produce and develop a good quality package mix so as to maintain and enhance the relationship unharmed.

Thus in the present research work, banking industries performance have been studied in one of the industrialized, agriculture and business based region in the southern part of Tamil Nadu, called Virudhunagar district. In this case widely accepted and more popular banks that serves to the community for years have been taken into account. As it is pretty evident to withstand in the market and continuously serve better in the market in addition to make profit to the concern, any banking industries in this era is completely developed with technology and their customer relationship strategies are installed in place. Yet it is always wise to revisit on their implementation strategies by measuring its performance periodically that will be helpful to revitalize and to ensure on their pathway or else the strategies could be modified to suit specific requirement and to stay healthy in the market. For which, the performance of banking has been studied in the banking perspective by choosing the following underpinnings such as branch expansion, target and advances in achievement, various deposits incurred and credit to deposit ratio.

## II. METHODOLOGY

### Source data

The Virudhunagar district has been chosen for the study of banking services in the present work. It is one of the districts in Tamil Nadu state, situated southern part of the state. It consist eleven taluks and has an area surfing 4270.3 square kilometres [10]. The district is served by a network of banking giving an average of 15680 persons per branch during the study period, 2000-2007. These branches are located across the districts comprising nearly eleven public sector banks during the study period. For this study, several banks were approached, of which, two major banking industries were consented to carry this research work that can be named it as public sector bank 1 (PSB1) and public sector bank 2 (PSB2). The sources of data have been collected from the chosen banking industry with the proper questionnaire constructed through literature survey and through brainstorming exercise carried out with the field experts. In addition, the annual reports of the respective banks have been observed to collect the relevant data during the period of study.

### Mathematical Model

The raw data are first used to estimate the trend that it follows; which are then used to determine the trend coefficients that could basically form as a dependent variable 'Y' is a function of independent variable 'f(x)' and a constant 'a', which is shown in Eq. 1. In this Eq. 1., The 'a' and 'b' are the trend coefficients, the 'a' further can be determined by taking  $\ln(a)$ .

$$Y = ae^{bx} \quad (1)$$

Then, through the regression analysis the certainty of best fit is found, finally the compound growth rate (CGR) is calculated using the obtained data that follows to be:

$$CGR = \left[ \left( \frac{n_f}{n_i} \right)^{\frac{1}{n}} \right] - 1 \quad (2)$$

Where, 'n<sub>f</sub>' is the end value in the study period, 'n<sub>i</sub>' is the initial value of the study period and 'n' is the number of samples or study period. In addition, the statistical significance of the data on a particular variable is ensured through, 't<sub>o</sub>'- test statistic, and accordingly this analysis is portrayed for the other necessary variables that the banks under study had encountered through CRM strategies in reaching the customer effectively and efficiently. The value of 't<sub>o</sub>' can be determined as follows [11]

$$t_o = \frac{r\sqrt{n-3}}{\sqrt{1-r^2}} \quad (3)$$

Where, 't<sub>o</sub>' is the computed value from the sample, 'n' is the sample size and 'r<sup>2</sup>' is the regression coefficient. If '|t<sub>o</sub>' > t<sub>α/2, n-2</sub>, the correlation between 'Y' and 'X' is significant or, equivalently, the regression model is significant. The t<sub>α/2, n-2</sub> can be determined from the t-table for 0.005 and 'n-2' is the degrees of freedom, in the present study it is 5, therefore the table value of 't' is 4.032. If the condition meets then it can be ensured that 99.9% trend coefficients of the sample data are statistically significant.

## III. RESULTS AND DISCUSSION

The main variables or underpinnings that can best estimate the function or performance of the banking services in the region are considered as branch expansions, various deposits incurred, target and achievements in advances met and finally credit to deposit ratio retained. Fig. 1 shows the relationship between branch expansions and the study period.

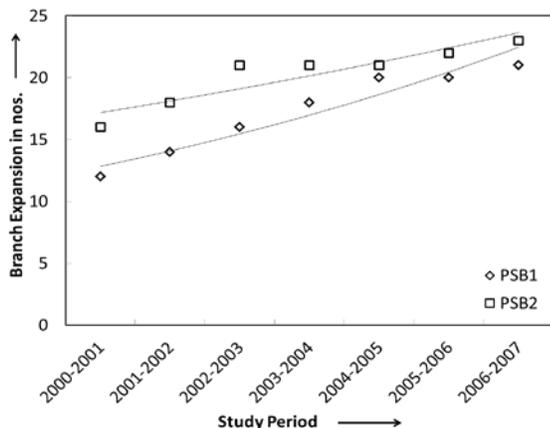


Figure 1: Relationship between branch expansions and study period

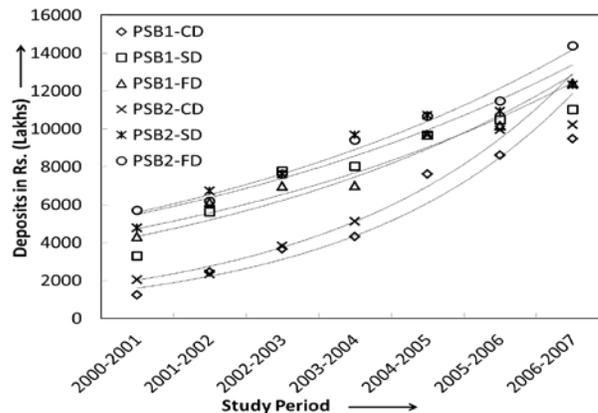


Figure 2: Various deposits secured during study period

Table 1

Trend and growth of branches in the study period

Bank s	Trend Coefficients		R <sup>2</sup>	t <sub>o</sub>	It <sub>o</sub> I > t <sub>α/2, n-2</sub>	CG R
	a	b				
	PSB1	2.4582				
PSB2	2.7904	0.0532	0.8238	4.3244	Significant	5.06

**Branch Expansion:** The Fig. 1 reveals that there is a consistent improvement in branch expansion for both the public sector banks over the period of study, yet PSB2 is always superseded over PSB1 almost for all the years. Therefore, it can be said that there exist steady trend, besides, PSB2 had higher in branch establishment than PSB1. Further it can be understood that PSB1 shows higher fluctuation in opening branches than PSB2, as it is estimated that PSB1 nearly 18% is away from its mean as compared to PSB2 which is just 11% away from its mean value. The trend and growth for branch expansions has been constructed in Table 1 along with its regression coefficient. It is ensured that the trend coefficients for both the banks are statistically significant at 0.005% level. Further, it is noticed from Table 1 that PSB1 and PSB2 shown respectively 0.0934 and 0.0532 amount or rate of growth on average annually during the study period. In Table 1, the value for R<sup>2</sup> represents the regression coefficient that reveals the certainty of best fit, for instance PSB1 is of 92.74% best fit. The CGR means as compound growth rate, which is of nearly 10 for PSB1 that indicates they have comparatively raised more branches from their existence during the study period.

Table 2

Trend and growth of various deposits during study period

Ban ks	Depos its	Trend Coefficients		R <sup>2</sup>	t <sub>o</sub>	It <sub>o</sub> I > t <sub>α/2, n-2</sub>	CG R
		a	b				
		PSB 1	CD				
SD	8.1931		0.1813	0.8199	5.3217	19.87	
FD	8.3029		0.1610	0.9426	9.9780	17.47	
PSB 2	CD	7.3039	0.3091	0.9306	8.3356	32.22	
	SD	8.4632	0.1484	0.9207	7.6387	16.12	
	FD	8.4755	0.1549	0.9809	17.7609	16.76	

**Deposits Incurred:** It is noted that higher the deposits, higher the productivity of the bank industries as it lies on higher financial self-support, which is a paramount factor. The various deposits include current deposit (CD), savings deposit (SD) and fixed deposit (FD) of both the banks and its trend that follows during the study period have been shown in Fig. 2. It can be observed that FD and SD of PSB2 are far better than rest of all; in particular the FD of PSB2 possesses the best of all, almost, it is consistent during the study period. However, the CD of PSB2 falls the second from bottom or fifth from top; in fact it is falling even after PSB1 of FD and CD respectively. Thus it can be concluded that irrespective of the bank considered, the CD of both secures least, whereas FD of both secured top in the deposits and while SD situated in between FD and CD. The careful interrogation reveals that CD is mostly maintained for business reasons and SD is maintained by salaried people; whereas FD that could comprise any people who could earn bit more than their basic need, besides having the mindset to save money for future. On the other hand, these characteristics of deposits reveals that people in general have more trust towards PSB2 as compared to PSB1 keeping the view that interest

rate provided for FD in general more or less similar. It is also interesting to note from Table 2 is that sample data and obtained trend coefficients are statistically significant for all the deposits irrespective of banks. To further note that the growth rate for CD for both the banks are far better and in particular PSB1 is showing increased rate as compared to PSB2. A similar observation can be seen it for SD and FD of PSB1 as compared to PSB2, this indicates that PSB1 taking better initiative to reach customer through their CRM techniques in the recent years.

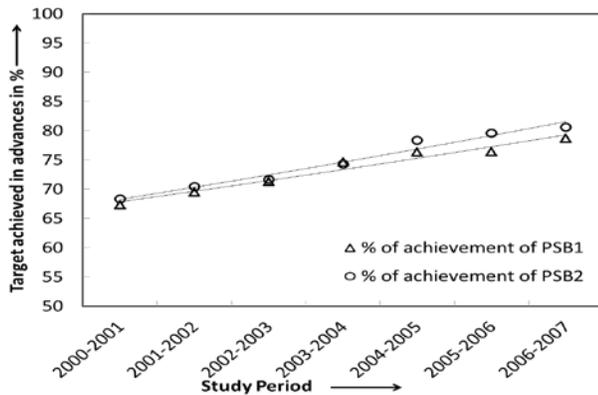


Figure 3: Relationship between targets achieved in advances and study period

**Target & Achievement in Advances:** Another milestone of digging the performance of bank industries as overall is the achievement of banks in credit, thus the total percentage of achievement in advance as set from the target by both the banks have been studied and is plotted in Fig. 3. Target achievement in percentage is basically the ratio of target achieved to target set in advances for the every financial year that is undertaken during the study period for both the banks. It is better revealed from Fig. 3., is that almost although both the banks start from same figure (that is in the year 2000-2001) but gradually the performance of PSB2 in achievement of advances is appreciable as it increase bit faster and consistent during the rest of study period. Indeed, the PSB1 performance is also appreciable and close competitive till 2003-2004 but later it is falling down. In other words there exists some fluctuation in achieving the target for PSB1. It is carefully observed from the source data that PSB2 shows fluctuation in target setting however not in achieving the target on the other hand PSB1 shows fluctuation in target achieving but not in target setting. This underpinning or variable reveal that customers trust or the banks quality of service and ability of solving potential problems by the banks are the major factor, in addition to the effective way of marketing their products to the customer in today's competitive environment. But looking at the fact, it can be concluded that both banks are performing equally well to their target in securing advances through their best CRM practices.

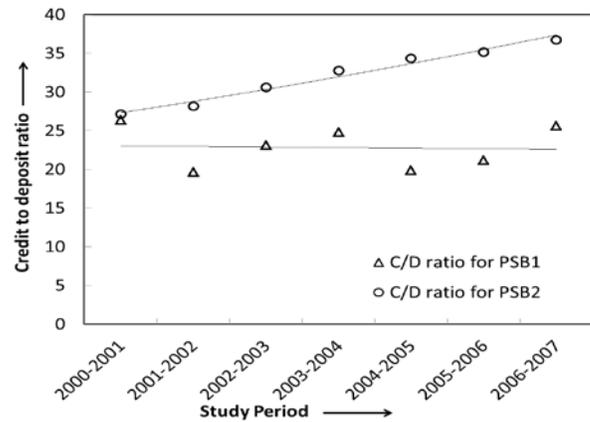


Figure 4: Credit to deposit ratio over the study period

**Credit to Deposit Ratio:** The credit to deposit (C/D) ratio is another important factor to measure the functioning of the banks as overall in regards to their CRM adoption to reach customer. It is shown in Fig. 4., this reveals that there is a gradual increase of C/D ratio for PSB2 over the study period. Eventually it confirms that the customers has got more trust with this bank and indirectly refer to their best quality of service. On the other hand C/D ratio is highly fluctuating for PSB1 over the study period. In general the C/D ratio for PSB1 is decreasing over the time despite both the banks persist almost from the same starting point during 2000-2001. This indicates that perhaps the PSB1 needs to concentrate more on to their quality of service that should reach the customer in still better way.

#### IV. LIMITATIONS AND FUTURE RESEARCH

The primary objective of this study is to understand the functioning of chosen bank industry in the chosen region in view of their implementation of CRM to reach customer more effectively and efficiently, which were met in the study particularly in the bank perspective. Yet the study can be extended in the perspective of customers' point of view, which opens a channel for making future research in this field. In the present scenario, with the multi nation companies' domination in almost every sector, including the service sector, the CRM implementation becomes just vital. This is in general found to be implemented almost such any major service industries. However just going towards the advancement in technology in the service industry does not guarantee that the service can be provided best in its class and attracts customers in every angle, so this kind of study can be extended to other banks and other service industries to revisit on their implementation and success on it. Further research directions is to move on to consider several other underpinnings or parameters that is influencing the

performance of banking service such as ATM expansion in the region, phone banking facility, tele-banking facility, Internet banking facility and so on. Thus, in multi corner this can be studied and better understanding on the implementation of the banking strategies and selling their products in better manner and retain the true long standing customers shall be achieved.

## V. IMPLICATIONS AND CONCLUSIONS

This research has a number of implications on the performance of the banks, implementation of CRM strategies, and quality of service and so on. In particular, the banks and in general, any service organizations, show importance on finding and sustaining the loyal customers; for which, the service organizations will be after conquering the customers' trust and constructing the healthy bondage with customers. Thus it is important to upgrade with the technology as well as to know the industries periodic performance to withstand and to grow in the competitive environment. The study will alarm the concerned banking industry to make adjustments to customers' needs, be flexible and innovative in providing services, be flexible in serving customers, and also offer personalized services, since these are the strategies that directly link to create trust and quality service.

The present study had investigated the performance of banking industry in view of their CRM activities, for which four different parameters have been chosen to carry out the study in two different major public sector banks. The results revealed that both the banks are most popular in the region and conquered vast majority of trust and quality in their service among customers. However the study is just concentrated in the view of banking industry perspective, leaving customers view for future studies revealed that both the banks expanded their branch every year gradually and consistently. Nevertheless PSB2 had superseded over PSB1 irrespective of the study period under concerned. Similarly, all the deposits offered by both the banks shows an increasing trend over the period, of which current deposit shows highest compound growth rate and the fixed deposit takes lowest annual growth rate, whilst the saving deposit takes in between position. The target and advances in achievement by both the banks shows almost similar trend and in deed is increasing gradually over the period. However the credit to deposit ratio found gradually and continuously increasing under the study period for PSB2, which is otherwise for PSB1, despite both had started from almost at the same C/D level in the initial year of study. Overall the PSB1 performance is bit less than the PSB2, however the growth rate in each underpinning for PSB1 is appreciable; this indicates the PSB1 is in way of revitalizing on their CRM and other technological implemental strategies.

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