4.1 INTRODUCTION

In chapter three, a review of selected works on performance and efficiency of commercial banks in India and their findings were presented. Here, an attempt is made to present the theoretical framework and indicators used to measure the performance of banks. Reviews of selected works are made and attempt has been made to refine those so that it can be used in a meaningful manner.

Performance evaluation of an organization refers to analyzing the performance of that organization with regard to its achievements in terms of the objectives and goals. Performance of a bank involves the achievement of a bank in fulfilling the various stakeholders' interest. The stakeholders may be owners or
equity holders, employees, customers, society and government. In Indian context, the commercial banks are always seen as vehicles for social development. From the review of literature, one can have idea on the concept of performance of banks. Researchers and academicians have studied and used various indicators to measure the performance of banks. The performance of a bank can be analyzed by the economic and social objectives. Accordingly, measures may be based on the economic and social objectives of the banks. Banks are economic entities and their function is intermediation. The performance of banks in this regard can be studied by analyzing the deposits and credits. Again the economic efficiency of an organization can be measured in terms of productivity i.e. efficient uses of input resources. The profit is an important indicator of performance which indicates the economic or commercial viability of banks. In the words of Bhatia¹ (1982), “profits perform many useful functions in a system. They allocate capital, compensate investors for the risk assumed, reward operating efficiency resulting from price-output decisions and provide for future expansion. Since these functions are the essential elements of economic performance, profits and profitability ratios may be employed as indices of a banking system’s economic performance”. Nayan² (1985), Garg³ (1989), Raut and Das⁴ (1996), Rammoorthy⁵ (1997), Bhatia and Verma⁶ (1999), Subbiah⁷ (2001), Satyamurthy⁸ (2001), Sood⁹ (2001), Kaveri¹⁰ (2001), Shirai¹¹ (2002), Raypati¹² (2002), Chipalkatti and Rishi¹³ (2003), Trehan and Soni¹⁴ (2003), Sabnani¹⁵ (2004), Sathhye¹⁶ (2005), Maji and Dey¹⁷ (2006), and Ramsastri and Samuel¹⁸ (2006) have measured the performance of Indian banks by assessing the financial performance. Financial performance has been measured in terms of
returns on assets, spread to working funds, establishment expenses to total expenses, loan-out ratio (loans/deposits) and non-performing assets to net advances. Efficiency of the bank was measured using accounting ratios such as deposits per employee (loans/staff) and net profit (net profit/ staff). In measuring the performance, output in relation to input has been used by many. The factors that determine profitability, how they behave, how they are related to each other, and how valid inter-bank and inter-temporal comparisons can be made are some methodological questions, which are addressed by Varde and Singh¹⁹ (1983). This has been addressed in detail at a later stage in this chapter.

There are different approaches as used by different scholars with regard to input and output. Coates²⁰ (1990) has suggested the production approach for measurement of performance. The Indian commercial banks have multiple goals. Although they are profit oriented, the regulatory agency (RBI) has the objectives of fostering economic growth and preserving the safety and soundness of the banking system. Considering the above approach, Shanmugam and Das²¹ (2004) considered four outputs: (1) net interest margin that reflects the gain in financial intermediation process, (2) non-interest income reflecting revenues from other services, (3) credits and (4) investments. The first two reflect the profit goal, while the rest the economic growth and safety objectives. Similarly, the inputs considered are: deposits, borrowings, labour and fixed assets. The other approach, which has been adopted by some, is intermediation approach that includes ‘profit approach’ and ‘risk management approach’.
In the last few decades, use of data envelopment analysis to measure the performance efficiency has been observed very often. Works of Noulas and Ketkar\textsuperscript{22} (1996), Bhattacharya\textsuperscript{23} et al (1997), Das\textsuperscript{24} (1997), Saha and Ravishankar\textsuperscript{25} (2000), Shanmugam and Lakshmanasamy\textsuperscript{26} (2001), Kumar and Verma\textsuperscript{27} (2003), Koeva\textsuperscript{28} (2003), Trehan and Soni\textsuperscript{29} (2003), Misra\textsuperscript{30} (2003), Kumbhakar and Sarkar\textsuperscript{31} (2003), Reddy\textsuperscript{32} (2004), Choudhuri and Tripathy\textsuperscript{33} (2004), Shanmugam and Das\textsuperscript{34} (2004), Glagedera and Edisuriya\textsuperscript{35} (2005), Chakrabarti and Chawla\textsuperscript{36} (2005), Chatterjee\textsuperscript{37} (2006), Sinha and Chatterjee\textsuperscript{38} (2006), Debasish\textsuperscript{39} (2006), Ketkar and Ketkar\textsuperscript{40} (2008), and Kumar\textsuperscript{41} (2008) have used Data Envelopment Analysis to study the efficiency of Indian banks at different point of time. In these studies, they have identified multiple inputs and outputs either based on production or intermediation approach.

Another group of scholars such as Barr and Siems\textsuperscript{42} (1996), Rao and Datta\textsuperscript{43} (1998), Prasuna\textsuperscript{44} (2004), and Bodla and Verma\textsuperscript{45} have used the CAMELS model in analyzing the performance of banks. Chakrabarti and Chawala\textsuperscript{46} (2005) have also used CAMELS approach in addition to Data Envelopment Analysis. CAMELS Model covers issues on capital adequacy, asset quality, management efficiency, earning quality and liquidity. Various ratios can be studied with regard to these issues in assessing the performance of banks.

The studies made by different authors/researchers show that there are various methods of studying the performance of commercial banks. In fact with the
passage of time new techniques and methods have been adopted to study the performance of commercial banks. The initial phase witnesses the use of ratios and trend analysis followed by regression analysis to understand the relationship among various bank related variables and its implications on profitability. The latest technique preferred by researchers in studying the performance and efficiency of banks is Data Envelopment Analysis. These methods have their merits and limitations. A brief discussion on these has been made here to justify the methodology that has been adopted in this work.

4.2 ASSESSMENT OF BUSINESS PERFORMANCE

The performance of business is the result of many individual decisions made continually by its management. The assessment of business performance involves analyzing the financial and economic effects of these decisions and judging the result through the use of comparative measures. These decisions involve three areas: (1) the investment of resources, (2) the operation of business through the use of these resources, and (3) the proper mix of financing with which to provide the resources (Helfert 47, 1988).

Financial analysis is largely based on ratios as tools for making fair comparisons. However, the selection of ratios is very important and needs careful examination. To be really helpful and practically useful, the selected ratios should
be small, simple and logically consistent, so that valid and fair comparisons can be made and useful results obtained.

Despite the increasing interest in studying the banking industry, there are controversies with regard to output and input function to deposit. Some define it as input while other define it as output. For instance, Berg et al.\textsuperscript{48} (1991) argued that deposits should be treated as an output mainly because they represent a resource consuming activity while Berger et. al.\textsuperscript{49} (1993) argued that deposit should be treated as an input in the models that take account of interest paid on purchased funds. Attempts to define these concepts were made by Sealey and Lindley\textsuperscript{50} (1977), Colwell and Davis\textsuperscript{51} (1992) and later by Berger and Humphrey\textsuperscript{52} (1997).

4.3 THE CONCEPT OF INPUTS AND OUTPUTS IN BANKS

Frisch\textsuperscript{53} (1965) defined production as “a process of transformation, directed by human beings, which is considered desirable by some individuals.” Transformation implies that certain goods or services (inputs) enter a process where they “lose their identity, i.e. cease to exist in the original form” while other goods or services (outputs) are generated. This concept of inputs and outputs is applicable to manufacturing sector where inputs and outputs are measured in terms of flow, that is, a certain amount of input is used to produce a certain amount of output per unit time. However, the production process in banking involves the use of deposits
and other assets. It is therefore a stock concept, representing a given amount at a particular point in time. The output of bank services, unlike outputs of manufacturing firms, can be measured in terms of quantity once the goal is clearly defined. Thus, there are two common approaches— the ‘production or value added approach’ and ‘the asset or intermediation approach’.

4.3.1 PRODUCTION APPROACH

In the production approach also known as service approach and value added approach, banks provide services to customers by administering customers’ financial transactions, keeping customers’ deposits, issuing loans, cashing cheques and managing other financial assets (Berg et al. 1991, Berger and Humphrey 1992, Berg et al. 1993, Schaffnit et al. 1997). Here banks use labour and capital to generate deposits and loans. Under this approach, high value creating activities such as loans and taking deposits are classified as outputs and measured in dollar terms, whereas labour, physical capital and purchased funds are classified as inputs (Wheelock and Wilson, 1995). This is a flow concept and it follows the standard production approach. Berg et al. (1991) identified five activities performed by a bank: (1) supplying, facilitating deposit services, (2) providing short and long term loan services, (3) brokerage and other services, (4) property management and (5) provision of safe deposit boxes. They pointed out that a bank incurs positive operating costs in terms of (a) labour, (b) machines, (c) materials and (d) buildings.
4.3.2 THE ASSET OR INTERMEDIATION APPROACH

In this approach, banks are considered only as financial intermediaries between liability holders and those who receive funds. In this approach, banks perform two major roles of mobilizing and distributing resources efficiently in order to smooth down invest activities in the economy. Labour, materials and deposits are inputs while loans and other income generating activities are treated as outputs. The intermediation approach might be more suitable for studying the efficiency of entire financial institutions because interest expenses might indeed compose a large portion (as high as one-half to two thirds) of banking total costs depending on the phase of the interest rate cycle. Also in practice availability of flow data required in the production approach is usually exceptional rather than in common (Berger and Humphrey\textsuperscript{61}, 1997). The asset approach has two major sub groups: (a) the profit approach and (b) the risk management approach.

4.3.2.1 The Profit Approach: The economic efficiency of a banker is mostly analyzed using either a profit approach or cost approach. Profitability is one of the criterions for evaluating the performance of banks. What factors determine profitability, how they behave, how they are related to each other is an important question. Most of such analysis can be done on financial data. Under this approach, the objective of the bank is to maximize bank's profit function by manipulating the cost and income in the production process. This approach measures simultaneously
inefficiency in the input and output side and thus reduces problems associated with mis-specification and mis-measurement (Thompson et al. 1997).

4.3.2.2 The Risk Management Approach: This approach is used to evaluate risk attached to various forms of assets in a bank. In risk management banks take some risks to produce acceptable returns. A bank's performance will affect its valuation in the market, its ability to acquire other banks or to be acquired at a good price, and its ability to be funded in deposits and financial markets (Mester 1996). This approach considers management decision making process and its implementation on one side as inputs and shareholders value and bank profit as outputs on the other side.

4.4 MEASUREMENT OF PRODUCTIVITY AND EFFICIENCY

Productivity is construed as the ability and willingness of an economic unit to produce maximum possible output with given inputs and technology (Kalirajan and Shand, 1994). Higher the output per unit of input, higher is the productivity. Efficiency on the other hand, measures the performance of the banks in normative sense by comparing it with the industry leader within or across the borders. Unlike a manufacturing unit, the bank does not produce a single or definite product. Bank has a wide range of products. Again, there are different approaches regarding the concept of input and output in a bank. Under production approach, deposit is regarded as output while under intermediation approach this is treated as input.
Therefore, the usual yardstick to measure the productivity of a manufacturing unit is not suitable to a bank. Specific refinements in the traditional methods are required to measure the productivity and efficiency in the banking sector. The most widely use methods to measure are accounting measures and efficiency measures. Accounting measures refer to various financial ratios that focus on one or more outputs and their relevant inputs to measure the performance or productivity of a banking unit. Efficiency, being a normative concept, could be measured by comparing the bank or bank groups' performance as evaluated using these ratios against other groups or the best practices within the country.

4.5 ACCOUNTING MEASURES

Accounting measures enables a disaggregated and incisive analysis of bank’s performance in terms of individual parameters determining the overall efficiency level. The accounting measures commonly used in measuring the performance and productivity of banks are: profitability ratio, spread ratio, interest income ratio, interest cost ratio, burden ratio, manpower cost ratio, operating cost ratio and non-interest income ratio. Besides, productivity ratios like deposit to manpower cost ratio, credit to manpower cost ratio, business-manpower cost ratio etc. are used in measuring the performance. To understand the importance and significance of these ratios, it is necessary to discuss the accounting linkage among theses variables.
4.5.1 Profitability Ratios: Profitability is one of the major criterions for evaluating the performance of banks. The factors that determine profitability, how they behave, how they are related to each other, and how valid inter-bank and inter-temporal comparisons can be made are some methodological questions, which are addressed by Varde and Singh (1983). The suggested analytical framework for profitability management has been designed with two very simple but powerful instruments of logical reasoning. The first is the periodic income and expenditure flow and the difference between these two flows by definition is profit. The second is the balance sheet, which contains the assets and liabilities of a bank on a particular date. Table 4.1 shows the key entities of the income and expenditure statement and their relationship. In Table 4.1, the income and expenditure has been divided into three parts. The Part I shows 'Interest Income' and 'Interest Cost' and the difference as 'spread' i.e. interest margin. Part II shows 'C' as non-interest income which includes income other than interest income earned through commission, service charges etc. 'M' refers to the manpower cost that includes salary paid to the staff. Other operating expenses (O) represent expenditure other than interest expenses and manpower expenses. Both manpower cost and other cost refer to the total operating cost (N) that is also known as intermediation cost. The difference between Non-interest Income(C) and Non-interest Cost (N) is referred as burden. The logic behind use of non-interest income to off-set non-interest cost is that banks' main business is to lend through receiving deposit and the income from this activity is net interest margin or spread. Again, bank incurs non-interest cost to perform the main function but also earns through other activities. These revenues
are used to reduce the operational cost. Part III shows the result i.e. profit which is the difference between Total Income (I) and Total Expenses (E) or Spread (S) and Burden (B). These variables are in absolute form and cannot be used for comparative study. Therefore, these can be expressed in relative or ratio form. It is a well-known fact that the assets of a bank are keys to returns or profits. Volumes of business (deposits and credits), working funds (volume of business less contra items) are also often used as alternative to assets. However, use of any of these shall give more or less same result and so we have used total assets as denominator. All these profits related variables are divided by total assets to get profitability ratio (p), spread ratio (s), burden ratio (b), interest income ratio (r), interest cost ratio (k), man-power cost ratio (m), facility cost ratio (f) and non-interest income ratio (c).

Table 4.1

**Accounting Relation of Profit Related Variables**

<table>
<thead>
<tr>
<th>Part</th>
<th>Income</th>
<th>Expenditure</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>R: Interest Income</td>
<td>K: Interest Cost</td>
<td>S: Spread: R - K</td>
</tr>
<tr>
<td>II</td>
<td>C: Non-interest Income</td>
<td>M: Manpower Cost</td>
<td>B: Burden: N - C = ( M + F - C )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F: Facility Cost</td>
<td>( N: \text{Non-interest Cost/Intermediation Cost} )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>( (M + F) )</td>
</tr>
<tr>
<td>III</td>
<td>I: Total Income: (R + C)</td>
<td>E: Total Expenses: (M + F + K)</td>
<td>P: Profit: ( (1 - E) ) or ( (S - B) )</td>
</tr>
</tbody>
</table>
4.6 THE CAMELS APPROACH OF PERFORMANCE

In 1995, the Reserve Bank of India set up a working group under the chairmanship of Shri S. Padmanabhan to review the banking supervision system. The Committee made certain recommendations and based on such suggestions a rating system for domestic and foreign banks based on the international CAMELS model combining financial management and systems and control elements was introduced for the inspection cycle commencing from July 1998. It recommended that the banks should be rated on a five-point scale (1 to 5) based on the lines of international CAMELS rating model. CAMELS evaluate banks on the following six parameters:

4.6.1 Capital Adequacy: It is important for a bank to maintain depositors' confidence by having adequate capital that can absorb unexpected loss. Capital adequacy reflects the overall financial condition of the banks and also the ability of the bank to absorb unexpected losses.

4.6.2 Asset Quality: One of the indicators for asset quality is the ratio of non-performing loans to total loans. The gross non-performing loans to gross advances (GNPA) ratio is more indicative of the quality of credit decisions made by bankers. Higher GNPA is indicative of poor credit decision-making.

4.6.3 Management Efficiency: The ratio of non-interest expenditures to total assets can be one of the measures to assess the working of the management.
This variable, which includes a variety of expenses, such as payroll, workers compensation and training reflects the management policy. Various productivity related ratios like credit-deposit ratio, business per employee, profit per employee etc. are indicators of management quality.

4.6.4 **Earnings Quality:** The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently. It mainly focuses on the profitability of banks. The ratios generally in use to measure the earning quality are return on assets, spread or net interest margin to total assets, net profit to assets, interest income to total assets, non-interest income to total assets, interest cost to total assets, establishment expenses to total assets etc.

4.6.5 **Liquidity:** Liquidity is one of the important principles of bank investment. In general, banks with a larger volume of liquid assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals. Cash maintained by the banks and balances with central bank to total assets ratio is an indicator of bank's liquidity.

4.6.6 **Sensitivity to Market Risk:** It reflects the degree to change in interest rates, foreign exchange rates, commodity prices, and equity prices. This risk can adversely affect earnings or economic capital.

The components of the CAMELS rating system comprise of both objective and subjective parameters. Internationally and in India, regulators use these ratings to determine the supervision policies for individual banks. The ratings are assigned
on a scale from 1 to 5, 1 being strong and 5 being poor. The ratings and its implications are given in Table 4.2. These measures of performance are suitable for internal management. Hence, these are not considered in our analysis.

Table 4.2

<table>
<thead>
<tr>
<th>CAMELS Rating Symbol</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0-1.5</td>
<td>Strong: Bank is sound in every respect.</td>
</tr>
<tr>
<td>1.6-2.5</td>
<td>Satisfactory: Bank is fundamentally sound but with moderate weaknesses.</td>
</tr>
<tr>
<td>2.6-3.5</td>
<td>Fair (Watch category): Financial, operational or compliance weaknesses that give cause for supervisory concern.</td>
</tr>
<tr>
<td>3.6-4.5</td>
<td>Marginal: Serious or immoderate finance, operational and managerial weaknesses that could impair future viability</td>
</tr>
<tr>
<td>4.6-5.0</td>
<td>Unsatisfactory (High degree of failure) Critical financial weaknesses and there is high possibility of failure in the near future.</td>
</tr>
</tbody>
</table>

**4.7 PERFORMANCE INDICATORS**

On the basis of our observations made from the review of literature, we may identify the following indicators as performance indicators.

**4.7.1 Return on Assets/ Net Profit to Total Assets.** Return on Assets or profitability ratio is the coefficient found by expressing the volume of profit as a
percentage of ‘total funds’ or ‘volume of business’ or ‘total assets’. In our study, we have used profit as a percentage of total assets, as total assets represent the broad input factor. The ratio can be expressed symbolically as follows:

\[ p = \frac{P}{A} \times 100 \]

where,

\( p \) = profitability Ratio or Return on Assets,
\( P \) = Net Profit, and
\( A \) = Total Assets.

This ratio indicates the profit earning capacity of the bank in relation to the total assets. A higher ratio is interpreted as higher level of profitability and efficiency.

4.7.2 Spread to Total Assets. Spread ratio is an expression of spread as a percentage of total assets. Spread is defined as the difference between interest earned and interest paid. Thus, spread ratio indicates net interest earning capacity of a bank. The ratio may be expressed symbolically as follows:

\[ s = \frac{S}{A} \times 100 \]

where,

\( s \) = Spread Ratio,
\( S \) = Spread, and
\( A \) = Total Assets.

This ratio indicates the gross operating efficiency of a bank from its core business of borrowing and lending. A higher ratio is an indication of better performance of
the bank. Spread indicates at the adequacy or inadequacy of the bank’s net revenue to meet its operating expenses.

**4.7.3 Burden to Total Assets.** Burden ratio is the second explanatory ratio to profitability ratio. Burden is expressed as the net non-interest expenses over non-interest income. When burden is expressed in relation to total assets, it is called burden ratio. Symbolically,

\[ b = \left( \frac{B}{A} \right) \times 100 \]

where,

- \( b \) = burden ratio,
- \( B \) = Burden and
- \( A \) = Total Assets.

A higher burden ratio indicates the high operating cost which is a cause to low profitability.

**4.7.4 Interest Income to Total Assets.** Interest income ratio or interest revenue ratio is an expression of interest income as a percentage of total assets. Symbolically this ratio can be expressed as follows:

\[ r = \left( \frac{R}{A} \right) \times 100 \]

where,

- \( r \) = Interest Income Ratio,
- \( R \) = Interest Income, and
- \( A \) = Total Assets.
An increase in the interest income ratio indicates a corresponding increase in the spread ratio provided the interest cost ratio remains same. A high level of interest income ratio is expected to have a positive impact on the profitability of a bank.

**4.7.5 Interest Cost to Total Assets.** Interest cost ratio refers to interest paid as a percentage to the total assets. Symbolically,

\[ k = \frac{K}{A} \times 100 \]

where,

- \( k \) = Interest Cost Ratio,
- \( K \) = Interest Cost, and
- \( A \) = Total Assets.

A low interest cost ratio results in high spread ratio and thus it contributes to high profitability.

**4.7.6 Manpower Cost to Total Assets.** Manpower cost expressed as a percentage to the total assets is known as ‘manpower cost ratio’. Symbolically, it may be expressed as:

\[ m = \frac{M}{A} \times 100 \]

where,

- \( m \) = manpower cost ratio,
- \( M \) = Manpower cost, and
- \( A \) = Total Assets.
This ratio indicates the manpower cost incurred for every hundred rupees of assets. An increase in the said ratio results in an increase in burden ratio and thus reduces the profitability.

4.7.7 Facility Cost to Total Assets. Facility cost ratio denotes the total of all operating cost except manpower cost, expressed as a percentage of total assets. It can be expressed as:

\[ f = \frac{F}{A} \times 100 \]

where,

- \( f \) = Facility Cost Ratio,
- \( F \) = Facility Cost, and
- \( A \) = Total Assets.

As facility cost increases, the burden ratio also increases resulting at a decrease of profitability.

4.7.8 Non-interest Income to Total Assets. This ratio refers to all non-interest income expressed as a percentage of total assets. Symbolically,

\[ c = \frac{C}{A} \times 100 \]

where,

- \( c \) = Non-interest Income Ratio,
- \( C \) = Non-interest Income, and
- \( A \) = Total Assets.
This ratio indicates the non-interest income earned from non-fund based services provided by a bank. An increase in this ratio reduces the burden and thus enables a bank to increase its profitability.

4.7.9 Deposit to Manpower Cost. Deposit to Manpower cost ratio indicates the deposit mobilized by the bank for every rupee of manpower cost. This ratio is a productivity based ratio indicating the efficiency of banks in utilizing its manpower. This ratio may be stated as:

\[
d = \frac{D}{M} \times 100
\]

where,

\(d\) = Deposit to Manpower Cost Ratio,

\(D\) = Deposits, and

\(M\) = Manpower Cost.

An increase of this ratio indicates at the increased efficiency of the bank.

4.7.10 Credit to Manpower Cost. Similar to deposits to manpower cost ratio, credit to manpower cost ratio indicates at the efficiency of a bank in utilizing its manpower to deploy credit. Symbolically,

\[
a = \frac{A}{M} \times 100
\]

where,

\(a\) = Credit to Manpower Cost Ratio

\(A\) = credits/advances made by the bank, and

\(M\) = Manpower Cost.
This ratio indicates the credits deployed for one rupee of manpower cost. An increase of this over other banks or period shall indicate the improved efficiency of the bank.

4.7.11 Business to Manpower Cost. Business to manpower cost ratio indicates the volume of business for every rupee of manpower cost. It measures the efficiency of employees in getting business. Symbolically,

\[ v = \frac{V}{M} \times 100 \]

where,

\[ v = \text{Volume of business, and} \]
\[ M = \text{Manpower cost}. \]

4.7.12 Credit-Deposit Ratio. Credit-deposit ratio is a quotient of credit and deposit which indicates the efficient utilization of deposits after meeting the reserve requirements. The ratio may be stated in percentage form as:

\[ \text{CDR} = \left( \frac{\text{Credit}}{\text{Deposit}} \right) \times 100 \]

Where, \( \text{CDR} = \text{Credit- Deposit Ratio} \).

4.8 SUMMARY

Performance of a bank involves the achievement of a bank in fulfilling the various stakeholders' interest. The stakeholders may be owners or equity holders, employees, customers, society and government. The studies made by different authors and researchers show that there are various methods of studying the
performance of commercial banks. The performance can be measured in terms of outputs to inputs. Authors and scholars differ with regard to input and output choices. However, the important indicators that are in use to measure the performance of banks are: Return on Assets or Net Profit to Total Assets, Spread to Total Assets, Burden to Total Assets, Interest Income to Total Assets, Interest Cost to Total Assets, Manpower Cost to Total Assets, Facility Cost to Total Assets, Non-interest Income to Total Assets, Deposit to Manpower Cost, Credit to Manpower Cost, Business to Manpower Cost and Credit-Deposit Ratio. The present researcher has also concentrated on these indicators.
REFERENCES


