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#### Abstract

Profitability in general means excess of total revenue over total costs. Profitability is a rate expressing profit as a percentage to total assets or sales or any other variable to represent their relationship. In case of banks, the operational efficiency of the bank is determined based on its income generation through deposit mobilization and interest paid to its deposit holders and stockholders. These indicators alarms the banks to plan the dividend decisions wisely based on the volatility rate of profit acceleration. The main source of income is interest earned and discount on bills discounted. Since banks accept various types of deposits from people interest paid to customers is an important expenditure of the banks. The difference between interest earned and interest paid is known as spread and is a good indicator of banks' efficiency. The rate of profitability and volume of profits are therefore, rightly considered as indicators of efficiency in the deployment of resources of banks' profit and thereby profitability i.e. the ability to generate profits, can be increased in two ways 1.Increasing the income on the hand 2.Decreasing the expenses on the other hand. So, it is important to study about the factors which may affect the profitability of the banks.


Keywords: Burden, Non-Interest Income, Interest Income, Non-Interest Expenses, Interest Expenses.

## Introduction

As the banking institutions expand and become increasingly complex under the impact of deregulation, innovation and technological upgradation, it is crucial to maintain balance between efficiency and stability. During the last 30 years since nationalization tremendous changes have taken place in the financial markets as well as in the banking industry due to financial sector reforms. Banks, especially, public sector banks, work as catalyst agents of economic growth and prosperity by following the right kind of policies in their working depending upon the socio- economic conditions prevailing in a country. So it becomes necessary to study the determinants of profitability of the banks.

## Review of Literature

Uppal, R.K. and Kaur, R (2007) emphasized that cost should be properly managed to improve the profitability of banks because the net profits were affected by the increase or decrease of operating cost.

Jain (2006), in his article titled, "Ratio Analysis: An Effective Tool for Performance Analysis in Banks" discussed various ratios relating to profitability of the banks. The author classified the various ratios under three categories, viz. Costing Ratio, Returns / Yield Ratio and Spread Ratios. Such ratios can be used to understand a bank's financial condition, its operation and attractiveness as an investment.

## Objectives of the Study

- To study the determinants of profitability of the nationalised commercial banks through burden ratios
- To suggest better strategies to increase the profitability of select nationalized commercial banks


## Methodology of The Study

## Selection of Banks for the Study

All the 20 Nationalised Commercial Banks were considered to construct the sample companies.

## Period of Study

The study covers a period of ten years from 2001-2002 to 2010-2011.

## Descriptive Statistics

The most common descriptive statistics are those that concern the average and the variability of a set of data, and those that describe the degree of relationship between two variables. The descriptive statistics like mean, standard deviation, co-efficient of variation, skewness and range are employed to arrive at a single value that describes the characteristics of the entire group.

## Burden

Burden is the difference between non- interest expenses and the non- interest income of the bank. Non-interest expenses comprises of operating expenses, provisions and contingencies. Non-interest income consist of commission, exchange and brokerage, profit on sale of assets or investments and miscellaneous income which are influenced by the range, volume and charges of other banking services rendered by bankers, FOREX business, return from joint ventures or subsidiary etc.. Efforts of the banks have always been to reduce the burden either
by increasing non- interest income or reducing non- interest expenses or both. Lesser the amount of burden, a bank has more operationally efficient. The following six ratios related to burden have been computed for the analysis of profitability.

Ratio of Burden to Working Fund
This ratio shows the relationship between burden and working funds of the bank. The ratio of burden to working fund of the select Nationalised Commercial Banks during the study period from 2001-2002 to 2010-2011 as given in Table No. 1

TABLE NO. 1 RATIO OF BURDEN TO WORKING FUND (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.32 | 0.25 | 0.17 | 0.26 | 0.21 | 0.09 | 0.22 | 0.11 | 1.84 | 0.57 | 0.26 | 0.23 | 0.36 | 0.15 | 0.24 | 0.28 | 0.23 | 0.22 | -0.36 | 0.21 |
| 2003 | 0.38 | 0.29 | 0.25 | 0.26 | 0.21 | 0.19 | -0.16 | 0.22 | -8.00 | 0.57 | 0.30 | 0.34 | 0.36 | -0.13 | 0.60 | 0.52 | 0.26 | 0.32 | -0.40 | 0.31 |
| 2004 | 0.27 | 0.21 | 0.33 | 0.17 | 0.18 | 0.15 | -0.21 | 0.29 | -3.01 | 0.60 | 0.27 | 0.28 | 0.45 | -0.10 | 1.19 | 0.17 | 0.24 | 0.36 | -0.39 | 0.55 |
| 2005 | 0.29 | 0.22 | 0.29 | 0.38 | 0.20 | 0.34 | 0.34 | 0.32 | 0.56 | 0.72 | 0.31 | 0.10 | 0.67 | 0.54 | 0.97 | 0.73 | 0.20 | 0.28 | -0.32 | 0.42 |
| 2006 | 0.17 | 0.16 | 0.21 | 0.25 | 0.56 | 0.23 | 0.54 | 0.26 | 0.34 | 0.29 | 0.62 | 0.23 | 0.16 | 0.28 | 0.71 | 0.34 | 0.58 | 0.41 | 0.42 | 0.42 |
| 2007 | 0.22 | 0.30 | 0.15 | 0.16 | 0.30 | 0.19 | 0.24 | 0.19 | 0.34 | 0.44 | 0.32 | 0.18 | 0.30 | 0.23 | 0.34 | 0.18 | 0.26 | 0.32 | 0.28 | 0.19 |
| 2008 | 0.13 | 0.17 | 0.13 | 0.16 | 0.25 | 0.15 | 0.14 | 0.15 | 0.17 | 0.21 | 0.23 | 0.17 | 0.27 | 0.16 | 0.22 | 0.12 | 0.16 | 0.17 | 0.13 | 0.10 |
| 2009 | 0.31 | 0.23 | 0.15 | 0.13 | 0.30 | 0.19 | 0.17 | 0.10 | 0.14 | 0.31 | 0.17 | 0.11 | 0.25 | 0.26 | 0.21 | 0.13 | 0.12 | 0.15 | 0.19 | 0.14 |
| 2010 | 0.23 | 0.12 | 0.10 | 0.15 | 0.16 | 0.17 | 0.09 | 0.09 | 0.16 | 0.30 | 0.32 | 0.15 | 0.26 | 0.16 | 0.43 | 0.20 | 0.20 | 0.16 | 0.21 | 0.24 |
| 2011 | 0.32 | 0.22 | 0.10 | 0.15 | 0.65 | 0.13 | 0.51 | 0.18 | 0.22 | 0.40 | 0.32 | 0.30 | 0.31 | 0.25 | 0.45 | 0.38 | 0.20 | 0.24 | 0.28 | 0.31 |
| Mean | 0.26 | 0.22 | 0.19 | 0.21 | 0.30 | 0.18 | 0.19 | 0.19 | -0.72 | 0.44 | 0.31 | 0.21 | 0.34 | 0.18 | 0.54 | 0.31 | 0.24 | 0.26 | 0.00 | 0.29 |
| SD | 0.08 | 0.06 | 0.08 | 0.08 | 0.17 | 0.07 | 0.25 | 0.08 | 2.83 | 0.17 | 0.12 | 0.08 | 0.14 | 0.19 | 0.33 | 0.20 | 0.12 | 0.09 | 0.33 | 0.14 |
| CV | 0.29 | 0.27 | 0.42 | 0.37 | 0.56 | 0.36 | 1.31 | 0.43 | -3.91 | 0.38 | 0.38 | 0.38 | 0.42 | 1.05 | 0.62 | 0.64 | 0.51 | 0.34 | 71.13 | 0.48 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

It is surmised from Table No. 1 that State Bank of India had witnessed with the highest ratio on burden to working fund ratio ( 0.54 percent) followed by Indian bank ( 0.44 percent) and Bank of Maharastra ( 0.30 percent). This ratio is the lowest for Dena Bank (-0.72percent).

This ratio is more consistent for Andra Bank ( 0.19 percent), Corporation Bank (0.23 percent), Bank of Baroda and Canara Bank (0.24 percent) and it is inconsistent for Dena Bank ( 8.56 percent).

## Ratio of Burden to Total Income

This ratio reflects the relationship between burden and total income of the bank. Generally, the lower the ratio of burden to total income better is the profitability. Incremental value of burden always affects the profitability of the banks.

The ratio of burden to total income of the select Nationalised Commercial Banks during the study period is shown in Table No.2.

TABLE NO. 2 RATIO OF BURDEN TO TOTAL INCOME (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.24 | 0.16 | 0.19 | 0.20 | 0.19 | 0.14 | 0.26 | 0.14 | 0.29 | 0.18 | 0.20 | 0.18 | 0.22 | 0.20 | 0.20 | 0.27 | 0.18 | 0.23 | -0.35 | 0.20 |
| 2003 | 0.20 | 0.12 | 0.18 | 0.16 | 0.18 | 0.15 | -0.17 | 0.14 | 0.22 | 0.21 | 0.20 | 0.19 | 0.26 | -0.15 | 0.18 | 0.26 | 0.20 | 0.18 | -0.36 | 0.22 |
| 2004 | 0.17 | 0.15 | 0.20 | 0.16 | 0.17 | 0.15 | -0.19 | 0.17 | 0.16 | 0.21 | 0.24 | 0.19 | 0.26 | -0.10 | 0.20 | 0.25 | 0.20 | 0.19 | -0.34 | 0.17 |
| 2005 | 0.21 | 0.18 | 0.30 | 0.28 | 0.26 | 0.22 | 0.33 | 0.26 | 0.30 | 0.26 | 0.25 | 0.19 | 0.25 | 0.42 | 0.22 | 0.30 | 0.26 | 0.23 | -0.24 | 0.25 |
| 2006 | 0.20 | 0.22 | 0.27 | 0.26 | 0.33 | 0.22 | 0.34 | 0.24 | 0.29 | 0.25 | 0.25 | 0.22 | 0.28 | 0.36 | 0.26 | 0.29 | 0.28 | 0.25 | 0.29 | 0.32 |
| 2007 | 0.18 | 0.25 | 0.24 | 0.22 | 0.26 | 0.20 | 0.28 | 0.21 | 0.25 | 0.22 | 0.23 | 0.19 | 0.28 | 0.28 | 0.24 | 0.21 | 0.23 | 0.23 | 0.28 | 0.23 |
| 2008 | 0.11 | 0.16 | 0.18 | 0.15 | 0.23 | 0.12 | 0.18 | 0.15 | 0.15 | 0.17 | 0.14 | 0.17 | 0.21 | 0.17 | 0.18 | 0.14 | 0.15 | 0.14 | 0.14 | 0.11 |
| 2009 | 0.17 | 0.16 | 0.16 | 0.13 | 0.20 | 0.14 | 0.14 | 0.12 | 0.16 | 0.18 | 0.14 | 0.11 | 0.17 | 0.17 | 0.15 | 0.16 | 0.13 | 0.15 | 0.20 | 0.14 |
| 2010 | 0.15 | 0.16 | 0.14 | 0.20 | 0.17 | 0.12 | 0.11 | 0.09 | 0.13 | 0.18 | 0.21 | 0.16 | 0.18 | 0.15 | 0.17 | 0.18 | 0.12 | 0.14 | 0.18 | 0.16 |
| 2011 | 0.22 | 0.21 | 0.18 | 0.22 | 0.27 | 0.13 | 0.49 | 0.15 | 0.21 | 0.22 | 0.23 | 0.20 | 0.22 | 0.19 | 0.25 | 0.27 | 0.24 | 0.22 | 0.24 | 0.22 |
| Mean | 0.19 | 0.18 | 0.20 | 0.20 | 0.23 | 0.16 | 0.18 | 0.17 | 0.22 | 0.21 | 0.21 | 0.18 | 0.23 | 0.17 | 0.20 | 0.23 | 0.20 | 0.20 | 0.00 | 0.20 |
| SD | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.22 | 0.05 | 0.06 | 0.03 | 0.04 | 0.03 | 0.04 | 0.18 | 0.04 | 0.06 | 0.05 | 0.04 | 0.28 | 0.06 |
| CV | 0.20 | 0.21 | 0.24 | 0.26 | 0.23 | 0.25 | 1.23 | 0.33 | 0.30 | 0.15 | 0.20 | 0.16 | 0.17 | 1.05 | 0.18 | 0.24 | 0.27 | 0.21 | 84.47 | 0.30 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

Bank-wise analysis of burden to total income was analysed and it is noted that Punjab National Bank, Syndicate Bank and Bank of Maharastra are shown the highest level of burden to total income ratio ( 0.23 percent). It is followed by Dena bank ( 0.22 percent), Indian Bank ( 0.21 percent) and Indian Overseas Bank ( 0.21 percent), Bank of Baroda, Bank of India, State Bank of India, UCO Bank and Union Bank of India (0.20 percent).The ratio is the lowest for United Bank of India ( 0.10 percent).

Moreover, in the year 2002-2003 and 2003-2004, the burden to total income ratio of Central Bank of India was showing a negative figure of 17 percent and 19 percent respectively. In the same years the ratio of Punjab and Sind Bank also shows negative of 15 percent and 10 percent respectively. United Bank of India was also recorded with negative ratio for the years 2001-2002, 2002-2003, 2003-2004 and 2004-2005 with 0.33 percent, 0.36 percent, 0.34 percent and 0.24 percent respectively.

The results of dispersion shows that the ratio was consistent for Oriental Bank of Commerce ( 0.16 percent), Punjab National Bank ( 0.17 percent), State Bank of India ( 0.18 percent) and Indian Overseas Bank and Allahabad Bank ( 0.20 percent) and it was found inconsistent for United Bank of India ( 84.47 percent).

Ratio of Non- Interest Income to Working Fund
Non-interest income is known as the last component of total income of an organisation. It includes all the incomes earned by an organisation from the sources other than interest i.e., income earned by way of commission, brokerage, service charges and other receipts. From the point of view of profitability, non- interest income of an organisation is considered as an important factor. This ratio expresses the relationship between non- interest income to working funds of the banks. The increased efforts will improve the non- interest income ratio, hence, the burden can be reduced and profitability of banks may be improved. Thus, the bank must give much emphasis to increase the noninterest income so as to have higher profitability.

Table No. 3 shows the ratio of non-interest income working funds of the select Nationalised Commercial Banks during the period of study from 2001-2002 to 2010-2011.

TABLE NO. 3 RATIO OF NON- INTEREST INCOME TO WORKING FUND (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.19 | 0.21 | 0.15 | 0.13 | 0.23 | 0.12 | 0.11 | 0.14 | 1.08 | 0.58 | 0.19 | 0.18 | 0.12 | 0.22 | 0.16 | 0.10 | 0.25 | 0.11 | 0.74 | 0.13 |
| 2003 | 0.39 | 0.52 | 0.18 | 0.25 | 0.36 | 0.22 | 0.53 | 0.31 | -7.36 | 0.48 | 0.20 | 0.26 | 0.52 | 0.22 | 0.57 | 0.31 | 0.24 | 0.29 | 0.77 | 0.24 |
| 2004 | 0.39 | 0.33 | 0.21 | 0.40 | 0.26 | 0.22 | 0.67 | 0.33 | -4.81 | 0.66 | 0.21 | 0.27 | 0.59 | 0.37 | 1.23 | 0.14 | 0.20 | 0.30 | 0.83 | 0.73 |
| 2005 | 0.23 | 0.30 | 0.12 | 0.17 | 0.22 | 0.29 | 0.16 | 0.25 | 0.34 | 0.46 | 0.21 | 0.07 | 0.22 | 0.55 | 0.86 | 0.33 | 0.10 | 0.18 | 0.89 | 0.25 |
| 2006 | 0.13 | 0.11 | 0.20 | 0.14 | 0.14 | 0.15 | 0.21 | 0.19 | 0.26 | 0.17 | 0.35 | 0.14 | 0.08 | 0.09 | 0.48 | 0.16 | 0.20 | 0.20 | 0.25 | 0.18 |
| 2007 | 0.13 | 0.17 | 0.17 | 0.09 | 0.11 | 0.11 | 0.09 | 0.14 | 0.27 | 0.32 | 0.18 | 0.13 | 0.10 | 0.16 | 0.23 | 0.09 | 0.12 | 0.20 | 0.12 | 0.11 |
| 2008 | 0.17 | 0.14 | 0.11 | 0.11 | 0.16 | 0.17 | 0.09 | 0.14 | 0.22 | 0.21 | 0.20 | 0.10 | 0.14 | 0.15 | 0.20 | 0.10 | 0.12 | 0.16 | 0.16 | 0.12 |
| 2009 | 0.26 | 0.18 | 0.16 | 0.15 | 0.16 | 0.17 | 0.11 | 0.13 | 0.13 | 0.24 | 0.19 | 0.11 | 0.16 | 0.23 | 0.22 | 0.08 | 0.10 | 0.12 | 0.11 | 0.13 |
| 2010 | 0.27 | 0.10 | 0.11 | 0.11 | 0.10 | 0.26 | 0.10 | 0.18 | 0.17 | 0.26 | 0.17 | 0.10 | 0.10 | 0.21 | 0.47 | 0.12 | 0.15 | 0.17 | 0.13 | 0.22 |
| 2011 | 0.16 | 0.10 | 0.22 | 0.07 | 0.08 | 0.19 | -0.11 | 0.16 | 0.11 | 0.24 | 0.13 | 0.12 | 0.10 | 0.20 | 0.32 | 0.10 | 0.06 | 0.13 | 0.11 | 0.12 |
| Mean | 0.23 | 0.22 | 0.16 | 0.16 | 0.18 | 0.19 | 0.20 | 0.20 | -0.96 | 0.36 | 0.20 | 0.15 | 0.21 | 0.24 | 0.47 | 0.15 | 0.15 | 0.18 | 0.41 | 0.22 |
| SD | 0.10 | 0.13 | 0.04 | 0.10 | 0.09 | 0.06 | 0.23 | 0.07 | 2.78 | 0.17 | 0.06 | 0.07 | 0.18 | 0.13 | 0.34 | 0.09 | 0.06 | 0.07 | 0.34 | 0.18 |
| CV | 0.42 | 0.61 | 0.25 | 0.60 | 0.48 | 0.30 | 1.18 | 0.38 | -2.90 | 0.46 | 0.28 | 0.46 | 0.86 | 0.54 | 0.72 | 0.61 | 0.41 | 0.36 | 0.84 | 0.83 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

It could be understood from Table No. 3 that among the select banks, State Bank of India recorded with the highest ratio of non-interest income to working funds at 0.47 percent on an average it is followed by United Bank of India ( 0.41 percent), Indian Bank ( 0.36 percent), Andhra Bank and Vijaya Bank ( 0.22 percent). Dena Bank recorded with the lowest ratio of non-interest income to working fund ratio at 0.96 percent.

The ratio of Central Bank of India witnessed with 0.11 percent during 2010-2011, Dena Bank during the year 2002-2003 (7.36 percent) and 2003-2004 (4.81 percent) recorded negative figures. Maximum variability in the ratio of terms of dispersion was found in Central Bank of India (1.18 percent) followed by United Bank of India ( 0.84 percent), Vijaya Bank ( 0.83 percent) and State Bank of India ( 0.72 percent).

## Non-Interest Income to Total Income

The relationship between non- interest income and total income of the banks was studied. This ratio reveals that the percentage share of non - interest income to the total income of the banks. If the proportion of non- interest income is more, then the bank can use this amount to meet the non- interest expenses.

The non-interest income to total income ratio of the select Nationalised Commercial Banks during the study period is presented in Table No.4.

TABLE NO. 4 NON - INTEREST INCOME TO TOTAL INCOME (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.15 | 0.13 | 0.15 | 0.17 | 0.14 | 0.18 | 0.12 | 0.16 | 0.17 | 0.18 | 0.14 | 0.14 | 0.14 | 0.15 | 0.13 | 0.10 | 0.19 | 0.11 | 0.71 | 0.13 |
| 2003 | 0.21 | 0.22 | 0.18 | 0.22 | 0.16 | 0.18 | 0.55 | 0.20 | 0.20 | 0.17 | 0.13 | 0.15 | 0.16 | 0.59 | 0.17 | 0.15 | 0.18 | 0.16 | 0.69 | 0.17 |
| 2004 | 0.26 | 0.24 | 0.24 | 0.24 | 0.19 | 0.23 | 0.60 | 0.19 | 0.26 | 0.23 | 0.18 | 0.18 | 0.21 | 0.58 | 0.20 | 0.21 | 0.17 | 0.16 | 0.72 | 0.23 |
| 2005 | 0.17 | 0.25 | 0.17 | 0.16 | 0.15 | 0.19 | 0.15 | 0.20 | 0.18 | 0.17 | 0.17 | 0.13 | 0.20 | 0.18 | 0.20 | 0.14 | 0.13 | 0.15 | 0.66 | 0.15 |
| 2006 | 0.15 | 0.15 | 0.19 | 0.14 | 0.12 | 0.14 | 0.13 | 0.18 | 0.22 | 0.15 | 0.14 | 0.13 | 0.16 | 0.10 | 0.17 | 0.13 | 0.10 | 0.12 | 0.17 | 0.14 |
| 2007 | 0.11 | 0.14 | 0.14 | 0.15 | 0.15 | 0.12 | 0.10 | 0.16 | 0.20 | 0.16 | 0.13 | 0.14 | 0.15 | 0.12 | 0.17 | 0.11 | 0.10 | 0.14 | 0.12 | 0.13 |
| 2008 | 0.14 | 0.13 | 0.15 | 0.15 | 0.10 | 0.14 | 0.11 | 0.14 | 0.19 | 0.18 | 0.12 | 0.11 | 0.12 | 0.14 | 0.16 | 0.11 | 0.12 | 0.13 | 0.17 | 0.12 |
| 2009 | 0.14 | 0.13 | 0.16 | 0.16 | 0.11 | 0.12 | 0.09 | 0.16 | 0.15 | 0.14 | 0.15 | 0.11 | 0.15 | 0.10 | 0.17 | 0.09 | 0.11 | 0.12 | 0.11 | 0.13 |
| 2010 | 0.18 | 0.14 | 0.17 | 0.13 | 0.12 | 0.18 | 0.13 | 0.18 | 0.13 | 0.16 | 0.11 | 0.11 | 0.15 | 0.10 | 0.18 | 0.11 | 0.09 | 0.14 | 0.11 | 0.14 |
| 2011 | 0.11 | 0.10 | 0.12 | 0.11 | 0.09 | 0.19 | -0.10 | 0.13 | 0.10 | 0.13 | 0.10 | 0.08 | 0.14 | 0.08 | 0.17 | 0.07 | 0.08 | 0.11 | 0.09 | 0.09 |
| Mean | 0.16 | 0.16 | 0.17 | 0.16 | 0.13 | 0.17 | 0.19 | 0.17 | 0.18 | 0.17 | 0.14 | 0.13 | 0.16 | 0.21 | 0.17 | 0.12 | 0.13 | 0.14 | 0.36 | 0.14 |
| SD | 0.05 | 0.05 | 0.03 | 0.04 | 0.03 | 0.03 | 0.22 | 0.03 | 0.05 | 0.03 | 0.02 | 0.03 | 0.03 | 0.20 | 0.02 | 0.04 | 0.04 | 0.02 | 0.29 | 0.04 |
| CV | 0.28 | 0.33 | 0.19 | 0.24 | 0.24 | 0.21 | 1.14 | 0.15 | 0.26 | 0.16 | 0.18 | 0.22 | 0.17 | 0.92 | 0.12 | 0.32 | 0.32 | 0.14 | 0.83 | 0.26 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

As per Table No. 4 the ratio of non-interest income to total income of United Bank of India ( 0.36 percent) witnessed with the highest progress among the select Nationalised Commercial Banks indicating the higher contribution of non-interest income towards the total income of the bank. It is followed by Punjab and Sind Bank ( 0.21 percent), Central Bank of India ( 0.19 percent), Dena Bank ( 0.18 percent) and Corporation Bank ( 0.17 percent), Indian Bank ( 0.17 percent) and State Bank of India ( 0.17 percent).

The ratio was the lowest for syndicate bank ( 0.12 percent). The ratio of central bank shows negative figure at an average of 0.10 percent, during the year 2010-2011.

The ratio was inconsistent for the Central Bank of India ( 1.41 percent) followed by Oriental Bank of Commerce ( 0.92 percent) and United Bank of India ( 0.83 percent) among the select Nationalised Commercial Banks as it is evident from the results of dispersion.

## Ratio of Non- Interest Expenditure to Working Fund

The ratio of non-interest expenditure in relation to working fund is worked out to ascertain how much percentage of working fund is being spent by the select banks towards non-interest costs. Generally, non-interest expenses of the institution consist of three elements, viz., establishment expenses, other operating expenses and provisions and contingencies.

Establishment expenses comprises of wage allowances including leave fare concession and the usual provident fund contributions on account of staff. But, bonus/ ex-gratia payment to the employees is not included. On the other hand, the other operating expenses include fee paid to directors and members of the committee for attendance at board or committee meeting, occupancy expenses, office supplies, postage and advertisement expenses. Table No. 5 presents the ratio of non-interest expenditure to working funds of select Nationalised Commercial Banks.

TABLE NO. 5 RATIO OF NON- INTEREST EXPENDITURE TO WORKING FUND (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.51 | 0.46 | 0.30 | 0.49 | 0.36 | 0.21 | 0.33 | 0.25 | 2.93 | 1.15 | 0.45 | 0.41 | 0.58 | 0.26 | 0.40 | 0.38 | 0.47 | 0.32 | 0.38 | 0.34 |
| 2003 | 0.77 | 0.81 | 0.50 | 0.62 | 0.39 | 0.41 | 0.37 | 0.52 | 15.36 | 1.05 | 0.51 | 0.60 | 0.58 | 0.39 | 1.17 | 0.83 | 0.50 | 0.61 | 0.37 | 0.55 |
| 2004 | 0.66 | 0.54 | 0.73 | 0.44 | 0.39 | 0.37 | 0.46 | 0.62 | 7.82 | 1.26 | 0.48 | 0.55 | 0.82 | 0.49 | 2.42 | 0.30 | 0.44 | 0.66 | 0.44 | 1.27 |
| 2005 | 0.52 | 0.52 | 0.46 | 0.60 | 0.32 | 0.63 | 0.50 | 0.56 | 0.90 | 1.19 | 0.52 | 0.16 | 1.22 | 0.76 | 1.83 | 1.07 | 0.29 | 0.46 | 0.57 | 0.67 |
| 2006 | 0.29 | 0.27 | 0.35 | 0.39 | 0.77 | 0.38 | 0.75 | 0.46 | 0.59 | 0.46 | 0.97 | 0.36 | 0.25 | 0.35 | 1.19 | 0.50 | 0.77 | 0.61 | 0.68 | 0.60 |
| 2007 | 0.34 | 0.47 | 0.24 | 0.27 | 0.47 | 0.30 | 0.33 | 0.33 | 0.61 | 0.76 | 0.50 | 0.31 | 0.45 | 0.33 | 0.57 | 0.28 | 0.38 | 0.53 | 0.41 | 0.30 |
| 2008 | 0.31 | 0.31 | 0.24 | 0.32 | 0.36 | 0.32 | 0.23 | 0.28 | 0.39 | 0.42 | 0.42 | 0.27 | 0.42 | 0.31 | 0.42 | 0.22 | 0.28 | 0.32 | 0.28 | 0.22 |
| 2009 | 0.57 | 0.41 | 0.30 | 0.29 | 0.47 | 0.36 | 0.28 | 0.23 | 0.27 | 0.55 | 0.35 | 0.23 | 0.48 | 0.43 | 0.43 | 0.21 | 0.22 | 0.26 | 0.29 | 0.27 |
| 2010 | 0.49 | 0.22 | 0.21 | 0.25 | 0.27 | 0.43 | 0.19 | 0.27 | 0.34 | 0.56 | 0.48 | 0.25 | 0.47 | 0.27 | 0.89 | 0.32 | 0.35 | 0.33 | 0.35 | 0.47 |
| 2011 | 0.48 | 0.32 | 0.17 | 0.23 | 0.87 | 0.32 | 0.41 | 0.33 | 0.33 | 0.64 | 0.45 | 0.42 | 0.51 | 0.35 | 0.77 | 0.49 | 0.27 | 0.37 | 0.39 | 0.43 |
| Mean | 0.49 | 0.43 | 0.35 | 0.39 | 0.47 | 0.37 | 0.39 | 0.39 | 0.29 | 0.80 | 0.51 | 0.36 | 0.58 | 0.39 | 1.01 | 0.46 | 0.40 | 0.45 | 0.41 | 0.51 |
| SD | 0.15 | 0.17 | 0.17 | 0.14 | 0.20 | 0.11 | 0.16 | 0.14 | 0.49 | 0.33 | 0.17 | 0.14 | 0.27 | 0.15 | 0.67 | 0.28 | 0.16 | 0.14 | 0.12 | 0.31 |
| CV | 0.31 | 0.40 | 0.48 | 0.36 | 0.42 | 0.29 | 0.41 | 0.37 | 0.16 | 0.40 | 0.32 | 0.39 | 0.46 | 0.37 | 0.66 | 0.61 | 0.40 | 0.32 | 0.29 | 0.60 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

It is observed from Table No. 5 that the ratio of non-interest expenditure to working fund of State Bank of India (1.01 percent) on an average stood at all the select Nationalised Commercial Banks followed by Indian Bank ( 0.80 percent). This indicates that these banks had to incur more by way of non-interest expenditure.

The ratio of Dena Bank ( 0.49 percent) indicating lesser burden of non-interest expenditure and for the remaining banks the ratio varied from 0.36 percent to 0.58 percent. The ratio was more consistent in terms of results of dispersion for Dena Bank ( 0.16 percent), United Bank of India ( 0.29 percent) and Central Bank of India ( 0.29 percent) and it is inconsistent for State Bank of India ( 0.66 percent).

This ratio expressed the relationship between non-interest expenses and working funds of the bank. Non-interest expenditure consists of operating expenses and provisions and contingencies. Lower the ratio better is the performance.

## Ratio of Non- Interest Expenses to Total Income

Non-interest expenses are primarily employees' salaries and benefits and occupancy expenses. Additional non- interest expenses includes legal, regulatory and accounting fees depreciation and amortization and insurance and advertising cost. This ratio shows the relationship between non-interest expenses to total income. A lower percentage indicates higher profitability.

Table No. 6 presents the ratio of non-interest expenditure to total income of the select Nationalised Commercial Banks for the period from 2001-2002 to 2010-2011.

TABLE NO. 6 RATIO OF NON- INTEREST EXPENSES TO TOTAL INCOME (Percentage)

| Year | ALB | AB | BOB | BOI | BM | CB | CBI | COB | DB | IB | IOB | OBC | PNB | PSB | SBI | SB | UCO | UBI | UtBI | VB |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2002 | 0.39 | 0.29 | 0.34 | 0.37 | 0.33 | 0.32 | 0.38 | 0.30 | 0.46 | 0.36 | 0.34 | 0.33 | 0.36 | 0.35 | 0.32 | 0.37 | 0.37 | 0.34 | 0.36 | 0.33 |
| 2003 | 0.41 | 0.34 | 0.36 | 0.37 | 0.34 | 0.33 | 0.39 | 0.34 | 0.41 | 0.38 | 0.33 | 0.34 | 0.42 | 0.44 | 0.36 | 0.41 | 0.38 | 0.35 | 0.33 | 0.39 |
| 2004 | 0.43 | 0.39 | 0.44 | 0.39 | 0.36 | 0.38 | 0.41 | 0.36 | 0.43 | 0.43 | 0.42 | 0.37 | 0.46 | 0.48 | 0.40 | 0.47 | 0.37 | 0.35 | 0.38 | 0.40 |
| 2005 | 0.38 | 0.43 | 0.47 | 0.45 | 0.42 | 0.41 | 0.48 | 0.46 | 0.48 | 0.43 | 0.42 | 0.32 | 0.45 | 0.60 | 0.42 | 0.43 | 0.39 | 0.38 | 0.43 | 0.39 |
| 2006 | 0.35 | 0.37 | 0.46 | 0.41 | 0.45 | 0.36 | 0.48 | 0.42 | 0.51 | 0.41 | 0.39 | 0.35 | 0.45 | 0.46 | 0.43 | 0.42 | 0.38 | 0.38 | 0.46 | 0.45 |
| 2007 | 0.29 | 0.38 | 0.38 | 0.37 | 0.41 | 0.32 | 0.39 | 0.36 | 0.44 | 0.38 | 0.36 | 0.32 | 0.43 | 0.40 | 0.41 | 0.32 | 0.33 | 0.37 | 0.39 | 0.36 |
| 2008 | 0.25 | 0.29 | 0.33 | 0.30 | 0.33 | 0.26 | 0.28 | 0.28 | 0.34 | 0.35 | 0.26 | 0.28 | 0.34 | 0.31 | 0.34 | 0.24 | 0.27 | 0.27 | 0.31 | 0.23 |
| 2009 | 0.31 | 0.29 | 0.32 | 0.29 | 0.30 | 0.26 | 0.24 | 0.28 | 0.30 | 0.32 | 0.29 | 0.22 | 0.32 | 0.27 | 0.32 | 0.25 | 0.24 | 0.27 | 0.31 | 0.27 |
| 2010 | 0.33 | 0.29 | 0.31 | 0.32 | 0.29 | 0.29 | 0.23 | 0.26 | 0.26 | 0.33 | 0.33 | 0.27 | 0.33 | 0.25 | 0.35 | 0.28 | 0.22 | 0.28 | 0.29 | 0.30 |
| 2011 | 0.33 | 0.31 | 0.31 | 0.33 | 0.36 | 0.32 | 0.39 | 0.27 | 0.30 | 0.35 | 0.33 | 0.28 | 0.36 | 0.27 | 0.42 | 0.35 | 0.31 | 0.34 | 0.33 | 0.31 |
| Mean | 0.35 | 0.34 | 0.37 | 0.36 | 0.36 | 0.33 | 0.37 | 0.34 | 0.39 | 0.37 | 0.35 | 0.31 | 0.39 | 0.38 | 0.38 | 0.35 | 0.33 | 0.33 | 0.36 | 0.34 |
| SD | 0.06 | 0.05 | 0.06 | 0.05 | 0.05 | 0.05 | 0.09 | 0.07 | 0.09 | 0.04 | 0.05 | 0.05 | 0.05 | 0.11 | 0.04 | 0.08 | 0.06 | 0.04 | 0.05 | 0.07 |
| CV | 0.16 | 0.15 | 0.17 | 0.14 | 0.14 | 0.15 | 0.24 | 0.20 | 0.22 | 0.11 | 0.15 | 0.15 | 0.14 | 0.29 | 0.12 | 0.22 | 0.20 | 0.13 | 0.15 | 0.20 |

Source: Data compiled and collected from Database of Indian Banking, Bank's Annual Reports and Issues of relevant years.

From Table No.6, it could be observed that the ratio of non-interest expenses to total income of Punjab National Bank stood at 0.39 percent, the highest among the select Nationalised Commercial Banks indicating lower profitability position. For the rest of the banks, the ratio varied between 0.31 percent to 0.38 percent. The dispersion results showed that variability in the ratio was more consistent in the case of Indian Bank ( 0.11 percent), State Bank of India ( 0.12 percent), United Bank of India ( 0.13 percent) and it is moderately consistent for Corporation Bank ( 0.20 percent), UCO Bank ( 0.20 percent) and inconsistent for Punjab and Sind Bank ( 0.29 percent).

## Suggestions

Based on the key findings of the study, the following suggestions have been offered:
State Bank of India has spent more on non-interest expenditure than any other Nationalised Commercial Banks. Hence, it is suggested that the State Bank of India has to either increase the non-interest income or reduce the non-interest expenditure.

The proportion of non-interest expenditure to total income was found more than thirty percent in the case of all the Nationalised Commercial Banks which should be curtailed in order to increase the net operating profit after tax.

All the Nationalised Commercial Banks except State Bank of India and Dena Bank have utilized the working fund efficiently to maintain more earning assets. Hence, the State Bank of India and Dena Bank should carefully plan and control the working fund for efficient management.

Since the ratio of non-interest expenditure to total income, and ratio of interest expenditure to total income showed much discrimination. Hence, the banks should initiate strategies to work on reducing the non-interest expenditure as well as interest expenditure.

As the burden to working fund and burden to total income have been found significantly related to net operating profit after tax, it is suggested that the Nationalised Commercial Banks should increase non-interest income and to reduce non-interest expenditure.

It is further suggested that the banks have to introduce more financial services with technology enabled with a view to earn more non-interest income. Through these value added services the satisfied customers be changed to delighted customers, which would result in non-interest income.

## Conclusion

It is concluded that the financial regulatory policies followed by the banks should be strengthened by enhancing both interest and non-interest income and by reducing interest as well as non-interest expenditure.The select banks should adopt effective assets and liabilities management practices for making the industry as profitable.

## Reference

- Vashisht, A. K. (1987), "Performance Appraisal of Commercial Banks in India", A Ph.D.
- Thesis submitted to the Department of Commerce and Business Management, HPU,
- Shimla.
- Kothari, C.R (1995) Research Methodology- Methods and Techniques, Vishwa Prakasam Publication, New Delhi.
- Misra S.K and Puri V.K. (1998) - Indian Economy, Himalaya Publishing House, Mumbai
- Jane Cowell (2002) - Investment, CIB Publishing Company, New Delhi.
- Gordon and Natarajan (2006) - Banking Theory, Law and Practice, Himalaya Publishing House, Mumbai.
- Jain, V. (2006), "Ratio Analysis: An Effective Tool for Performance Analysis in Banks", PNB Monthly Review, November, pp. 27-29.
- Peter. S. Rose, Sylvia C. Hudgins (2011) - Bank Management and Financial Services, Tata McGraw Hill Publishing Company Ltd., New Delhi
- Public Sector Bank Websites.

