

PRODUCTIVITY AND PROFITABILITY ANALYSIS OF STATE BANK OF INDIA

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ABSTRACT

Profitability is considered a very important test for measuring efficiency of the Bank as it is a means to measure the ability of the bank to earn profits. Bank has to take care of profitability while granting advances along with the other two aspects i.e. funds remain fairly liquid, safe and give a reasonable return. Liquidity in bank's investment would mean that a bank is able to acquire cash as and when required, i.e., in short period of time. By solvency of a bank means that the advances granted by the bank are safe enough and the borrowers are able to repay them in time so that bank is in the position to fulfil its obligations.

This paper attempts to analyse the productivity and profitability of State Bank of India during the study period from 2008-09 to 2017-2018. Key Performance indicators of productivity such as number branches, employees, deposits, advances and total business and Interest earned, Interest paid, other income, total income, spread, burden and average and compound annual growth rate is taken for the present study. The study finds and concludes that the productivity and business performance of State Bank of India was improved over the period of study.

Keywords: Business Performance, Productivity, Operating Profit, Profit earning capacity and Net Profit.

Introduction

The banking sector is the backbone of the Indian economy and plays an important financial intermediary role. It is generally agreed that a strong and healthy banking system is a prerequisite for sustainable economic growth. Banks are in a business to receive deposits or liabilities and to issue debt securities on the one hand and create or invest in assets on the other hand. A bank collects the savings and disburses in various productive sectors.

The term profit is an accounting concept which shows the excess of income over expenditure viewed during a specified period of time. Profit is the main reason for the continued existence of every commercial organization. On the other hand, the term profitability is a relative measure where profit is expressed as a ratio, generally as a

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percentage. Profitability depicts the relationship of the absolute amount of profit with various other factors. Profitability is a relative concept which is quite useful in decision-making. Profitability is the most important parameter for performance appraisal of any business organization.

Banking Sector Reforms have changed the face of Indian banking industry. These reforms have led to an increase in resource productivity, increasing level of deposits, credits and profitability and decrease in non-performing assets. However, the profitability, which is an important criteria to measure the performance of banks in addition to productivity, financial and operational efficiency, has come under pressure because of changing environment of banking. An efficient management of banking operations aimed at ensuring growth in profits and efficiency requires up-to-date knowledge of all those factors on which the banks profit depends.

The information of productivity and profitability is useful to the management for planning, decision making and control. This will enable the management to exercise control over the day to day operations with a view to ensuring maximum efficiency and adherence to the plans of management. Operational performance of bank is evaluated for the purpose of analysing the operational strengths and weaknesses of the bank by using a measure i.e., operating profit.

Review of literature

As the present study is concerned with the profitability and productivity of State Bank of India, an attempt is made to review in brief the earlier studies relating to banking activities so as to gain greater insight into the subject. Some of the relevant studies which are concerned with the productivity and profitability in banking sector are presented briefly.

Satyanarayane (1996)³, studied “Productivity beyond per employee business”, and suggested a model to measure overall efficiency of the banks. He emphasized that the size of the bank should be squared off while measuring efficiency of bank. According to him, Productivity of bank = (Average index market share of all the output factors/Average index market share of all the input factors) X 100 where, output factors were deposits, non-deposit working funds, loans & advances, investments, interest spread, non-interest income and the net profit. The input factors were network of branches, number of staff, wage bill, non-wage operating expenses, etc. In order to facilitate comparison of one bank with the other,

³Satyanarayane, K. (1996), “Productivity Beyond Per Employee Business”, IBA Bulletin (April), Mumbai.

irrespective of size, the market share of each factor in percentage terms has to be taken into account instead of absolute levels.

Ramamoorthy (1997)⁴ analysed Profitability and Productivity in Indian Banking and observed that the old banks were not conscious of their profitability and productivity levels. But new economic order has compelled these banks to shift towards market-oriented, commercially driven banking system. He also observed in his study that performance of banks operating in different economic systems with different levels of economic development and varying degrees of regulations were not comparable. The results further revealed that profitability of a bank was a function of allocation efficiency, volume of credit, provisioning for loan losses, interest rate movements and operating cost structure. He suggested that performance incentive plans, motivation, training and leadership of human resources and level of technology absorption can improve the productivity and profitability of the banks.

Objectives of the study

- To analyse the Productivity and Business Performance of State Bank of India
- To evaluate the profit earning capacity and profitability of State Bank of India

Data Collection and Methodology

The study is based on secondary data collected mainly from annual reports of State Bank of India, The data has been suitably arranged, classified, analysed and tabulated according to the requirements of the study. For analyzing the data the techniques like trends, ratios, Standard deviation, compound annual growth rate and averages have been used for evaluating the Business Performance, Productivity, Profit earning capacity and Profitability.

Compounded Annual Growth Rate (CAGR)

Compounded Annual Growth rate (CAGR) is a business and investing specific term for the smoothed annualized gain of an investment over a given time period. CAGR is often used to describe the growth over a period of time of some element of the business, for example revenue, units delivered, registered users, etc. In the present study CAGR is used to find the yearly growth in productivity and profitability of the State Bank of India. Following formula has been used to calculate the CAGR.

$$\text{CAGR} = ((\text{Ending Value} / \text{Beginning Value}) ^ {1/\text{Number of Years}}) - 1$$

Period of the Study: The relevant data of the State Bank of India for the purpose of the study was collected for a period of ten years from 2008-09 to 2017-18.

2.Ramamoorthy. (1997), "Profitability and Productivity in Indian Banking-International Comparisons and implications for Indian Banking", Paper Presented in Bank Economists Conference, IBA Bulletin, October, Mumbai.

Scope of the Study: The present study is confined to the productivity and profitability aspects of State bank of India only. The study covered all important aspects of State Bank of India in relation to Deposits, Advances, Total Business, interest expenses, Interest income, other income, total income, operating profit and net profit.

Limitations of the Study: The study is mainly based on the secondary data only and the number of the employees per bank may differ due to their transfer or retirement which could affect the productivity and profit earning capacity of individual banks. The accuracy of the data depends on the accuracy ensured in the data presented in the annual reports. While computing the ratios theoretical approach is adopted. Hence, there may be some discrepancies between ratios and the data furnished in the annual reports.

Business performance:

The business performance of State Bank of India in relation to expansion of branches, recruitment of employees, deposits, advances and total business carried out by the bank during the study period from 2008-09 to 2018-19 are considered for the study.

Table – 1: Business Performance of State Bank of India from (2008-09 to 2017-18)

Years	No. of Branches	No. of Employees	Deposits	Advances	Total Business
2008-09	11448	205896	742073	542503	1284576
2009-10	12496	200299	804116	631914	1436030
2010-11	13542	222933	933933	756719	1690652
2011-12	14097	215481	1043647	867579	1911226
2012-13	14816	228296	1202740	1045617	2248357
2013-14	15869	222809	1394409	1209829	2604238
2014-15	16333	213238	1576793	1300026	2876819
2015-16	16784	207739	1730722	1463700	3194422
2016-17	17170	209567	2044751	1571078	3615829
2017-18	22414	264041	2706344	1934880	4641224
Mean	15497	219030	1417953	1132385	2550337
STDEV	3069.27	18036.67	617408.80	446906.44	1060082.13
CAGR	0.07	0.03	0.14	0.14	0.14
Growth in Times	1.96	1.28	3.65	3.57	3.61

Source: Annual Reports of State Bank of India

Table – 1 shows that the Business Performance of State Bank of India during the study period from 2008-09 to 2017-18. The number of branches of Bank has been increased from 11448 in 2008-09 to 22414 in 2017-18. The registered growth rate is 1.96 times, with an average of 15497 branches functioning every year. Similarly the number of employees of the Bank increased from 205896 in 2008-09 to 264041 in 2017-18. It registered growth rate of 1.28 times with an average of 219030 employees working every year. The deposits of Bank

have been increased from Rs. 742073 crores in 2008-09 to Rs. 2706344 crores in 2017-18. The growth rate is 3.65 times, with an average of Rs. 1417953 crores deposits every year. The advances of the Bank have been increased from Rs. 542503 crores in 2008-09 to Rs. 1934880 crores in 2017-18. The growth rate is 3.57 times, with an average of Rs. 1132385 crores advances every year. The total business of the Bank has been increased from Rs. 1284576 crores in 2008-09 to Rs. 4641224 crores in 2017-18. It registered growth rate of 3.61 times, with an average of Rs. 2550337 crores business every year.

Right from the second phase of economic liberalization the public sector banks in India aimed at reduction of manpower and improving their operation feasibility. At a glance it is evidenced that the growth rate of deposits, advances and total business is more than the growth rate of branch expansion and employee recruitment.

Productivity Ratios

Productivity has been measured in terms of the outputs (like Business, deposits, advances) per input (employee/branch). This study uses Ratio analysis to compare Productivity and Profitability of the Indian Banks. In financial analysis ratios are generally used as benchmarks for evaluating a firm's position or performance.

Major Indicators of Productivity

Employee Productivity

Human resource is the most important asset of an organization and banking business is no exception to it. In the present study, employee productivity of State Bank of India has been evaluated by taking eight ratios in consideration. A brief summary of all these ratios are asunder:

Deposit per Employee: This ratio reveals the deposit-collection capacity of an employee. Higher the deposit per employee ratio, higher the productivity per employee.

$$\text{Deposit per Employee} = \frac{\text{Total Deposits}}{\text{No. of Employees}}$$

Advances per Employee: This ratio reveals the contacts and convincing skills of the employee to disburse and invest the amount deposited. This only ultimately results in the interest earning capacity of a particular bank. The deposits cannot be maintained unless they are advanced for productive use by the people. As this entails involvement of employee time, this also is considered a ratio to measure the productivity higher the ratio, higher the productivity. This ratio has been calculated with the help of the following formula.

$$\text{Advances per Employee} = \frac{\text{Total Advances}}{\text{No. of Employees}}$$

Business per Employee: Deposit collection and the advance disbursement are the two basic activities of any given bank. The productivity of any bank in fact relates to the creation and delivery of capital. Here creation means deposits and delivery means advances. Both together are the net measure of productivity. If this ratio is higher, the employee of the bank is better and the productivity of the bank is more.

$$\text{Business per Employee} = \frac{\text{Total Business}}{\text{No. of Employees}}$$

Profit per Employee: This is one of the indicators to measure the performance of the bank. It is not only a Profitability indicator but also indicates the efficiency. Higher this ratio, better the profit per employee, which means employees are utilising higher efficiency in his/her workings in the firm/bank.

$$\text{Profit per Employee} = \frac{\text{Net Profit}}{\text{No. of Employees}}$$

Table – 2 Deposit per Employee from (2008-09 to 2017-18)

Years	Deposit per Employee	Advances per Employee	Business per Employee	Profit per Employee(000)
2008-09	3.60	2.63	6.24	443
2009-10	4.01	3.15	7.17	457
2010-11	4.19	3.39	7.58	370
2011-12	4.84	4.03	8.87	543
2012-13	5.27	4.58	9.85	617
2013-14	6.26	5.43	11.69	492
2014-15	7.39	6.10	13.49	614
2015-16	8.33	7.05	15.38	479
2016-17	9.76	7.50	17.25	500
2017-18	10.25	7.33	17.58	-248
Mean	6.39	5.12	11.51	426.7
CAGR	0.11	0.11	0.11	--
Growth in Times	2.84	2.78	2.82	--

Source: Annual Reports of State Bank of India

The above table - 2 shows the details of deposit per employee, advances per employee, business per employee and profit per employee of state bank of India during the study period from 2008-09 to 2017-18.

The analysis of deposit per employees increased from Rs. 3.60 crores in 2008-09 to Rs. 10.25 crores in 2017-18 and its average per employee collection of deposit is Rs. 6.39 crores. The compound annual growth rate is 11% and its registered growth rate of 2.84 times.

It is observed from the table that the advances per employees increased from Rs. 2.63 crores in 2008-09 to Rs. 7.33 crores in 2017-18 and its average advances per employee is Rs.

5.12 crores. The compound annual growth rate is 11% and its registered growth rate of 2.78 times.

It can be seen from the tables that the business per employees increased from Rs. 6.24 crores in 2008-09 to Rs. 17.58 crores in 2017-18 and its average business per employee is Rs. 11.51 crores. The compound annual growth rate is 11% and its registered growth rate of 2.82 times.

It is observed from the table profit per employee is fluctuating during the study period and expect 2017-18 negative profit per employee.

It can be concluded that the employee productivity of state bank of india is continuously increased during the study period except profit per employee. profit per employee is negative may be increases of NPAs.

Branch Productivity

While evaluating the results in terms of infrastructural facilities utilized by the banks at various locations, places, again eight indicators have been used. A brief summary of these ratios are as under:

Deposit per Branch Ratio: A Branch is the initial organizational unit in any bank with similar environment and clientele. This also follows the similar policies, methodologies and structure in a particular bank. In order to smoothen out the individual differences, this seems to be a better unit for measuring productivity. It reflects the organizational effectiveness of the bank. Higher the deposit per branch, better the system of collection and vice-versa.

$$\text{Deposit per Branch} = \frac{\text{Total Deposits}}{\text{No. of Branches}}$$

Advances per Branch: In addition to employee skills, the loan policies as well as interest rates etc of a particular bank also affect advances. This ratio reflects this aspect of the bank. Higher the advances per branch, better the advance policies and hence the productivity.

$$\text{Advances per Branch} = \frac{\text{Total Advances}}{\text{No. of Branches}}$$

Total Business per Branch: Advances and deposits of a branch together reflect the overall banking system and its productivity. It is this ratio which in fact compares the productive efficiency of two banks. Higher the ratio, better and more productive the bank.

$$\text{Business per Branch} = \frac{\text{Total Business}}{\text{No. of Branches}}$$

Profit per Branch: Net profit is the difference between income and expenditure, which indicates profitability at each branch level and the same time, indicates its efficiency. Better ratio is indicator of good health and efficiency.

$$\text{Profit per Branch} = \frac{\text{Net Profit}}{\text{No. of Branches}}$$

Table – 3 Deposit per Branch from (2008-09 to 2017-18)

Years	Deposit per Branch	Advances per Branch	Total Business per Branch	Profit per Branch (in Rs.)
2008-09	64.82	47.39	112.21	796733054
2009-10	64.35	50.57	114.92	733514725
2010-11	68.97	55.88	124.85	610323438
2011-12	74.03	61.54	135.58	830460382
2012-13	81.18	70.57	151.75	952011339
2013-14	87.87	76.24	164.11	69197807
2014-15	96.54	79.60	176.14	802179636
2015-16	103.12	87.21	190.33	592886082
2016-17	119.09	91.50	210.59	610599884
2017-18	120.74	86.32	207.07	-292094227
Mean	88.07	70.68	158.75	632859238
CAGR	0.06	0.06	0.06	
Growth in times	1.86	1.82	1.85	

The above tables -3 shows the details of deposit per branch, advances per branch, business per branch and profit per branch of state bank of India during the study period from 2008-09 to 2017-18.

The analysis of deposit per branch increased from Rs. 64.82 crores in 2008-09 to Rs. 120.74 crores in 2017-18 and its average deposit per branch of Rs. 88.07 crores. The compound annual growth rate is 6% and its registered growth rate of 1.86 times it is good improved during the study period.

It is observed from the table that the advances per branch increased from Rs. 47.39 crores in 2008-09 to Rs. 86.32 crores in 2017-18 and its average advances per branch is Rs. 70.68 crores. The compound annual growth rate is 6% and its registered growth rate of 1.82 times.

It can be seen from the table that the business per branch increased from Rs. 112.21 crores in 2008-09 to Rs. 207.07 crores in 2017-18 and its average business per branch is Rs. 158.75 crores. The compound annual growth rate is 6% and its registered growth rate of 1.85 times.

It is observed from the table profit per branch is fluctuating during the study period and expect 2017-18 negative profit per branch.

It can be concluded that the branch productivity of state bank of india is improved during the study period except profit per branch. The overall productivity of state bank of india has been improved during the study period except profit per employee and profit per branch.

Profit Earning Capacity

Banks are commercial organization and like any such organization all of their activities should be directed towards earning profit. Essentially, banks must give a fair return on capital after providing adequately for business risks. This has warranted banks to earn profit.

Table – 4 Profit earning capacity of State Bank of India from (2008-09 to 2017-18)

Years	Interest Income	Other Income	Total Income	Interest Expended	Operating Expenses	Provisions & Contingencies	Total Expenditure	Net Profit
2008-09	63788	12691	76479	42915	15649	8794	67357	9121
2009-10	70993	14968	85962	47322	20318	9154	76796	9166
2010-11	81394	15824	97218	48867	23015	17071	88954	8265
2011-12	106521	14351	120873	63230	26068	19866	109165	11707
2012-13	119657	16034	135692	75325	29284	16976	121586	14105
2013-14	136350	18553	154904	87068	35725	21218	144012	10981
2014-15	152397	22576	174973	97381	38677	25811	161871	13102
2015-16	163998	27845	191844	106803	41782	33307	181893	9951
2016-17	175518	35461	210979	113658	46472	40363	200495	10484
2017-18	220499	44600	265100	146602	59943	66058	272603	-6547
Mean	129111	22291	151402	82917.10	33693.30	25862	142473	9033.
CAGR	0.13	0.13	0.13	0.13	0.14	0.22	0.15	--
Growth in times	3.46	3.51	3.47	3.42	3.83	7.51	4.05	-0.72

Source: Annual Reports of State Bank of India

Table – 4 shows the profit earning capacity of State Bank of India during the study period from 2008-09 to 2017-18. The interest income of the bank has been increased from Rs. 63788 crores in 2008-09 to Rs. 220499 crores in 2017-18. It is registered growth rate of 3.45 times, with an average of Rs. 129111.50 crores every year. The other income of the bank has been increased from Rs. 12691 crores in 2008-09 to Rs. 44600 crores in 2017-18. It is registered growth rate of 3.51 times, with an average of Rs. 22290 crores every year. The interest expenditure of bank has been increased from Rs. 42915 crores in 2008-09 to Rs. 146602 crores in 2017-18. It is registered growth rate of 3.42 times, with an average of Rs. 82917 crores every year. The operating expenses of the bank increased from Rs. 15649 crores in 2008-09 to Rs. 59943 crores in 2017-18. It is registered growth rate of 3.83 times, with an average of Rs. 33693 crores every year.

The provisions and contingencies of State Bank of India has been increased from Rs. 8794 crores in 2008-09 to Rs. 66058 crores in 2017-18. It is registered growth rate of 7.51 times, with an average of Rs. 25862 crores every year. The total expenditure of the bank has been increased from Rs. 67357 crores in 2008-09 to Rs. 272603 crores in 2017-18. It is registered growth rate of 4.05 times, with an average of Rs. 142473 crores every year. The total income of the bank has been increased from Rs. 76479 crores in 2008-09 to Rs. 265100 crores in 2017-18. It is registered growth rate of 3.47 times, with an average of Rs. 151402 crores every year. The net profit of the bank has been increased from Rs. 9121 crores in 2008-09 to Rs. 10484 crores in 2016-17. with an average of Rs. 9033 crores every year. The net profit of the bank is negative in 2017-18 may be increasing provisions and NPAs.

To sum up the growth rate of interest income and other income is less than the proportionate growth of, operating expenses and provisions and contingencies. It creates pressure on profit earnings of the bank. Interest income of the bank constantly increased throughout the study period due to increase in granting loans and advances. Similarly the interest expenses too. Non-interest income was highly volatile, but the operating expenses steadily increased throughout the study period. In general the proportionate growth rate of total income (3.47 times) was less than the growth rate of total expenditure (4.05 times). Due to this reason the net profit of the bank remains under stress. It can be concluded that net profit earning of the state bank of india was directly influenced by operational and interest expenses.

Other income to total income ratio: Other income largely constitutes of fee income such as commission, exchanges and brokerage fees. Banks in developed countries derive nearly 50% of revenues from this stream. For Indian banks, such fees contribute only about 15% -25% of the overall revenues. Other income also includes profit on exchange transactions, profit from sale of investments, and other miscellaneous income, amongst others. However, it must be noted that fee income (and not total other income) of the public sector banks are relatively quite low.

Table –5 Interest Income to Total Income and Other Income to Total Income of State Bank of India (2008-09 to 2017-18)

Years	Interest Income	other Income	Total Income	Interest income to total income(ratio)	Other income to total income(ratio)
2008-09	63788	12691	76479	83.41	16.59
2009-10	70993	14968	85962	82.59	17.41
2010-11	81394	15824	97218	83.72	16.28

2011-12	106521	14351	120873	88.13	11.87
2012-13	119657	16034	135692	88.18	11.82
2013-14	136350	18553	154904	88.02	11.98
2014-15	152397	22576	174973	87.10	12.90
2015-16	163998	27845	191844	85.49	14.51
2016-17	175518	35461	210979	83.19	16.81
2017-18	220499	44600	265100	83.18	16.82
Mean	129111.50	22290.30	151402.40	85.30	14.70
Growth in Times	3.46	3.51	3.47	1.00	1.01

Source: Annual Reports of State Bank of India

It is observed from the above table that the state bank of india having more than 80 percent of interest income like interest income on investments, advances, discount on advances and interest on balances with reserve bank of india and other interbank funds etc. only 10-20 percent income from other income such as commission, exchanges and brokerage fees etc. The average of other income to total income is 14.70 percent the remaining 85.30 percent income from interest income.

Table – 6 Operating Profit of State Bank of India (2009-10 to 2018-19)
(Rs. In Corers)

Years	Operating Income	Operating Expenses	Operating Profit
2008-09	33564	15649	17915
2009-10	38639	20318	18321
2010-11	48351	23015	25336
2011-12	57642	26068	31574
2012-13	60366	29284	31082
2013-14	67834	35725	32109
2014-15	78214	38677	39537
2015-16	85040	41782	43258
2016-17	97320	46472	50848
2017-18	119454	59943	59511
Mean	68642	33693	34949
CAGR	0.14	0.14	0.13
Growth in Times	3.56	3.83	3.32

Source: Annual Reports of State Bank of India

Note: Operating Profit = Operating Income – Operating Expenses

The table – 6 shows the operating profit of State Bank of India. Operating profit is the excess of operating income over operating cost. The details of operating income, operational expenses and operating profit of State Bank of India are shown in Table – 6. It can be observed from table that the operating income of the bank has been raised from Rs. 33564 crores to Rs. 119454 crores while operating expenses increased from Rs. 15649 crores to Rs.

59943 crores during the study period. The average amount of operating income is Rs. 68642 crores and operating expenses is Rs. 33693 crores. The rate of increase noticed in respect of operating income is 3.56 times and the rate of increase in operating expenses observed is 3.83 times during the study period. The operating profit of State Bank India has been increased from Rs. 17915 crores in 2008-09 to Rs. 59511 crores in 2017-18 and the average amount is Rs. 34949 crores. The rate of growth observed in operating profit of the bank during the study period is 3.32 times.

The compound annual growth rate of state bank of india operating income and operating expenses is 14 percent and operating profit is 13 percent. This indicates that the operating profit somewhat reduced.

Conclusion

In view of the foregoing issues, it may be meaningful to suggest the following strategies for the State Bank of India for enhancing operational efficiency and profitability. Business expansion through setup branches paves way bringing out large geographical area customer coverage by the banks. Thereby exploring the unexplored of clients is possible. Even though efficiency of banks improved over the period of study, Indian banks are far behind to the performance of global banks. Banks have to take steps to improve the efficiency by adopting new technologies. Added thrust is required for enhancing the non-interest income. This can significantly improve profitability. Non-interest income can be improved through undertaking more of fee based activities, besides the traditional fund based activities like providing credit. In this regard, it may be pointed out that higher investments in technology would help to improve the non-interest income of banks.

The profitability of the Bank is expected to remain under pressure due to increased cost of borrowings, declining interest spreads and lower fee income due to slowdown in retail lending. It has been concluded that the number of offices and number of employees did not directly influenced the business performance. It shows that the business performance and efficiency of the Bank is improved during the study period. However profit earning capacity and profitability ratios are remains under pressure due to increase NPAs.

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