

An Evaluation of the Profitability of Indian Commercial Banks (A Case Study of Top Public and Private Sector Banks)

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ABSTRACT

Since the introduction of New Economic policy in 1991, private sector banks have shown a remarkable presence in the banking space of India. These banks are became an natural part of this fastest growing service sector. Now these banks are giving a challenge to well establish and trustworthy public sector banks of India. Both types of banks have their own merits and demerits but they are working with an aim of wealth creation and economic development of the country. This paper is an attempt to compare the recent financial profitability of these banks by taking the data of top ten public and private sector banks as a suitable sample. To measure the profitability of these banks, various accounting ratios are used along with their proper analysis and interpretation. With the help of financial statements of these banks, this paper also focuses on finding the variation between the profitability of public and private sector banks.

Keywords: Net Interest Margin, Return on Assets, Public Sector Banks, Operating Ratio, Banking efficiency, Private Sector Banks.

INTRODUCTION:

Commercial bank is one of the most important components of an economy. Indian commercial banks are also play a key role in social and economic development of the country. These banks are the back bone of our economy because they directly affect the output, income and employment level. Being a largest service sector industry and have an influence on almost each economic activity, a periodical evaluation the financial performance of these banks is the need of the hour. Through the analysis of the financial performance of these banks we can also able to understand the positive of negative direction of our economy.

In accounting practices various tools and methods are developed to measure the financial performance. Gross profit Ratio, Net Profit Ratio, Operating Ratio and Operating Profit Ratio are the traditional accounting ratios to measure the profitability of any business organisation. Some ratios are specially developed for the analysis of the profitability of only banking sector, such as Return on Assets (ROA), Banking Efficiency (BE) and Net Interest Margin (NIM). With the analysis and interpretation of these ratios we can easily compare and assess their performance in a systematic manner. These ratios are very helpful to take any decision regarding the financial management efficiency of a bank..

Commercial bank refers to an institute or an organization which performs the function of accepting deposits, granting loans, making investments, with an aim to earn profit from these. In our country commercial banks are be divided mainly in following two categories:

Public Sector Banks:

A commercial bank in which Central Govt. of India holds majority shares and also managed or controlled by the central Govt. of India, is known as Government Bank or Public Sector Bank. These banks are one of the major components of Indian service sector. Majority of these banks were established before our independence and have a greater credibility of general public. As on 31st January 2018 total 21 public sector banks are operational

in India. They are holding on majority of total deposits and advances of the entire banking sector of India.

Private Sector Banks:

A commercial bank controlled, managed and operated by private entities is called Private Sector Bank. Since the introduction of New Economic policy in 1991, growth of these banks in our country is appreciable and they also became an important part of our economy. As on 31st January 2018 total 23 private sector banks are operational in India. In the terms of no. of branches, no. of employees' amount of deposits and advances public sector banks are well ahead of private sector banks,

LITERATURE REVIEW:

Review of literature is a critical analysis of work related to our research topic. There are many books, reports; research papers etc are available on the analysis of the profitability, performance and various financial aspects of the Indian Banking Sector. Few of them are as under:

Desai (1978) emphasized on providing for the management of the productivity related staff development technique.

Kulkarni (1979) has suggested that banks should try to make the developing business as successful as possible, to reduce the cost and increase the productivity.

Venkatachalam (1979) gave the reasons for the erosion of the bank profits and the profitability in recent years.

Nayan K. (1982) conducted a study on the performance evaluation of commercial banks and presented a performance evaluation model.

Joshi (1986) has suggested that profit planning at micro and macro level for the banking industry to overcome the trend of declining profitability.

Singh (1990) has analyzed branch productivity , per employee productivity of public sector banks and SBI at constant price.

Amita B. (1996) examined the policy constraints on the profitability of the Indian scheduled commercial banks.

B. Janki (2002) stated that the banking need to upgrade the technology to improve operating efficiency and better customer service.

Bhatia (2007) found that the amount of the NPAs has been seen on a continues and reached at alarming level for the financial institutions.

OBJECTIVES:

It is necessary to determine objectives before starting any research study. There are three main objectives of this study:

- i. To compare the financial profitability of the Public and Private Sector banks on the basis of Banking Profitability Ratios for the Financial Year 2016-17.
- ii. To measure the efficiency of the financial management of top commercial banks of India.
- iii. To analyze the variation between the profitability of the Public and Private Sector banks.

LIMITATIONS :

- i. This research study is based on only top ten public sector and private sector banks of India, which are selected on the basis of the their total assets as on 31st March 2017.
- ii. This research study is based on the financial performance of these banks only for F.Y. 2016-17.
- iii. This research study is based on the analysis of the performance on the basis of the selected Banking Profitability Ratios.

HYPOTHESIS:

Hypothesis is basically an assumption, which is useful to clear the objective of the research study. For the comprehensive analysis and to get a fair conclusion of above objectives we can take following two null hypotheses:

First Null Hypothesis - for the analysis of the profitability from the operating activities (Net Interest Margin – NIM).

(Ho1):“There is no significant difference between Net Interest Margin (NIM) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

Second Null Hypothesis - for the analysis of the cost of the operating activities (Operating Ratio - OR)

(Ho2):“There is no significant difference between Operating Ratios (OR) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

RESEARCH METHODOLOGY:

This quantitative research study is mainly based on secondary or published data. Financial data of top ten public and private sector banks are collected from the annual reports of these banks. For the Analysis or interpretation of data and testing the hypothesis it is essential to use statistical and accounting methods or research tools. So following accounting ratios, related with the banking profitability applied for this purpose:

(a) Net Interest Margin (NIM):

$$= \frac{\text{Interest Earned} - \text{Interest Expended}}{\text{Total Assets}}$$

(b) Return on Assets (ROA):

$$= \frac{\text{Operating Profit}}{\text{Total Assets}}$$

Operating Profit = Total Revenue – Operating Cost

Total Revenue = Interest Earned + Non Interest Income

Operating Cost = Interest Expended + Non Interest Expenses

(c) Operating Ratio (OR):

$$= \frac{\text{Operating Cost}}{\text{Revenue from operation (Interest Earned)}}$$

(d) Banking Efficiency (BE) or Non Interest Expenses Ratio:

$$= \frac{\text{Non Interest Expenses}}{\text{Revenue from operation (Interest Earned)}}$$

(x) Student’s t-Test:

For the test of Hypothesis

$$t = \frac{x_1 - x_2}{s} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}}$$

BREIF FINANCIALS OF THE TOP TEN BANKS:

Indian commercial banking system is very old organised and well established sector. Various types of more than hundred banks, with thousands of the branches and ATMs providing their services to more than 700 millions of customers. All the commercial banks of our country are working under the strict control, guidance and regulation of Reserve Bank of India, the central bank of India. Here is the brief financial profile of the top ten public and private sector banks of India:

**Table 1: Top Ten Public & Private Sector Banks of India
 (On the Basis of Total Assets as On 31st March 2017) Financials: At A Glance (in Rs. Crore)**

Public Sector Banks				
S No	Bank, Head Office & Establishment Year	Total Assets	Total Deposits	Total Advances
1.	State Bank of India (SBI), Mumbai. (Est. year – 1806)	2550731.12	2044751.39	1725086.11
2.	Punjab National Bank (PNB), New Delhi.(Est. year – 1894)	704314.33	621704.02	439000.21
3.	Bank of Baroda (BOB) Vadodara.(Est. year – 1908)	672589.87	601675.17	409016.6
4.	Bank of India (BOI), Mumbai. (Est. year – 1906)	611924.75	540032.01	394132.59

Public Sector Banks				
S No	Bank, Head Office & Establishment Year	Total Assets	Total Deposits	Total Advances
5.	Canara Bank (CANARA) Bengluru (Est. year – 1906)	568464.34	495275.24	367259.78
6.	Union Bank (UNION) Mumbai (Est. Year – 1919)	443593.65	378391.58	303838.56
7.	IDBI Bank (IDBI) Mumbai. (Est. year – 1964)	347465.72	268538.1	228800.63
8.	Syndicate Bank (SYNDICATE) Manipal (Est. year – 1925)	292220.57	260560.86	205921.69
9.	Central Bank of India (CBI) Mumbai.(Est. year – 1911)	323904.78	296671.19	158250.16
10.	Oriental Bank of Commerce (OBC) Gurugram. (E.Y. – 1943)	248052.94	219339.39	174050.77
Private Sector Banks				
1.	HDFC Bank (HDFC) Maumbai (Est. year – 1994)	807130.87	643639.66	596798.02
2.	ICICI Bank (ICICI) Mumbai (Est. year – 1994)	737546.29	490039.06	526766.63
3.	AXIS Bank (AXIS) Ahmedabad (Est. year – 1993)	575172.20	414378.79	418671.22
4.	Kotak Mahindra Bank (KOTAK).Mumbai(EY 2004)	206139.28	157425.86	145406.13
5.	Yes Bank (YES) Mumbai (Est. year – 2003)	203534.59	142873.86	132262.68
6.	Indusind Bank (INDUS) Mumbai. (Est. year – 1994)	169672.04	126572.22	121982.79
7.	Federal Bank (FEDERAL) Kochi. (Est. year – 1947)	112504.27	97664.56	78839.20
8.	IDFC Bank (IDFC) Mumbai. (Est. year – 2015)	105148.46	40208.22	55799.41
9.	Jammu & Kashmir Bank(JK)Srinagar. (EY– 1938)	79415.64	72463.09	53798.53
10.	South Indian Bank (SIB) Thrissur (Est. year – 1929).	72923.74	66117.49	50338.66

Source : Annual Report F.Y. 2016-17 of All the Banks

Table 2: Interest- Non Interest Revenue and Interest- Non Interest Expenses of Top Ten Public & Private Sector Banks of India (For The Financial Year 2016-17)

(In Rs. Crore)

Public Sector Banks					
S.No.	Bank	Interest Earned	Interest Expended	Non Interest Income	Non Interest Expenses
1	SBI	175518.24	113658.5	35460.95	46472.77
2	PNB	47275.99	32282.82	8951.37	9379.38
3	BOB	42199.93	28686.52	6758.06	9296.4
4	BOI	39290.85	27464.74	6772.33	8865.8
5	CANARA	41387.64	31515.87	7554.4	8512.28
6	UNION	32659.98	23756.64	4964.6	6437.84
7	IDBI	27791.37	22039.71	3967.6	5140.81
8	SYNDICATE	23003.79	16727.82	3457.36	5500.13

Public Sector Banks					
S.No.	Bank	Interest Earned	Interest Expended	Non Interest Income	Non Interest Expenses
9	CBI	24661.33	18087.4	2875.64	6361.03
10	OBC	18422.33	13512.83	2765.52	3504.88
	Total	472211.45	327732.85	83527.83	109471.32
Private Sector Banks					
1	HDFC	69305.96	36166.73	12296.5	19703.33
2	ICICI	54156.28	32418.96	19504.48	14755.06
3	AXIS	44542.16	26449.04	11691.31	12199.91
4	KOTAK	17698.93	9572.78	3477.16	5618.5
5	YES	16424.69	10627.34	4156.76	4116.53
6	INDUS	14405.67	8343.07	4171.49	4783.08
7	FEDERAL	8677.38	5624.74	1081.81	2209.53
8	IDFC	8532.71	6515.39	1013.12	1276.98
9	JK	6685.86	4173.86	492.86	1710.46
10	SIB.	5847.08	4171.65	715.56	1176.41
	Total	246276.72	144063.56	58601.05	67549.79

Source: Annual Report (2016-17) of All the Banks

PROFITABILITY RATIOS OF THE TOP TEN BANKS:

**Table 3: Profitability Ratio of Top Ten Public & Private Sector Banks of India
 (For the Financial Year 2016-17)**

(In %)

Public Sector Banks					
S.No.	Bank	NIM	ROA	OR	BE
1	SBI	2.43	1.99	84.96	26.48
2	PNB	2.13	2.07	87.22	19.84
3	BOB	2.01	1.63	83.99	22.03
4	BOI	1.93	1.59	87.14	22.56
5	CANARA	1.74	1.57	94.4	20.57
6	UNION	2.01	1.67	87.94	19.71
7	IDBI	1.66	1.32	93.58	18.5
8	SYNDICATE	2.15	1.45	87.75	23.91
9	CBI	2.03	0.95	85.00	25.79
10	OBC	1.98	1.68	88.36	19.03
11	OVERALL	2.14	1.75	87.09	23.18
Private Sector Banks					
1	HDFC	4.11	3.19	69.93	28.43
2	ICICI	2.95	3.59	95.88	27.25
3	AXIS	3.15	3.06	85.63	27.39
4	KOTAK	3.94	2.9	73.73	31.74
5	YES	2.85	2.87	90.01	25.06
6	INDUSIND	3.57	3.21	86.87	33.20
7	FEDERAL	2.71	1.71	77.29	25.46
8	IDFC	1.92	1.67	88.23	14.97
9	JK	3.16	1.63	69.8	25.58
10	SIB.	2.3	1.67	83.58	20.12
11	OVERALL	3.33	3.04	82.29	27.43

Source: Own Computation on the basis of banking Data.

Analysis:

Net Interest Margin (NIM):

Out of the top ten public sector banks SBI has the Maximum NIM of 2.41% while IDBI has the minimum NIM

of 1.66%. In case of top ten private sector banks HDFC has the Maximum NIM of 4.11%, while IDFCI has the minimum NIM of 1.92%. So in terms of both the maximum and minimum values the NIM of private sector banks is significantly greater than the NIM of public sector banks. Four public sector banks have NIM of less than 2%, while only one private sector bank has the same. Four private sector banks have the NIM of more than 3%, while no public sector bank has the NIM of 3% or above. We can also observe such variation in overall NIM, as overall NIM of private sector banks (3.33%) is about 50% more than public sector banks (2.14%). So the performance of private sector banks is well ahead of public sector banks in terms of the NIM profitability.

Return on Assets (ROA):

Out of the top ten public sector banks PNB has the Maximum ROA of 2.07%, while CBI has the minimum ROA of 0.95%. In case of top ten private sector banks ICICI has the Maximum ROA of 3.59%, while JK has the minimum ROA of 1.63%. So in terms of both the maximum and minimum values the ROA of private sector banks is significantly greater than the public sector banks. All public sector banks (excluding PNB) have ROA between 1% to 2%. Four private sector banks have the ROA of more than 3%. We can also observe such variation in overall ROA, as overall ROA of private sector banks (3.04%) is about 70% more than public sector banks (1.75%). So the assets quality of private sector banks is better than the public sector banks.

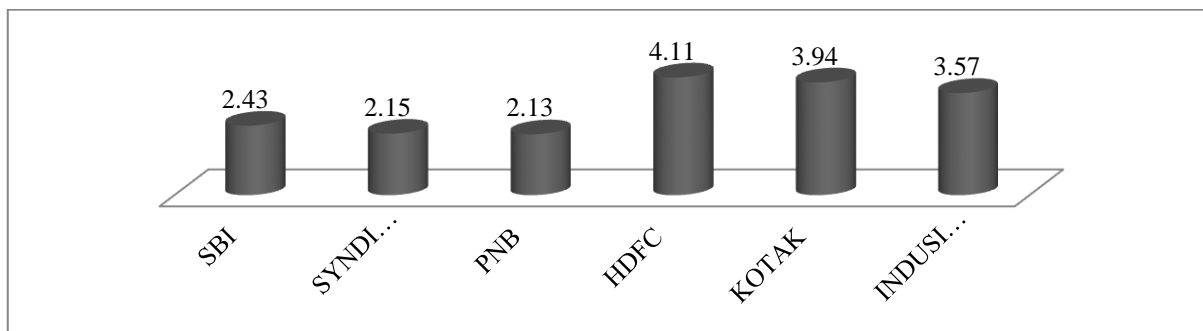
Operating Ratio (OR):

Out of the top ten public sector banks CANARA has the Maximum OR of 94.4%, while BOB has the minimum OR of 83.99%. In case of top ten private sector banks ICICI has the Maximum OR of 95.88%, while JK and HDFC has the minimum OR of 69.8% and 69.93%% respectively. All public sector banks have OR of more than 83% while only four private sector bank has the same. We can also observe such variation in overall OR, as overall OR of private sector banks (82.29%) is less than public sector banks (87.09%). So the operating cost of private sector banks is lower than the public sector banks.

Banking Efficiency(BE):

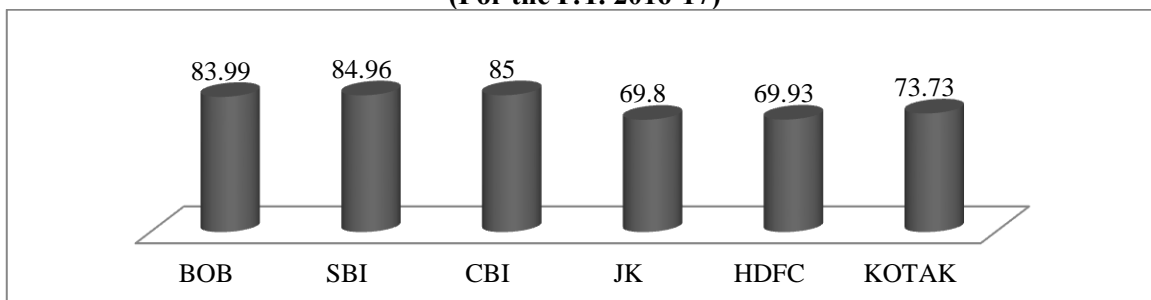
Out of the top ten public sector banks SBI has the Maximum BE of 26.48%, while IDBI has the minimum BE of 18.5%. In case of top ten private sector banks INDUSIND has the Maximum BE of 33.2%, while IDFC has the minimum BE of 14.97%. Majority of public sector banks have BE between 20% 25% while in case of private sector bank it is between 25% to 30%. So the non interest expenses of private sector banks are slightly higher than the public sector banks.

Graph 1: Top Three Public and Private Sector Banks on the Basis of Highest Net Interest Margin (Nim) (For The F.Y. 2016-17)



Source: Own Computation on the basis of banking Data.

Graph 2: Top Three Public and Private Sector Banks on the Basis of Lowest Operating Ratio (For the F.Y. 2016-17)



Source: Own Computation on the basis of banking Data.

Test of Hypothesis:

Table 04: Test of First Null Hypothesis by Student’s T-Test

(Ho1): “There is no significant difference between Net Interest Margin (NIM) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

S.No	Particulars	Public Sector Banks	Private Sector Banks
1.	No. of banks sample (n)	$n_1=10$	$n_2=10$
2.	Average NIM (x)	$x_1 = 2.01$	$x_2 = 3.07$
3.	Sum of the squares of deviations	$\sum(d_1)^2 = 0.45$	$\sum(d_2)^2 = 3.62$
4.	(S) :	$\sqrt{\frac{\sum(d_1)^2 + \sum(d_2)^2}{n_1 + n_2 - 2}} = 0.47$	
5.	Student’s T – Test	$\frac{x_1 - x_2}{s} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}} = 5.12$	
6.	Degree of freedom (d.f.)	$(n_1 + n_2 - 2) = 18$	
7.	Critical Value at 18 d.f. and 5% significance level	2.101	
8.	Result	Calculated Value > Critical Value 5.12 > 2.101 Ho1 : Rejected	
9.	Alterative hypothesis Accepted	There is a significant difference between Net Interest Margin (NIM) of the public sector banks and private sector banks of India in Financial Year 2016-17.”	

Source: Own Computation on the basis of banking data.

Table 5: Test of Second Null Hypothesis by Student’s T-Test

(Ho2): “There is no significant difference between Operating Ratios (OR) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

S.No	Particulars	Public Sector Banks	Private Sector Banks
1.	No of banks sample (n)	$n_1 = 10$	$n_2 = 10$
2.	Average OR (x)	$x_1 = 88.03$	$x_2 = 82.1$
3.	Sum of the squares of deviations	$\sum(d_1)^2 = 105.97$	$\sum(d_2)^2 = 720.03$
4.	(S) :	$\sqrt{\frac{\sum(d_1)^2 + \sum(d_2)^2}{n_1 + n_2 - 2}} = 6.77$	
5.	Student’s T – Test	$\frac{x_1 - x_2}{s} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}} = 1.99$	
6.	Degree of freedom (d.f.)	$(n_1 + n_2 - 2) = 18$	
7.	Critical Value at 18 d.f. and 5% significance level	2.101	
8.	Result	Calculated Value < Critical Value 1.99 < 2.101 Ho2 : Accepted	

Source: Own Computation on the basis of banking data.

REASONS OF VARIATION IN PROFITABILITY:

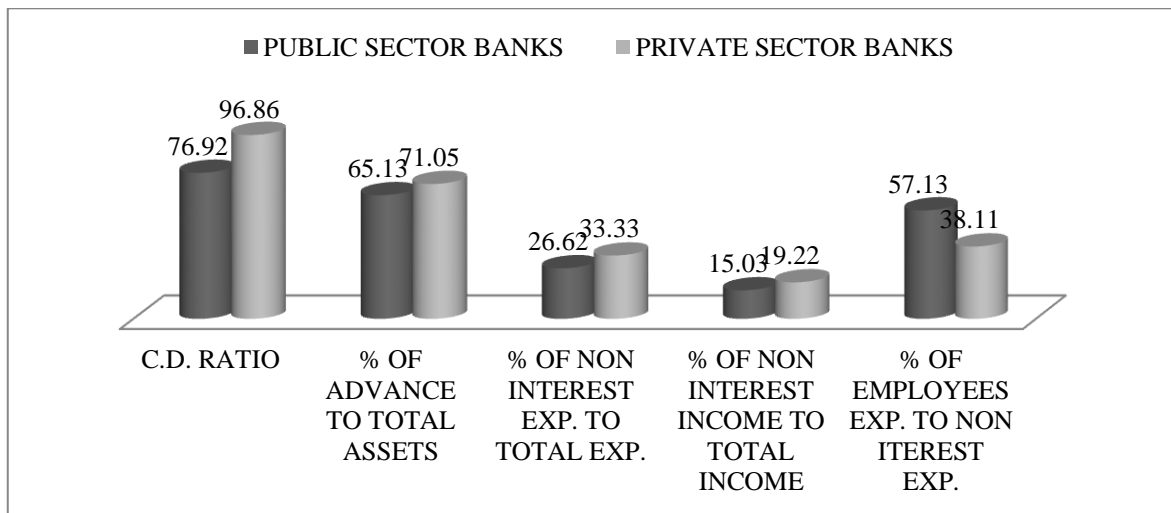
With the reference to the above tables it is noticeable that there is significant difference between the NIM of public sector banks and private sector banks, we can also observe this difference in term of ROA. In term of both these parameters private sector banks are leading over public sector banks as it is also visible in the test of first null hypothesis. However there is no significant variation in the terms of operating cost and non interest expenses, as it is also visible in the test of second null hypothesis. It means the main variation is concerned with the interest earned, interest expended and the quality of the banking assets. We can discuss the main reasons of this variation on the basis of the following points:

Assets Quality:

Cost of funds (borrowings & deposits) of private sector banks (5.65%) is just more than the cost of funds of public sector banks (5.5%). Interest paid on deposits by private sector banks is always higher than the public sector banks. However average interest earned on advances by private sector banks is 11.29%, which is also slightly higher than the 10.72% average interest earned by the public sector banks. So the main reason of variation is the quality of assets.

Private sector banks have 71.05% of total assets in form of the advances, but in case of the public sector banks this is only 65.13%. Total assets of public sector banks are 120% more than the private sector banks, while they are able to earn only 92% higher interest than the private sector banks. It indicates the lower quality of assets of or increasing Non Performing Assets (NPAs) of the public sector banks.

Graph 3: Reasons of Variation in Profitability of Top Ten Public and Private Sector Banks of Indian (For The F.Y. 2016-17)



Source: Own Computation on the basis of banking Data.

Credit Deposits (CD) Ratio:

NIM is positively linked with the ratio of Credit –Deposits (CD). Commercial banks are able to earn more interest when they allow more and more credit to the public. In this financial year private sector banks have the CD Ratio of 96.86%, which is significantly greater than the CD Ratio of 76.92% of public sector banks. It indicates effective and efficient financial management of private sector banks and also the proper utilisation of the deposits funds. It also showing that almost 1/4th of the deposits of the public sector banks remains idle and creating interest burden on the revenue.

Role of Non Interest Income:

Interest income is the main source of revenue of all the commercial banks, but now they are also generating enough revenue from other income also. This type of income known as non interest income including commission, exchange, brokerage, fees or charges, profit on sale of investments, profit on sale of fixed assets, profit on revaluation of investments, merchant banking services, etc. Out of the total revenue of the private sector banks average 19.22% is earned as non interest income, while public sector banks are earning average 15.03% from this source. So non interest income is the major source of revenue of private sector banks which leads to the higher Return On Assets.

Role of Non Interest Expenses:

Interest paid on the deposits and other borrowings is the main expenditure of all the commercial banks, but they have to spent amount on some other expenses also, these type of expenses known as non interest expenses. It includes employees benefit expenses (employees cost), rent and rates, printing and stationery, postage and telephone, marketing and selling expenses, repairs and maintenance, depreciation, insurance, director’s fees etc. etc. Out of the total expenses of the private sector banks average 33.33% is paid as non interest expenses while public sector banks are paying average 26.62% on this head. So, non interest expenses of private sector is more than the public sector banks. It is a sign of a higher establishment and other cost of the private sector banks.

Other Expenses:

Major portion of non interest expenses of both types of banks is of the payment and provision for the employees (or employees benefit expenses). In case of public sector banks out of the total non interest expenses 57.13% is meant for the employees benefit expenses but in case of the private sector banks this is only 38.11%. In spite of this, non interest expenses of private sector banks are more than the public sector banks, it means that private sector banks are spending more amount on other expenses as compare to public sector banks.

Under the head of non interest expenses private sector banks are spending 1.36% of total non interest expenses on selling and marketing while in case of public sector banks this is only 0.66%. It means selling and marketing expenses of private sector banks are more than twice that of the public sector banks.

SUGGESTIONS AND CONCLUSION:

With the analysis of the financial profitability of top public and private sector banks of India through the Ratio analysis Approach we can easily observe a significant variation between the performances of both types of banks. The analysis of data and the test of the hypothesis indicate that:

- NIM of private sector banks 50% more than public sector banks, so the performance of private sector banks is well ahead of public sector banks in terms of the NIM profitability. The assets quality of private sector banks is better than the public sector banks, because the ROA of private sector banks is about 70% more than public sector banks.
- The operating cost of private sector banks is slightly lower than the public sector banks, as OR of private sector banks is about 5% less than public sector banks. It is also a sign of better operating efficiency of private sector banks..
- Non interest income is the major source of revenue of private sector banks which leads to the higher Return On Assets. On other hand non interest expenses of private sector is more than the public sector banks. It is a sign of a higher establishment and other cost of the private sector banks.
- In the terms of operating profitability the performance of private sector banks is better than the public sector banks, but in the terms of non operating cost (non interest expenses) the performance of the public sector is better.

Ongoing through the reason of the variation in performance, public sector banks are required to improve their performance in the terms of assets quality and the credit off take. They should also to work on the NPAs with top priority to achieve greater profitability. They are also suggested to introduce more customer friendly innovative credit products for optimum utilisation of the huge amount of the deposits available. Intensive use of technology will leads to reduction in overall operating cost. They should also try to increase their non interest income by exploring other profitable items. Private sector banks are also suggested to check on their non interest expenditures.

The competition induced by the private sector banks has clearly reenergized the Indian banking sector as a whole. Competition itself is the sign of the progress, this importance is also recognise by the Reserve Banks of India. These above discussed variations have enhanced the competitive framework for the banking system in India, as the private sector banks have the higher level of the profitability based on advanced technology and lower level of the operating cost.

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