FINANCIAL LIBERALISATION AND BANK EFFICIENCY: A NOTE ON TRENDS IN PROFITABILITY OF INDIAN PUBLIC SECTOR BANKS

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ABSTRACT

As a result of globalization of financial markets these banking institutions face today a fast paced, dynamic and a competitive environment at the global scale. Within such a competitive environment, financial institutions are forced to examine their performance because their survival in the dynamic economics of Twenty-first century will be dependent upon their productive efficiencies. It is, therefore, relevant to study the efficiency with reference to the profitability of Public Sector Banks in general and State Bank of India and its Associates in particular in the post reform era of banking sector. From the analysis, it is concluded that there was a continuous upward trend in total income of SBI and its associate banks during the study period. Further, comparative analysis proved that all the associate banks except state bank of Saurashtra have the highest growth in burden compared to SBI. The analysis of trends of profit confirmed that the trends of profit fluctuated in all the cases except State Bank of Travancore which registered an increasing trend of profit during the study period. To conclude, SBI and its associates have marched ahead during the post-second banking sector reforms period in fostering economic growth of the country and has shown tremendous resilience and vibrancy in their strategies, processes and operations to remain competitive in the globalized environment.

Keywords: Public Sector Banks, State Bank of India, Associates Banks, Spread Burden, Profitability and Profit Trend.

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Introduction

As a result of globalization of financial markets, banking institutions face today a fast paced, dynamic and a competitive environment at the global scale. Within such a competitive environment, financial institutions are forced to examine their performance because their survival in the dynamic economics of Twenty-first century will be dependent upon their productive efficiencies. Hence, in response, banking firms have been trying to adopt and to adjust themselves to improve their productive efficiencies in the changing social and economic environment. The present study is an attempt to analyze the overall efficiency with respect to profitability in banking sector in India.

Review of Literature

Bhatia and Verma (1998) revealed in their study that the priority sector advances, fixed / current deposit ratio and establishment expenses affected the profitability of public sector banks negatively and net spread and high credit-deposit ratio affected the profitability positively. **Ganesan (2001)** examined the determinants of profitability of public sector banks and revealed that interest cost, interest income and credit to total assets are the significant determinants of profit of Indian public sector banks. **Nasser Katib (2004)** in his study examined the profitability of Malaysian Banking and suggests that market concentration determines profitability in the Malaysian banking industry. The empirical results of the study concluded by **Siva Reddy Kalluru and Shan Bhat (2006)** revealed that the profitability of banks was affected not only by bank own characteristics but also by industry structural variables and macroeconomic variables. **Ved Pal and Malik (2007)** investigated the differences in the financial characteristics of public sector banks, private sector banks and foreign banks in India. The findings suggest that foreign banks were better performers as compared with the other two categories of banks.

Jim Wong et. al., (2007) developed a model to identify the major determinants of bank's profit and showed cost efficiency of banks was a major determinant of bank's profitability. **Donatila Kaino and Boaz Meso (2008)** studied that financial liberalization improves profit efficiency of the banks in the long-run, and non-performing loans negatively affects banks' profit efficiency. **Toni Uhomoibhi Aburime (2008)** examined the determinants of bank profitability in Nigeria. The regression results revealed that capital size, size of credit portfolio and extent of ownership concentration are significant company level determinants of bank profitability in

Nigeria. **Dangwal et. al., (2009)** studied the performance appraisal of new private sector banks measured through spread, burden and profitability ratios by considering eight parameters. The study showed that bank efficiency is best explained by the productive specialization, size and to a lesser extent, by location. **Uppal (2009)** examined the comparative trends in profitability behaviour of five major bank groups in the post liberalization era. The study concluded that to increase the profitability, the bank should to take measures to increase the level of spread and curtail the burden.

Statement of the problem

In the recent years the Indian banking system has witnessed a significant transformation. Prior to the financial reforms, Indian banks were operating in highly regulated environment. In view of the social responsibility place on the banking sector, profitability was not considered as an important yardstick to judge their performance. From the time of nationalization of 14 major scheduled commercial banks in 1969 till the early 1990s, the main thrust of banking operation was on social banking. Accordingly the emphasis was placed on enhancing branch network in rural and semi-urban areas. Moreover, banks had to undertake several other responsibilities which included the financing of fiscal deficit and facilitating the development of certain specific factors as reflected in high and increasing prescription of SLR and direct lending. With institution of financial sector reforms, competition among the banks had increased. Barriers to entry have been sharply reduced. Economics of scale and scope have to be exploited for facing competition. Efficiency and profitability have, as a result, become critical objectives to be aimed at. Hence, in the present study an attempt has been made to analyze the profitability of public sector banks along with the help of profitability ratios.

Selection of the State Bank of India and its Associates

The State Bank of India is the biggest commercial bank in whole of Asia. It has occupied a unique place in the Indian money market, as it commands more than one-third of India's banking resources. It commands resources of public confidence through its dedicated service. In the present era of banking sector reforms, the State Bank of India has witnessed deregulation with a strong capital base and expenses-to-income rate which is comparable with world class banks. Moreover, the State Bank of India continued to retain its position of the pioneer in the Indian Banking Industry by reorienting itself in terms of market strategies, organizational

structures systems and processes to enable it to meet the emerging challenges surely. Therefore, SBI and its associates bank have been chosen to critically examine the profitability performance of the banks for the present study.

Significance of the study

In the process of financial intermediation, banks have come to acquire the nature of multi-product firms. However their primary functions remain same and these form the most remunerative functions of banks. The performance of these functions pre-suppose that after various cost of such functions are met, a margin of profit is left and level of profit should be taken as an index of the efficiency of working of organization. For that matter, profit as an indicator of working efficiency is applicable to any business unit. Depending on their size, banks are multi-product firms and they compare with each other for profits. There is growing evidence of concern by the authorities on the declining profitability of the banking system due to unsecured loans and advances. It becomes extremely over and finds remedial measures to reduce the profitability in the value of new banking philosophy. The approach of policy makers towards profitability has changed, with the result that low profits have become a fact of life. Therefore, it is high time to concentrate on analysis of the profitability performance and factors leading to profitability of banking sector. A sound, efficient and profitable banking sector would be able to resist negative shocks and contribute to the stability of the financial system by making financial resources accessible to economic needs.

More specifically, in connection with the profitability, last few years have seen many of the Public Sector Banks posting handsome profits and improving profitability levels. However, sustaining the profit momentum is best with issues like progressive of decline in interest spread, volatile business environment, fierce competitive pressures and the negative externalities associated with the large size of these banks. The ensuing banking sector will presuppose a shift in focus from size-related issues to concern about profitability, profit monitoring and efficiency in operations. It is, therefore, relevant to study the efficiency with reference to the profitability of Public Sector Banks in general and State Bank of India and its Associates in particular in the post reform era of banking sector.

Sample Design

It is nearly more than 20 years since reform process has been started in Indian Banking Industry. It is necessary to know whether the reforms are being fruitful or not keeping in this view, it is decided to analyze the performance of public sector banks in globalized economy. The review of various study on literature on banking revealed that there is not enough study that covered the performance of State Bank of India and its Associates bank in relation to financial aspects. Therefore, this study is primarily based on financial performance of State Bank of India and its associates.

Period of study

The period 1996-97 to 2007-08 is selected for this study. This 12 year period is chosen in order to have a fairly long, cyclically well balanced period, for which reasonable homogeneous, reliable and up-to-data financial data would be available. Further, the period 1996-97 to 2007-08, is era of growth of performance in the banking sector and has got genuine economic significance of its own.

Sources of data

This study is primarily based on secondary data. The major source of data analyzed and interpreted in this study related to all those selected banking companies is collected from PROWESS database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). Besides the prowess database, relevant secondary data have been collected from capitaline database of Bombay Stock Exchange, Bombay Stock Exchange Official Directory, CMIE publication, various publications of RBI – Banking Statistics Research's (BSR's), Banking Statistics, Statistical tables relating to banking in India and Report on trends and progress of banking in India, Reports on Currency and Finance, Economic Survey, Libraries of various research institutions, Indian Banks Association bulletin, Indian Institute of Bankers Report and various Internet resources.

Data Analysis

It is well known that management is concerned with the efficient performance, profitability, productivity and trends of income, expenditure, spread and Burden. For this purpose it has to study various specific trend ratios relating to income, expenditure, spread, and burden. In order to derive the open handed results from the information collected through

secondary data, various statistical tools like mean, standard deviation, variance, compound annual growth rate, regression and testing of hypotheses have been accomplished through Excel, SX and SPSS software.

Analysis of Trends in Profitability

Trend analysis is an important tool of horizontal financial analysis. This method determines the direction upwards or downwards and involves the computation of the percentage relationship that each statement item bears to the same item in the base year. Therefore, in the present study, the trends of profitability of State Bank of India and its Associates have been analyzed on the basis of five relevant indicators of profitability of banks. They are; Total Income, Total Expenditure, Spread, Burden and Profit.

Trends of Total Income

The total income of banks consists of two parts: (i) Interest incomes and non-interest or other incomes. Table 1 discerned the trend of share of interest earned as well as other income to total income of State Bank of India and its associates. It was observed that of the total income, the interest earned constituted a major portion. The mean interest income of State Bank of India is 78.15 per cent during the study period. Among the associates banks, the mean of interest is the highest in State Bank of Travancore (76.80 per cent) followed by State Bank of Bikaner (73.76 per cent), State Bank of Mysore (73.50 per cent), State Bank of Saurashtra (64.55 per cent), State Bank of Patiala (63.17 per cent), State Bank of Indore (61.96 per cent) and State Bank of Hyderabad (56.99 per cent) during the study period. The compounded annual growth rate of interest incomes of State Bank of India are 4.55 per cent during the study period. Among the associates banks the compounded annual growth rate of interest incomes is the highest in State Bank of Saurashtra, followed by State Bank of Bikaner, State Bank of Indore, State Bank of Patiala, State Bank of Mysore, State Bank of Hyderabad and State Bank of Travancore during the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of interest incomes among State Bank of India and its Associates during the study period.

The mean non-interest incomes of State Bank of India are 21.59 per cent during the study period. Among the associates banks the mean of non-interest incomes is the highest in State Bank of Hyderabad (42.83 per cent) followed by State Bank of Indore (38.03 per cent), State

Bank of Patiala (36.82 per cent), State Bank of Saurashtra (35.39 per cent), State bank of Mysore (26.45 per cent), State Bank of Bikaner (26.24 per cent) and State Bank of Travancore (23.22 per cent) during the study period. The compounded annual growth rate of non-interest incomes of State Bank of India is negative during the study period. Among the associates banks the compounded annual growth rate of non-interest income is the highest in State Bank of Saurashtra State Bank of Travancore, State Bank of Bikaner and State Bank of Patiala, State Bank of Indore, State Bank of Hyderabad and State Bank of Mysore during the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of non-interest income during the study period. The analysis of variance result would indicate that there are significant differences in the trends of incomes between the years and banks. It is evident from the Table 2 that the linear model of the time trends of income experienced a strong tendency in to income increase over the time study period. The positive of **β,** the time trend co-efficient; confirm this trend, as these are observed to be statistically significant. The table further reveals that income of different banks increased at different rates over this period.

The projected trends of income of State Bank of India based on linear trend reveals that income of State Bank of India during 2013-14 is estimated as Rs.71,205.59 crores which are 1.22 times as compared to the terminal year(2007-08) of the study period. This increase is estimated 1.43 times for State Bank of Saurashtra, 1.20 times for State Bank of Travancore, 1.22 times for State Bank of Bikaner, 1.23 times for State Bank of Indore, 1.20 times for State Bank of Hyderabad, 1.15 times for State Bank of Patiala and 1.13 times for State Bank of Mysore. The rejection of null hypothesis as per chi-square value indicated that the trends of incomes of State Bank of India and its associates banks not approximated to straight line trend.

Trends of Expenditure

Table 3 indicates a continuous upward trend in total expenditure of State Bank of India under study. The mean interest expenditures to total expenditure of State Bank of India are 58.95 per cent during the study period. Among the associates banks the mean of interest expenditures to total expenditure are the highest in State Bank of Travancore (62.35 per cent) followed by State Bank of Hyderabad (58.75 per cent), State Bank of Patiala (58.31 per cent), State Bank of Indore (56.92 per cent), State Bank of Mysore (54.99 per cent), State Bank of Bikaner (54.51 per

cent) and State Bank of Saurashtra (56.42 per cent) during the study period. The compounded annual growth rate of interest expenditures of State Bank of India are 0.39 per cent during the study period. Among the associates banks the compounded annual growth rate of interest expenditures are the highest in State Bank of Indore, followed by State Bank of Hyderabad, State Bank of Patiala, State Bank of Mysore, State Bank of Bikaner, State Bank of Travancore. However in case of State Bank of Saurashtra it is positive during the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of interest expenditures during the study period.

The mean non-interest expenditures to total expenditures of State Bank of India were 41.04 per cent during the study period. Among the associates banks the mean of non-interest expenditures are the highest in State Bank of Bikaner (45.73 per cent) followed by State Bank of Mysore (45.27 per cent), State Bank of Saurashtra (43.57 per cent), State Bank of Indore (43.09 per cent), State Bank of Patiala (41.68 per cent), State Bank of Hyderabad (41.24 per cent) and State Bank of Travancore (37.61 per cent) during the study period. Further it is observed that State Bank of India and its associates Banks registered negative compounded annual growth rate of non-interest expenditures during the study period. However in case of State Bank of Saurashtra it is positive during the study period. This showed that strict control established by State Bank of India and its associate banks to reduce their non-interest expenditure during the study period. The analysis of CV indicates that there are high fluctuations in this ratio during the study period. The rejection of null hypothesis as per ANOVA would indicate that there are significant differences in the trends of expenditures between the years and banks.

It is evident from the Table 4 that the linear model of the time trends of expenditures experienced a strong tendency in expenditures to increase over the study period. The table further reveals that expenditures of different banks increased at different rates over this period. The projected trends of expenditures of State Bank of India based on linear trend reveals that expenditures of State Bank of India during 2013-14 is estimated Rs. 63054.84 crores which is 1.21 times as compared to the terminal year (2007-08) of the study period. This increase is estimated 1.45 times for State Bank of Saurashtra, 1.18 times for State Bank of Travancore, 1.20 times for State Bank of Bikaner, 1.21 times for State Bank of Indore, 1.18 times for State Bank

of Hyderabad, 1.16 times for State Bank of Patiala and 1.11 times for State Bank of Mysore. It is concluded from the chi-square analysis that the trends of expenditures of State Bank of India and its associates banks not approximated to the straight line trend.

Trends of Spread

The difference between the interest earned and interest paid is defined as the 'Spread'. The trend of spread gives the better idea to judge the profitability of the bank's business of intermediation. The difference between what the banks pay for funds and what they get for funds is 'Spread'. Thus, spread plays a major role in determining the profitability of a bank. Table 5 exhibits a fluctuating trend of spread of State Bank of India under study. In case of State Bank of India the spread increased from Rs.162.29 crores in 1996-97 to Rs. 17,021.20 crores in 2007-08 indicating an increase of over 104.88 times. This increase is noticed 130.36 times in State Bank of Saurashtra, 43.69 times in State Bank of Travancore, 50.81 times in State Bank of Bikaner, 22.60 times in State Bank of Indore, 22.74 times in State Bank of Hyderabad, 167.08 times in State Bank of Patiala and 21.58 times in State Bank of Mysore during the study period. The mean trend in spread of State Bank of India is Rs.9491.69 crores during the study period. Among the associates banks, the mean spread has the highest position in State Bank of Bikaner, followed by State Bank of Travancore, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala, State Bank of Saurashtra and State Bank of Indore during the study period. Further, negative compounded annual growth rate of spread of State Bank of India and its associates banks shows poor performance in earning spread over the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of spread during the study period. The results of ANOVA would indicate that there are significant differences in the trends of spread between the years and banks.

It is evident from the Table 6 that the linear model of the time trends of spread experienced a strong tendency in spread to increase over the study period. The table further reveals that spread of different banks increased at different rates over this period. The projected trends of spread of State Bank of India based on linear trend reveal that spread of State Bank of India during 2013-14 is estimated as Rs. 26,452.98 crores which are 1.55 times as compared to the terminal year(2007-08) of the study period. This increase is estimated 1.20 times for State Bank of Saurashtra, 1.61 times for State Bank of Travancore, 1.77 times for State Bank

of Bikaner, 1.57 times for State Bank of Indore, 1.66 times for State Bank of Hyderabad, 1.75 times for State Bank of Patiala and 1.46 times for State Bank of Mysore. It is concluded from the chi-square test that null hypothesis is rejected. The rejection of null hypothesis indicated that the trends of spread of State Bank of India and its associates banks not approximated to the straight line trend.

Trends of Burden

The difference between non-interest expenses and non-interest income is defined as 'Burden' for a bank. Non-interest expenses of bank comprise established expenses, other operating expenses and provisions and contingencies. These costs are relatively fixed because it is necessary to maintain the capability to handle some part of peak activity workloads. Table 7 depicts a continuous fluctuating trend in burden of State Bank of India under study. In case of State Bank of India the burden increased from Rs.1,511.49 crores in 1996-97 to Rs.10,292.10 crores in 2007-08 indicating an increase of over 6.80 times. This increase is noticed 3.89 times in State Bank of Saurashtra, 9.18 times in State Bank of Travancore, 28.38 times in State Bank of Bikaner, 41.04 times in State Bank of Indore, 160.20 times in State Bank of Hyderabad, 8.77 times in State Bank of Patiala and 90.64 times in State Bank of Mysore during the study period. The mean trends in burden of State Bank of India are Rs. 6,935.68 crores during the study period. Among the associates banks, the mean burden has the highest position in State Bank of Hyderabad, followed by State Bank of Bikaner, State Bank of Travancore, State Bank of Patiala, State Bank of Mysore, State Bank of Saurashtra and State Bank of Indore during the study period. The compounded annual growth rate of burden of State Bank of India and its associates banks showed negative growth during the study period. This showed that there is a decreasing amount of non-interest incomes of State Bank of India and its associates Banks during the study period. However in case of State Bank of Hyderabad it is positive during the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of burden during the study period. The rejection of null hypothesis as per ANOVA would indicate that there are significant differences in the trends of burden between the years and the banks.

It is evident from the Table 8 that the linear model of the time trends of burden experienced a strong tendency in burden to increase over the study period. The table further reveals that burden of different banks increased at different rates over this period. The projected

trends of burden of State Bank of India based on linear trend reveals that burden of State Bank of India during 2013-14 is estimates as Rs.16,325 crores which is 1.58 times as compared to the terminal year (2007-08) of the study period. This increase is estimated 1.68 times for State Bank of Saurashtra, 1.79 times for State Bank of Travancore, 1.81 times for State Bank of Bikaner, 1.93 times for State Bank of Indore, 2.54 times for State Bank of Hyderabad, 2.21 times for State Bank of Patiala and 1.59 times for State Bank of Mysore. It is concluded from the chi-square analysis that the trends of burden of State Bank of India and its associates banks not approximated to the straight line trend.

Trends of Profit

It is highly essential for an organization to earn a reasonable amount of profit for its survival and growth. Moreover, profit plays a vital role in measuring the degree of efficiency, progressiveness and stability of an undertaking. Hence, profit is also considered as the acid test of ability and competence in business planning and programming. The profit for a bank can be defined as the difference between spread and burden. The trends of profit of State Bank of India and its associates banks have been studied in Table 9. In case of State Bank of India the total profit increased from Rs.1,349.21crores in 1996-97 to Rs.6,729.10 crores in 2007-08 indicating an increase of over 4.98 times. This increase is noticed 0.81 times in State Bank of Saurashtra, 9.59 times in State Bank of Travancore, 7.78 times in State Bank of Bikaner, 13.72 times in State Bank of Indore, 10.62 times in State Bank of Hyderabad, 6.94 times in State Bank of Patiala and 7.88 times in State Bank of Mysore during the study period.

The mean trends in profit of State Bank of India were Rs.3,000.34 crores during the study period. Among the associates banks, the mean profit has the highest position in State Bank of Hyderabad, followed by State Bank of Patiala, State Bank of Bikaner, State Bank of Travancore, State Bank of Mysore, State Bank of Indore and State Bank of Saurashtra during the study period. It is also evident from the table that all the selected banks registered positive compounded annual growth rate of this ratio during the study period. However in case of State Bank of Indore it is negative during the study period. Further, this showed the improved performance of State Bank of India and its associates during the study period. The high value of CV indicates that there are high fluctuations noticed in the trends of profit during the study period. The results of ANOVA revealed that null hypothesis is accepted between the years and

null hypothesis is rejected between the banks(Table 11). The rejection null hypothesis would indicate that there are significant differences in the trends of profit between the banks.

It is evident from the Table 10 that the linear model of the time trends of profit experienced a strong tendency in profit to increase over the study period. The table further reveals that profit of different banks increased at different rates over this period. The projected trends of profit of State Bank of India based on linear trend reveals that profit of State Bank of India during 2013-14 is estimated as Rs.7638.13 crores which are 1.13 times as compared to the terminal year (2007-08) of the study period. This increase is estimated 1.00 times for State Bank of Saurashtra, 1.39 times for State Bank of Travancore, 1.35 times for State Bank of Bikaner, 1.47 times for State Bank of Indore, 1.46 times for State Bank of Hyderabad, 1.46 times for State Bank of Patiala and 1.34 times for State Bank of Mysore. It is concluded that null hypothesis is rejected. The rejection of null hypothesis indicated that the trends of profit of State Bank of India and its associates not approximated to the straight line trend.

Conclusion

From the analysis, it is concluded that there was a continuous upward trend in total income of SBI and its associate banks during the study period. From the comparative analysis of total expenditure registered that expenditure of different banks increased at different rates during the study period. The analysis of spread clearly indicated that the selected banks have shows poor performance in the field of obtaining spread during the study period. Further, comparative analysis proved that all the associate banks except state bank of Saurashtra have the highest growth in burden compared to SBI. The analysis of trends of profit confirmed that the trends of profit fluctuated in all the cases except State Bank of Travancore which registered an increasing trend of profit during the study period. To conclude, SBI and its associates have marched ahead during the post-second banking sector reforms period in fostering economic growth of the country and has shown tremendous resilience and vibrancy in their strategies, processes and operations to remain competitive in the globalized environment.

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Table 1: Trends of Total Income

Year	State Bank of India			State Bank of Saurashtra		
	Total Income (Rs)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	34346.63	78.15	21.59	1050.85	64.55	**35.39**
CV	0.37	0.16	0.60	0.32	0.28	**0.56**
CAGR	11.56	4.55	-9.10	9.00	4.54	**-10.37**
Year	State Bank of Travancore			State Bank of Bikaner		
	Total Income (Rs)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	2018.56	76.80	23.22	1879.52	73.76	**26.24**
CV	0.43	0.19	0.65	0.42	0.19	**0.54**
CAGR	12.77	3.24	-10.37	13.64	4.00	**-10.37**
Year	State Bank of Indore			State Bank of Hyderabad		
	Total Income (Rs)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	1199.51	61.96	38.03	2541.25	56.99	**42.83**
CV	0.53	0.32	0.52	0.47	0.36	**0.47**
CAGR	17.56	3.93	-10.1	15.04	3.31	**15.56**
Year	State Bank of Patiala			State Bank of Mysore		
	Total Income (Rs)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	2211.58	63.17	36.82	1395.25	73.50	**26.45**
CV	0.52	0.27	0.46	0.46	0.16	**0.44**
CAGR	**15.56**	**3.63**	**-10.37**	**14.06**	**3.37**	**-8.87**

F value(Between the year) - 2.46* and F Value(Between the banks) – 103.55*

Source: Computed from annual reports of respective Bank.

Table 2 : Total Income - Trend Equations

(Rs. in crores)

S.No	Name of the Bank	$P = \alpha + \beta t + e$		χ^2 Value	Estimated Total Income in 2013-14
		α	β		
1	State Bank of India	13513.31	3205.12	1652.84	71205.59
2	State Bank of Saurashtra	453.50	98.38	47.85	2224.42
3	State Bank of Travancore	511.41	231.87	363.56	4685.07
4	State Bank of Bikaner	501.75	211.96	195.46	4317.12
5	State Bank of Indore	468.86	169.82	293.25	3153.79
6	State Bank of Hyderabad	94.92	318.82	482.78	6207.79
7	State Bank of Patiala	254.56	301.08	931.90	5674.00
8	State Bank of Mysore	301.95	168.19	378.20	3329.54

Source: Computed.

Table 3: Trends of Total Expenditure

Year	State Bank of India			State Bank of Saurashtra		
	Total Expenses (Rs.)	Interest Income (%)	Non-Interest Income (%)	Total Income (Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	28671.99	58.95	41.04	969.05	56.42	**43.57**
CV	0.53	0.32	0.52	0.35	0.09	**0.12**
CAGR	11.09	0.39	-0.66	10.4	-0.47	**0.53**
Year	State Bank of Travancore			State Bank of Bikaner		
	Total Expenses (Rs.)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	1845.77	62.35	37.61	1705.53	54.51	**45.73**
CV	0.40	0.10	0.16	0.41	0.12	**0.15**
CAGR	12.13	0.53	-1.26	13.14	1.36	**-2.23**
Year	State Bank of Indore			State Bank of Hyderabad		
	Total Expenses (Rs.)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	1080.09	56.92	43.09	4167.59	58.75	**41.24**
CV	0.52	0.10	0.13	1.59	0.08	**0.11**
CAGR	-5.13	2.5	-3.98	14.35	1.90	**-3.58**
Year	State Bank of Patiala			State Bank of Mysore		
	Total Expenses (Rs.)	Interest Income (%)	Non-Interest Income (%)	Total Income(Rs)	Interest Income (%)	Non-Interest Income (%)
MEAN	1966.11	58.31	41.68	1262.66	54.99	**45.27**
CV	0.53	0.12	0.12	0.44	0.10	**0.12**
CAGR	**13.89**	**1.75**	**-4.11**	**13.51**	**1.36**	**-1.57**

F value(Between the year) – 1.89 and F Value(Between the banks) – 45.19*

Source: Computed from annual reports of respective Bank.

Table 4: Total Expenditure - Trend Equations

S. No	Name of the Bank	$P = \alpha + \beta t + e$		χ^2 Value	Estimated Total Income in 2013-14
		α	β		
1	State Bank of India	13281.18	2765.20	1554.09	63054.84
2	State Bank of Saurashtra	370.07	98.56	29.41	2144.15
3	State Bank of Travancore	546.84	199.83	303.65	4143.88
4	State Bank of Bikaner	427.85	189.64	205.78	3886.45
5	State Bank of Indore	102.89	150.33	283.46	2809.01
6	State Bank of Hyderabad	505.86	274.58	390.43	5448.42
7	State Bank of Patiala	213.55	269.62	1051.75	5066.79
8	State Bank of Mysore	328.39	143.73	324.84	2915.61

Source: Computed.

Table 5 : Trends of Spread

(Rs in crores)

Year	State Bank of India	STATE BANK OF							Mean
		Saurashtra	Travancore	Bikaner	Indore	Hyderabad	Patiala	Mysore	
1996-97	162.29	8.68	21.91	18.48	25.29	48.95	5.33	35.33	**40.78**
1997-98	985.86	185.49	103.36	17.31	0.56	37.43	8.33	1.94	**167.53**
1998-99	6064.00	27.56	231.98	90.13	0.27	83.24	9.42	13.33	**814.99**
1999-00	6928.30	50.09	281.93	373.62	54.30	227.72	12.09	281.11	**1026.14**
2000-01	8382.60	251.63	295.12	455.96	89.18	246.38	80.53	313.61	**1264.37**
2001-02	9081.00	280.07	424.43	490.29	292.23	339.63	66.64	261.24	**1404.44**
2002-0 3	9977.50	134.23	522.85	551.37	105.97	363.02	83.84	386.59	**1515.67**
2003-04	11186.30	107.08	683.33	716.37	72.65	339.33	24.21	454.59	**1697.98**
2004-05	13199.30	437.76	896.16	868.91	502.21	60.37	976.26	550.84	**2186.47**
2005-06	15589.10	448.98	955.13	992.89	541.52	1094.32	996.66	611.66	**2653.78**
2006-07	15322.90	1131.60	992.18	938.71	534.38	1227.97	1005.98	683.58	**2729.66**
2007-08	17021.20	1131.60	957.28	939.05	571.78	1112.90	890.57	762.29	**2783.29**
MEAN	**9491.69**	**256.20**	**530.47**	**537.75**	**232.52**	**431.77**	**346.65**	**363.00**	
CV	**0.57**	**1.15**	**0.65**	**0.67**	**1.02**	**0.89**	**1.32**	**0.71**	
CAGR	**-18.89**	**-18.46**	**-25.37**	**-23.84**	**-29.93**	**-29.93**	**-15.35**	**-29.93**	

F value(Between the year) – 2.21* and F Value(Between the banks) – 37.63*

Source: Computed from annual reports of respective Bank.

Table 6 : Spread - Trend Equations

S. No	Name of the Bank	$P = \alpha + \beta t + e$		χ^2 Value	Estimated Total Income in 2013-14
		α	β		
1	State Bank of India	-95.11	1474.89	3537.86	26452.98
2	State Bank of Saurashtra	-222.61	88.02	383.13	1361.89
3	State Bank of Travancore	-98.72	96.79	212.11	1643.67
4	State Bank of Bikaner	-99.90	98.10	27.72	1665.92
5	State Bank of Indore	-144.93	58.07	281.34	900.35
6	State Bank of Hyderabad	-226.44	101.26	633.52	1852.25
7	State Bank of Patiala	-341.89	105.93	931.35	1564.86
8	State Bank of Mysore	-96.45	70.68	62.11	1175.91

*** Significant at 0.01 level**

Source: Computed.

Table 7 : Trends of Burden

(Rs in crores)

Year	State Bank of India	STATE BANK OF							Mean
		Saurahshtra	Travancore	Bikaner	Indore	Hyderabad	Patiala	Mysore	
1996-97	1511.49	99.61	62.16	22.00	8.23	3.47	54.32	4.91	**220.77**
1997-98	2846.80	59.08	166.66	107.79	27.15	135.54	124.68	48.60	**439.53**
1998-99	5036.00	49.51	275.22	182.01	31.31	194.76	110.62	56.91	**742.04**
1999-00	4876.80	138.88	215.49	253.20	99.55	355.53	118.6	232.87	**786.36**
2000-01	6778.30	237.92	194.26	350.59	153.17	396.6	80.57	287.89	**1059.95**
2001-02	6649.00	198.06	303.50	325.79	167.13	566.12	166.3	311.55	**1085.93**
2002-03	6872.50	226.78	351.81	348.09	306.29	664.42	238.21	270.17	**1159.78**
2003-04	7505.30	284.47	438.23	414.92	299.01	720.53	407.15	279.02	**1293.57**
2004-05	8894.80	396.60	649.03	663.26	369.03	1543.53	689.19	345.58	**1693.87**
2005-06	11182.50	388.86	696.45	847.86	402.41	666.28	693.55	395.94	**1909.23**
2006-07	10781.60	367.09	665.90	632.96	344.42	720.47	638.55	435.35	**1823.29**
2007-08	10292.10	368.00	571.17	624.56	337.77	555.91	476.84	445.06	**1708.92**
MEAN	**6935.68**	**222.30**	**382.52**	**397.75**	**212.71**	**543.98**	**316.54**	**259.23**	
CV	**0.43**	**0.57**	**0.56**	**0.62**	**0.68**	**0.73**	**0.79**	**0.57**	
CAGR	**-22.57**	**-29.58**	**-19.66**	**-10.93**	**-7.79**	**-4.37**	**-20.02**	**-0.95**	

F value(Between the year) – 2.33* and F Value(Between the banks) – 63.07*

Source: Computed from annual reports of respective Bank.

Table 8: Burden - Trend Equations

S. No	Name of the Bank	$P = \alpha + \beta t + e$		R^2	F Value	χ^2 Value	Estimated Total Income in 2013-14
		α	β				
1	State Bank of India	1628.32	816.50	0.93	135.81*	1231.99	16325.38
2	State Bank of Saurashtra	17.37	33.41	0.87	72.37*	144.74	618.84
3	State Bank of Travancore	19.10	55.90	0.85	61.29*	187.77	1025.40
4	State Bank of Bikaner	-17.73	63.92	0.85	59.34*	181.62	1132.83
5	State Bank of Indore	-37.92	38.46	0.89	82.76*	216.44	654.52
6	State Bank of Hyderabad	51.50	75.70	0.47	9.00*	1317.94	1414.22
7	State Bank of Patiala	-75.67	60.34	0.75	30.72*	177.81	1010.47
8	State Bank of Mysore	5.14	39.12	0.88	79.66*	182.53	709.48

*** Significant at 0.01 level**

Source: Computed.

Table 9 : Trends of Profit

(Rs in crores)

Year	State Bank of India	STATE BANK OF							Mean
		Saurahshtra	Travancore	Bikaner	Indore	Hyderabad	Patiala	Mysore	
1996-97	1349.21	108.29	40.25	40.48	17.06	52.45	59.65	40.24	**213.45**
1997-98	1861.00	126.41	63.30	90.48	27.71	97.11	143.01	50.54	**307.44**
1998-99	1028.00	21.95	43.27	91.88	31.04	111.52	101.20	33.58	**182.80**
1999-00	2051.50	88.79	66.44	120.42	45.25	127.81	130.69	48.24s	**334.89**
2000-01	1604.30	13.71	97.49	225.79	63.99	150.22	161.10	25.72	**292.79**
2001-02	2432.00	82.03	120.93	164.50	125.10	226.49	232.94	65.90	**431.23**
2002-03	3105.00	92.55	171.04	203.28	200.32	298.40	322.02	115.42	**563.50**
2003-04	3681.00	177.39	244.60	301.52	226.26	561.42	430.36	175.38	**1356.11**
2004-05	4304.50	41.16	247.13	205.66	133.18	250.90	287.07	205.26	**709.35**
2005-06	4406.60	60.12	258.68	145.03	139.11	427.04	303.11	215.72	**744.426**
2006-07	3454.30	87.44	326.28	305.80	189.96	505.50	366.53	248.23	**685.50**
2007-08	6729.10	88.00	386.11	315.00	234.01	556.99	413.73	317.35	**1130.03**
MEAN	**3000.34**	**81.36**	**171.75**	**183.66**	**119.08**	**280.00**	**245.58**	**128.00**	
CV	**0.54**	**0.58**	**0.69**	**0.49**	**0.67**	**0.66**	**0.51**	**0.77**	
CAGR	**15.71**	**-2.09**	**22.82**	**20.50**	**26.87**	**23.95**	**19.24**	**20.64**	

F value(Between the year) – 1.07 and F Value(Between the banks) – 3.98*

Source: Computed from annual reports of respective Bank.

Table 10 : Profit – Trend Equations

S.No	Name of the Bank	$P = \alpha + \beta t + e$		χ^2 Value	Trends in Profit (Rs. in crores)
		α	β		
1	State Bank of India	-3388.87	1381.53	2152.42	7698.13
2	State Bank of Saurashtra	83.30	-0.15	271.76	80.59
3	State Bank of Travancore	-34.10	31.72	686.31	536.98
4	State Bank of Bikaner	47.29	21.05	142.35	426.28
5	State Bank of Indore	-7.96	19.59	130.63	344.78
6	State Bank of Hyderabad	53.49	99.67	256.94	817.45
7	State Bank of Patiala	41.43	31.46	132.28	607.79
8	State Bank of Mysore	-39.39	25.82	8.17	425.45

*** Significant at 0.01 level**

Source: Computed.