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Cost benefit analysis of State Bank of India and its associates

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Abstract
Cost-benefit analysis is a standard decision making tool for determining the efficiency of planned projects. Efficient fund management strategy is necessary in order to raise funds from various sources and utilise them effectively for making profit. The present study aimed to analyse the cost benefit framework of State Bank of India and its associate banks. The cost benefit performance of the selected banks are analysed for the period of 10 years from 2005 -06 to 2014 -15 using ratios namely cost of deposits, cost of borrowing funds, return on advances, return on investments, total deposits as percentage of total liabilities, total credit as percentage of total deposits, credit to deposit ratio. The results depicts that State Bank of India have low rate of cost of deposits and return on advances whereas State Bank of Patiala secured high rate. State Bank of Bikaner & Jaipur and State Bank of India secured high return on investment, however State Bank of Patiala have maintained low rate of return on investments. The multiple regression results describes that cost of deposit is an important dimension that foster the return on advances whereas return on investment and total investment as percentage of total deposits are negatively influencing the return on advances.

Keywords: cost benefit analysis, efficient fund management and return on advances

1. Introduction
The economic development of a nation is largely dependent on the efficient banking system; it caters to the needs of credit for all the sections of the society. The financial sector reforms started in early nineties have brought substantial changes in Indian banking sector. These reforms led to the emergence of new banks, innovative product and services, improving the financial soundness and credibility of banks, strengthening of the institutional structure and ultimately heightened competition in the banking industry. In this context, it is essential for the banking industry to adopt the effective, practical and competitive strategies to survive in the high tech banking environment and implement suitable fund management strategies to improve the profitability and overall efficiency of the banks.

Cost-benefit analysis is a standard decision making tool for determining the efficiency of planned projects. Efficient fund management strategy is necessary in order to raises fund from various sources and utilise them effectively for making profit. The success of bank fund management depends on selection of sources and uses of funds. The source of funds consists of deposits, share capital and borrowings. Deposits are considered as the primary sources of funds and its size determines the funds available for profitable deployment, share capital is the owned funds serve as a protection against risk and insolvency. In order to meet the long and short term deficiency, the bank borrows funds from central bank and money market. With the consideration of risk and return aspects, these funds are to be deployed in different investment avenues. However, one of the major difficulties in risk mitigation investment is that benefits are by nature uncertain (Atul Bansal, 2014) [1]. Cost efficiency measures the cost performance of a banking firm and relates with the best practice in which the bank can produce the maximum output under the same exogenous conditions. It is necessary for the banks to construct effective fund management strategy in order to reduce the risk and generates the returns sufficient to meet the operational cost and reasonable return on share capital.

State bank of India is the oldest and largest commercial bank in India, in terms of market capitalisation, total assets, number of branches, and profits.

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It is the second largest bank in the world, in number of branches and offers full range of products and services to its customers, spreading economic growth to rural areas and providing financial inclusion for all the people. The bank built an extensive branch network in the rural areas and availed banking services to ten millions of people in the country who have lacked to access basic financial services. In the intervening period of time in June 2016, the Cabinet approved the merger of State Bank of India (SBI) and five of its subsidiary banks to make it a global-sized bank. The merged entity will become a larger bank with an asset base of about Rs. 37 lakh crore with 22,500 branches, 58,000 ATMs and also have over 50 crore customers. Even though the bank has large scale of operation, it is essential to adopt effective cost benefit strategies to make effective utilisation of available resources in order to increase operational efficiency, profitability and competing with global banks. Hence the present study has undertaken to analyse the cost benefit framework of State Bank of India and its associate banks.

2. Review of Literature

Atul Bansal (2014) [1]. has investigated cost benefit analysis of select nationalised banks namely Bank of Baroda, Bank of India and Dena Bank during 2008-09 to 2014-15. The study stated that nationalised banks prefer deposits as cheaper mode of fund mobilisation and advances as more profitable utilization of funds, because of their efficient marketing strategies and sophisticated risk management. However, these banks prefer borrowing funds from the RBI to mobilize funds and invest the maximum share of their funds in the government securities as these are less risky with more returns. High cost of deposit in these banks are due to the fixed government rules and bind them not to make flexible rate of interest for deposits according to the market situation. Banks would have adopted the effective, practical and competitive strategies to survive in the high tech banking environment.

Vhokto Kumar Biswas and Kartik Chandra Mondal (2012) [15] stated that management of funds in commercial bank is a significant issue for its growth and stability. The study examined the position of fund management, profitability, growth, stability, and productivity trends of Janata Bank Ltd and Agrani Bank Ltd in Bangladesh during the period of 2000- 2009 and 2004 - 2008 respectively. The results indicates that fund management practice of the selected banks are not in a good position due to heavy stuck up advances, low recovery rates, excessive over dues, and outstanding advances. The recent financial reforms introduced by the Ministry of Finance and Bangladesh Bank have improved the situation. The overall profitability, productivity, and stability of the banks are increasingly improving through the application of modern fund management techniques like Credit Risk Grading System (CRGS), Investment Management Portfolio, etc reducing cost of fund curtailing excess man power, reducing burden of the bank and increasing the spread activities of the bank.

Debaprosanna Nandy and Manas Kr. Baidya (2012) [3] examined the technical efficiency of state bank of India and its subsidiaries before and after their hypothetical merger. The study used two DEA models namely CCR (Charnes, Cooper and Rhodes) and BCC (Bankers, Chardes and Cooper) to assess the technical efficiencies of selected Indian commercial banks for the financial year 2009-10.

The results reveal that the merger proposal of SBI and its associates may bring full technical efficiency but not scale efficiency of the merged entity. In order to avail both technical and scale efficiency, merged SBI has to reduce the number of employees substantially and should follow the prudent operating practices of three peer banks namely Corporation Bank, Axis bank, and Federal Bank.

M. R. Shollapur and Y. G. Baligatti (2010) [7] examined the profitability of funds management of the select Indian banks with a cost-benefit perspective. The study aimed to assess the cost of sources of funds and returns from the deployment of funds. Sample of 12 public sector banks were taken and reclassified as High Profile Banks (HPBs), Medium Profile Banks (MPBs) and Low Profile Banks (LPBs) based on their performance. The overall cost of funds and return funds for all the banks has maintained a decreasing trend. HPBs have relatively performed better than MPBs and LPBs in reducing both the costs and improved their performance in terms of return on investments. On the other hand the LPBs have registered a higher return than the other segments.

3. Objectives of the Study
- To analyse the cost of sources of funds and its investment returns of State Bank of India and its associates
- To examine the relationship between cost of funds and its effective utilisation
- To offer suggestions to raise funds at least cost and profitable deployment of funds in different investment avenues

4. Methodology
The present study is analytical in nature. For the purpose of analysis, State bank of India and its associate banks namely State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala and State Bank of Travancore are considered as sample. The study is purely supported by the secondary data drawn from the CMIE prowess database, official websites of the selected banks and various books and journals are also used. It covers a period of 10 years starting from 2005 - 06 to 2014 - 15. The cost benefit analysis of selected banks is examined through different ratios namely cost of deposits, cost of borrowing funds, return on advances, return on investments, total deposits as percentage of total liabilities, total credit as percentage of total deposits, total credit to deposit ratio. Correlation and regression analysis were used to test the hypotheses.

5. Hypotheses
H01: There is no significant relationship among the selected ratios of State Bank of India and its associate banks
H02: There is no effect of selected variables on Return on Advances

6. Results and Discussion
The cost benefit analysis of State Bank of India and its associates are analysed using the following ratios:

6.1 Cost of Deposits
Deposits constitute a vital source of funds required for banking business and its risk-return profiles directly affects the profitability of the banks. The components of deposit

constitute fixed, current, and savings deposits. The average cost of deposit is a percentage of interest cost to total deposits that can be used as an indicator for analysing the cost efficiency of deposits and overall profitability of the banks. The information relating to cost of deposits of the banks covered in the study is given in Table 1

Table 1: Cost of Deposit of State Bank of India and Associate Banks (In Percentage)

Banks / Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	4.77	4.22	4.60	4.13	4.10	4.82
2007	4.29	4.61	4.88	4.52	4.88	4.79
2008	5.04	5.72	6.27	5.78	6.43	6.11
2009	5.11	6.28	6.26	6.38	7.19	5.94
2010	5.39	5.62	5.67	5.40	6.45	5.40
2011	4.63	5.29	5.22	5.14	5.59	5.37
2012	5.33	6.23	6.91	6.42	6.66	6.11
2013	5.61	6.44	7.17	6.64	7.21	6.93
2014	5.60	6.59	7.41	6.57	7.48	7.49
2015	5.65	6.49	6.79	6.76	7.28	7.43
MEAN	5.14	5.75	6.12	5.77	6.33	6.04
SD	0.46	0.823	0.98	0.94	1.13	0.99
CV	8.98	14.32	16.10	16.29	17.86	16.32

Source: Computed data from CMIE Prowess

The above table portrays that cost of deposits of State Bank of India and it associate banks during 2006-2015. The cost of deposits of selected banks shows fluctuating trend and the mean value reveals that the State bank of Patiala have registered a higher cost of deposits (6.33), followed by State Bank of Hyderabad (6.12), and State Bank of Travancore (6.04) indicates lower productivity of fund management and State Bank of India has recorded lowest rate of cost of deposits (5.14) leads to increase the profit level. In terms of consistency, State Bank of India has maintained high consistency in the distribution followed by State Bank of Bikaner & Jaipur.

6.2 Cost of borrowings
Bank acquire funds from different sources namely from customers, money markets, inter-bank and short term institutional credits and certificate deposits in order to meet its short term requirements and long term investments. These funds are mobilised both in national and international money markets. However, these markets are more competitive, the funds raised in such markets are more volatile than deposits. Hence, funding the assets through these sources would entail liquidity risk. Cost of borrowings is calculated as a percentage of interest on borrowings to total borrowings reveals the efficiency of cost of borrowed funds. The information relating to cost of borrowings is given in Table 2.

Table 2: Cost of Borrowings of State Bank of India and Associate Banks (In Percentage)

Banks / Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	3.71	1.91	2.80	1.72	3.12	0.11
2007	2.6	2.31	1.89	0.32	1.19	0.09
2008	4.02	1.85	1.39	0.06	1.13	0.23
2009	3.04	3.90	1.61	0.24	2.13	0.76
2010	1.19	1.05	0.68	4.47	0.28	0.30
2011	2.14	1.06	0.70	2.89	0.70	1.08
2012	3.06	2.71	0.83	3.30	0.47	0.88
2013	2.44	1.61	0.52	5.57	1.37	0.74
2014	2.81	4.22	2.48	4.01	0.96	1.74
2015	1.94	5.48	1.22	0.76	0.90	3.33
MEAN	2.69	2.61	1.41	2.33	1.22	0.93
SD	0.835	1.473	0.79	1.988	0.840	0.986
CV	30.99	56.47	55.69	85.14	68.62	106.36

Source: Computed data from CMIE Prowess

The cost of borrowings of State Bank of India and its associates during 2006-2015 shows fluctuating trend. The State Bank of Travancore have registered lowest average cost of borrowings (0.93), followed by State bank of Patiala (1.22), and State Bank of Hyderabad (1.41) reveals favourable liquidity position in the call money market and have a positive impact on banks' profitability. State Bank of India depicts higher cost of borrowings (2.69) indicates lower productivity of funds. The coefficient of variation indicates, there is a consistency in the distribution of cost of borrowings in State Bank of India (30.99) whereas State

Bank of Travancore shows instability in the distribution of cost of borrowings.

6.3 Return on Advances
The main portion of bank revenue is derived from the return on advances. It includes interest and discount on various loans and advances namely cash credits, overdrafts, term-loans, bills purchased and discounted. Ratio of return on advances to total advances indicates the ability of banks in generating income from its lending operations. The information relating to return on advances is given in Table 3.

Table 3: Return on Advances of State Bank of India and Associate Banks (In Percentage)

Banks / Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	6.76	7.54	7.12	7.43	6.79	7.06
2007	7.36	8.34	7.87	7.71	7.72	7.64
2008	8.45	9.22	8.77	9.06	9.13	9.23
2009	8.55	10.01	9.62	9.87	10.32	9.73
2010	8.01	8.86	8.89	9.34	9.95	8.74
2011	7.93	9.15	9.09	9.41	9.81	8.75
2012	9.35	10.31	10.61	10.20	10.22	9.75
2013	8.66	10.41	10.63	10.66	10.35	10.00
2014	8.47	10.23	10.87	9.92	10.74	10.66
2015	8.64	10.24	10.43	10.45	10.45	10.59
MEAN	8.22	9.43	9.39	9.40	9.55	9.22
SD	0.73	0.97	1.27	1.09	1.30	1.19
CV	8.94	10.34	13.53	11.57	13.63	12.90

Source: Computed data from CMIE Prowess

The table portrays all the selected banks shows an increasing trend during the first four years after that it shows fluctuating trend. State Bank of Patiala (9.55) has recorded a highest average return on advances followed by State Bank of Bikaner & Jaipur (9.43), State Bank of Mysore (9.40) reveals that there is increasing volume of credit business during the study period and the ratio is comparatively low for State Bank of India (8.22). The coefficient of variation depicts State bank of India have maintained stability in return on advances as compared to other banks.

6.4 Return on Investment
Investment of bank funds is intended to meet the requirements of Statutory Liquid Ratio (SLR). The main purpose of this is to maintain the liquidity needs and earning fair rate of return with limited risks. Return on investment is an indicator of efficiency with which banks deploys their assets. Therefore, the return on investment is a key factor in determining banks profitability. It reveals the impact of movements of market interest rates on the portfolio value. The information relating to return on investments is given in Table 4.

Table 4: Return on Investment of State Bank of India and Associate Banks (In Percentage)

Banks / Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	8.60	9.08	8.3	7.73	7.06	8.46
2007	7.01	6.96	7.12	6.71	5.96	7.69
2008	6.30	6.73	7.03	6.91	6.45	6.75
2009	5.64	7.13	6.55	6.20	6.87	6.48
2010	6.00	6.25	6.34	6.73	6.37	6.05
2011	6.71	7.33	6.47	7.11	7.54	6.41
2012	7.67	6.99	7.74	7.17	6.78	6.45
2013	7.75	7.23	7.62	6.90	7.25	6.67
2014	8.01	8.74	8.19	7.14	7.43	7.96
2015	7.34	8.21	7.26	7.21	7.06	9.02
MEAN	7.10	7.46	7.26	6.98	6.88	7.19
SD	0.94	0.91	0.70	0.40	0.50	1.01
CV	13.29	12.21	9.58	5.74	7.24	14.08

Source: Computed data from CMIE Prowess

The above table portrays return on investment of State Bank of India and its associates during 2006-2015. The ratio shows a fluctuating trend during the study period. The State Bank of Bikaner and Jaipur (7.46) have demonstrated a higher average return on investments followed by State Bank of Hyderabad (7.46) and State Bank of Travancore (7.19) indicates that these banks invested their money in appropriate investments. State Bank of Patiala secured lowest average (6.88), adversely affects the profitability of bank funds. The results of coefficient of variation explain that State Bank of Mysore (5.74) has stability in the distribution of return on investment followed by State Bank

of Patiala (7.24) whereas State Bank of Travancore (14.08) shows less stability.

6.5 Ratio of deposits to total liabilities
This ratio helps to know the allocation of deposits in the total source of funds viz long term and short term borrowings. Higher the ratio indicates the banks preference for deposits in their resource mobilisation. In addition, a higher share of deposits generally coexists with lower size of borrowings and vice versa. The information relating to percentage of total deposits to total liabilities is given in Table 5.

Table 5: Total deposits as percentage of total liabilities of State Bank of India and Associate Banks (In Percentage)

Banks Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	76.91	78.85	83.42	84.65	81.61	81.51
2007	76.84	82.53	84.61	82.04	82.56	81.42
2008	74.42	82.66	81.11	83.04	82.24	80.14
2009	76.90	84.41	81.33	81.30	86.19	85.19
2010	76.30	84.92	82.56	85.62	84.85	85.58
2011	76.26	85.41	83.06	82.92	83.68	81.93
2012	78.02	84.75	83.45	83.05	80.56	82.99
2013	76.67	83.70	83.28	84.70	81.63	83.23
2014	77.70	81.13	84.47	83.08	78.45	84.85
2015	76.86	82.19	84.25	82.98	79.25	86.25
MEAN	76.69	83.06	83.15	83.34	82.10	83.31
SD	0.97	2.02	1.20	1.30	2.39	2.07
CV	1.26	2.43	1.45	1.56	2.91	2.48

Source: Computed data from CMIE Prowess

The ratio of deposits to total liabilities shows fluctuating trend during the study period. State Bank of Mysore have registered highest average ratio (83.34) followed by State Bank of Travancore (83.31), State Bank of Hyderabad (83.15) and State Bank of Bikaner & Jaipur (83.06) reveals these banks have major portion of deposits in its liabilities whereas State Bank of India recorded relatively lower rate deposits (76.69). In terms of consistency, all the selected banks were maintained consistency in the distribution of deposit to liabilities ratio.

6.6 Ratio of investment to deposit ratio

The bank deposits are invested in different sources namely loans and advances, government and corporate securities. Secured investments offer low rate of income compared to high risk investments namely loans and advances, corporate securities etc. The information relating to ratio of investments to deposits is given in Table 6

Table 6: Total Investment as percentage of Total Deposits of State Bank of India and Associate Banks (In Percentage)

Banks Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	42.77	36.57	41.90	34.78	37.53	40.89
2007	34.25	30.67	33.54	31.74	31.54	31.36
2008	35.26	30.78	31.99	30.60	29.60	32.11
2009	37.19	28.04	33.60	34.57	28.38	31.47
2010	36.78	29.53	32.90	29.56	28.14	31.14
2011	31.65	25.11	32.10	29.91	25.38	30.82
2012	29.91	27.07	29.62	29.36	27.76	31.39
2013	29.17	27.94	29.97	29.45	27.02	32.17
2014	28.60	24.03	28.67	29.77	27.43	31.28
2015	30.55	26.28	28.03	27.35	28.62	27.25
MEAN	33.61	28.60	32.23	30.71	29.14	31.99
SD	4.49	3.57	3.94	2.36	3.36	3.42
CV	13.36	12.49	12.23	7.69	11.54	10.69

Source: Computed data from CMIE Prowess

The above table reveals that all the selected banks shows fluctuating trend during the study period. State Bank of India have recorded highest average rate of investment on deposits (33.61) followed by State Bank of Hyderabad (32.23) and State Bank of Travancore (31.99) indicates that major portion of funds are deployed in low return investments such as deposits, government securities than in high risk securities. The ratio is relatively low for State Bank of Bikaner (28.60) and State Bank of Patiala (29.14). The coefficient of variation of investment to deposit ratio depicts that State Bank of Mysore have maintained high

consistency in the distribution whereas State Bank of India shows less stability in the distribution.

6.7 Credit to Deposit ratio

This ratio reveals how much of the advances lent by banks are done through deposits. It is the proportion of loan-assets created by banks from the deposits received. The higher the ratio, higher deployment of deposits for credit business and higher will be the productivity of funds. The outcome of this ratio reflects the ability of the bank to make optimal use of the available resources. The information relating to credit to deposits is given in Table 7

Table 7: Credit to Deposit ratio of State Bank of India and Associate Banks (In Percentage)

Banks / Year	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
2006	68.89	73.27	61.32	71.81	65.66	72.57
2007	77.46	72.07	67.73	74.77	73.42	79.49
2008	77.55	73.52	71.54	76.57	74.94	79.59
2009	73.11	76.10	69.94	77.82	72.64	77.55
2010	78.58	76.37	72.39	75.97	71.80	75.59
2011	81.03	76.52	73.02	78.73	75.56	79.17
2012	83.13	79.98	78.04	79.37	79.25	77.44
2013	86.94	79.78	79.29	78.87	83.23	79.75
2014	86.76	86.87	80.04	80.38	84.68	77.69
2015	82.45	82.56	80.71	78.75	84.83	75.45
MEAN	79.59	77.70	73.40	77.30	76.60	77.43
SD	5.720	4.614	6.222	2.572	6.291	2.316
CV	7.187	5.938	8.477	3.328	8.213	2.991

Source: Computed data from CMIE Prowess

The credit to deposit ratio of all the selected banks shows fluctuating trend during 2006-2015. State Bank of India have recorded highest average rate of credit to deposit (79.59) followed by State Bank of Bikaner & Jaipur (77.70), State Bank of Travancore (77.43) and State Bank of Mysore (77.30), these banks were distributed their major portion of deposits as loans and advances which is above the standard ratio of 60 percent. It indicates that inefficient utilisation of deposits and it adversely affects the profitability. The standard deviation indicates that State bank of Travancore maintained high consistency in the distribution of credit to deposit ratio.

6.8 Correlation Analysis
H01: There is no significant relationship among the selected ratios of State Bank of India and its associate banks

Table 8: Results of Correlation analysis of selected Ratio

Banks / Variables	State Bank of India	State Bank of Bikaner & Jaipur	State Bank of Hyderabad	State Bank of Mysore	State Bank of Patiala	State Bank of Travancore
X1 and X2	-.263	.536	-.266	.256	-.451	.760*
X1 and X3	.681*	.970**	.944**	.945**	.938**	.939**
X1 and X4	.133	-.089	.251	-.277	.281	.252
X1 and X5	.231	.363	.035	-.175	-.194	.536
X1 and X6	-.485	-.761*	-.806**	-.538	-.729*	-.533
X1 and X7	.591	.789**	.883**	.858**	.773**	.155
X2 and X3	-.089	.509	-.409	.428	-.601	.712*
X2 and X4	.255	.467	.583	.176	.124	.525
X2 and X5	-.196	-.280	.254	.674*	.128	.634*
X2 and X6	.311	-.382	.519	-.403	.761*	-.604
X2 and X7	-.391	.599	-.486	.369	-.521	-.138
X3 and X4	-.188	-.104	.119	-.244	.405	-.015
X3 and X5	.175	.425	.142	-.032	-.114	.604
X3 and X6	-.711*	-.802**	-.874**	-.628	-.884**	-.689*
X3 and X7	.657*	.761*	.947**	.890**	.753*	.277
X4 and X5	.502	-.805**	.514	.434	-.328	.115
X4 and X6	-.154	.105	.123	-.136	-.301	.138
X4 and X7	.201	.391	.075	-.230	.410	-.477
X5 and X6	-.299	-.537	-.193	-.218	-.054	-.492
X5 and X7	.254	-.010	.269	-.272	-.647*	-.323
X6 and X7	-.962**	-.743*	-.946**	-.641*	-.653*	-.494

Source: Computed data from CMIE Prowess
Note: *.correlation is significant at the 0.05 level (2-tailed)
**.correlation is significant at the 0.01 level (2-tailed)

The above table depicts the correlation results among the selected ratios of State bank of India and its associate banks. The results indicates that there is a high degree of positive correlation between Cost of Deposits (X1) and Return on Advances (X3) of all the selected banks and it is statistically significant at one percent level. The Total deposit to total liabilities (X6) of all the selected banks is negatively correlated with Return on Advances (X3) and Credit to Deposit Ratio (X7), and the results are statistically significant. There is low degree of negative relationship between total deposit to total liabilities (X5) and total investment to total deposit (X6) for all the selected banks.

6.9 Multiple Regression Analysis
The multiple regression analysis is used to explain the variance of the dependent variable Return on advances by independent variables namely Cost of Deposit (X1), Cost of Borrowings (X2), Return on Investment (X3), Total Deposit as Percentage of total liabilities (X4), Total investment as Percentage of total deposits (X5), Total credit as percentage of total deposits (X6). The regression model is defined as
$Y= a+ bx1+ bx2+bx3+bx4+bx5+bx6+e$

Table 9: Model Summary of Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.959	.921	.912	.3437

a. Predictors: (Constant), total credit as percentage of total deposits, Cost of Borrowings, total deposits as % of total liabilities, Return on Investment, Cost of Deposits, Total investment as % of total deposits

From the results of multiple regression analysis, the R-value (.959) indicates high degree of multiple correlations between the dependent and the selected independent variables. The adjusted R square value depicts that 91.2% variance of return on advances is explained by the selected independent variables and the remaining 9.8% is about the influence of unregistered or not considered factors.

Table 10: Significance Test of ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	72.562	6	12.094	102.356	.000[b]
Residual	6.262	53	.118		
Total	78.824	59			

a. Dependent Variable: Return on Advances
b. Predictors: (Constant), total credit as percentage of total deposits, Cost of Borrowings, total deposits as % of total liabilities, Return on Investment, Cost of Deposits, Total investment as % of total deposits

The ANOVA results reveal that the six independent variables in the standard model are significantly predicting the dependent variable Return on Advances. The calculated F value (102.356) is greater than the critical value (9.27), hence the null hypothesis is rejected indicates goodness of fit of the regression model.

Table 11: Multiple Linear Regression Coefficients

Model	Unstandardised Coefficients		Standardised Coefficient	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Intercept	.766	3.443		.223	.825		
Cost of Deposits (x1)	.871	.063	.717	13.9	.000	.563	1.78
Cost of Borrowings (x 2)	.080	.035	.095	2.301	.025	.885	1.13
Return on Investment (x 3)	-.140	.062	-.093	-2.257	.028	.874	1.14
Total Deposit as % of total liabilities (x 4)	.055	.024	.139	2.276	.027	.400	2.50
Total investment as % of total deposits (x 5)	-.063	.022	-.210	-2.912	.005	.289	3.46
Total credit as %of total deposits (x 6)	.021	.017	.092	1.257	.214	.278	3.59

a. Dependent Variable: Return on Advances

ROA = .766 + .871 Cost of Deposits + .08 Cost of Borrowings - .14 Return on Investment + .055 Total deposits as % of total liabilities - .063 Total investment as % of total deposits +.021 Total credit as % of total deposits

The absolute value of β (Beta) in the above table indicates the order of importance of predictors. The variable with highest beta value is relatively most important predictor variable. On examining the contributions made by the independent variables to the model, it was found that cost of deposits made the biggest contribution to the dependent variable (.871). It was followed by return on investment (-.140), cost of borrowings (0.80), total investment as percentage of total deposits (-.063), total deposit as percentage of total liabilities (.055), and total credit as percentage of total deposits (.021), respectively. However, cost of deposits and total credit as percentage of total deposits have significant contribution towards dependent variable at one percent level, rest of the variables are significant at five percent level except total credit as percentage of total deposits.

The Variance Increase Factors (VIF) values for all the variables shows less than 10, and the tolerance level is higher than .10, implying that there is no multicolinearity among the independent variables.

7. Findings and Recommendations
- The results depicts that among the selected banks State Bank of India have low rate of cost of deposits as well as return on advances, whereas State Bank of Patiala secured high rate, hence these banks should analyse the cost of funds through effective costing system.
- With regard to return on investment, State Bank of Bikaner & Jaipur and State Bank of India secured high rate indicate that effective utilisation of funds during the study period; however, State Bank of Patiala have maintained low rate of return on investments, it is necessary to utilise the optimum level of available resources to increase operational efficiency and revenues.
- The State Bank of India and state bank of Mysore borrowed money at high rate of interest, thus these banks prefer to raise funds through call money market with soft interest rates.
- The average credit to deposit ratio of selected banks shows above 70 percent, depicts that all the selected banks were deployed their major portion of deposits in credit business than investing in other sources. Therefore, banks need to invest their excess deposits in profitable avenues such as security market.
- The multiple regression results describes that cost of deposit is an important dimension that foster the return on advances whereas return on investment and total investment as percentage of total deposits are negatively influencing the return on advances.

8. Conclusion

Fund management strategy essentially includes rising of funds, their effective utilisation and generating sufficient revenues to meet the operational as well as financial costs and contributes a reasonable rate of return on capital. The study reveals that bank should minimise the cost of raising funds and make profitable deployment of these funds in different investment avenues. Even though the State Bank of India and its associates have wide range of network and large scale of operations, the banks need to improve its overall fund management practices in order to increase overall efficiency and profitability.

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