

## CHAPTER I

### RESEARCH DESIGN

#### Rationale of the Study

The objectives and operational philosophy of commercial banks in the public sector differ from those in the private sector in a capitalist society. The values and operational norms of banks in the public sector are specifically geared to achieve certain well-defined social objectives which may not always be consistent with the traditional profit objective. In other words, while the focal point in all operational decisions may be 'profit' for the banks in the private sector, social benefit may supercede that in the case of banks in the public sector. This calls for the nationalised banks to strike an ideal balance between the 'specific social objectives' and their 'operational profitability' as in the long run, the former cannot be achieved in the absence of the latter.

Nationalised banks in our country are increasingly involved in development process of all the sectors of the economy. The post nationalisation period has witnessed a spectacular growth in branch expansion, advances and deposits. These banks will further continue to be aggressive participants in the financial markets

and they will expand their coverage and involvement in meeting the banking needs of the economy carrying along with their social responsibilities.

However, it should not be ignored that banking industry is different from other industries and the nationalised banks have to operate under various environmental constraints typical to them, which are briefly given below:

- (i) Nationalised banks do not have absolute freedom in the management and allocation of their assets. Banks have to invest about 30 per cent of their total deposits in government securities. The average rate of return on them is less than the average cost of maintaining and operating the funds.
- (ii) They have to operate within the interest rates structure fixed by the Reserve Bank of India. Banks do not have much freedom in pricing of their funds and services. The prices of banks' funds are not determined by the market mechanism nor are they related to the costs of funds and services.
- (iii) Banks do not have much freedom in the segmentation of their market. and
- (iv) Banks cannot influence the deposit mix, as it is an exogenous factor to them.

These constraints and the stress on their rapid growth, it is felt, have relegated the profitability and

viability of the nationalised banks to a lower level. Profit is essential not only to ensure economic viability of banks but also to provide strength and stability to them. The present study, therefore, is an attempt to analyse the declining trend in the profitability of these banks and find out the main factors responsible for the decline in their profitability. At the end, some remedial measures, based on the findings have also been suggested so that in future these institutions may be able to ensure an improved operational profitability.

#### A Survey of the Existing Studies

As already pointed out the profitability of the nationalised banks has been declining. This has created a serious problem of survival for these banks. In spite of this weakness in the operational profile of the nationalised banks in India, research in the field of bank profitability has remained to a great extent a neglected area in our country.

It was for the first time in 1971-72 that the Banking Commission appointed by the government of India dealt with the problem of cost and capital structure of banks in India and analysed their profitability to offer a few suggestions to improve the same. The report of this commission, however, could not fully

grapple with the problem of bank profitability and it was felt that it left significant gaps in the matter. In view of this research gap as also in view of the importance of improving productivity and profitability of the banking industry, the Reserve Bank of India appointed in 1976 a committee<sup>1</sup> to examine the problem of improving productivity, efficiency and profitability of banks in India. The committee examined this problem in detail and offered a number of useful suggestions for improving the situation. Though the committee gave a serious thought to the problem and had gone into some of the finer details of banking operations in India, its report cannot be rated a research work as it could not make any academic contribution to the body of the existing banking research. Later on, the Reserve Bank of India appointed another committee in 1978, headed by James S. Raj to review the functioning of public sector banks in India.<sup>2</sup> This committee also probed into the working of the public sector banks but with a different emphasis and it highlighted the impact of branch expansion and the impact of bank lending to priority sector on the operational profitability of the public sector banks in

---

<sup>1</sup>J.C. Luther. The working group on productivity, efficiency and profitability in commercial banks, Reserve Bank of India, Bombay, 1976.

<sup>2</sup>James S. Raj. Functioning of public sector banks in India, Reserve Bank of India, Bombay, 1978.

India. While the report of this committee provided extremely useful insight into the working of the public sector banks in this country, it cannot be taken as a research contribution due to a variety of conceptual and methodological weaknesses. For instance the committee in its analysis did not differentiate significantly amongst the public sector banks on the basis of their age, size, operational area profile and organisational pattern for the purpose of analysis of different operational variables relevant to bank profitability. The criticisms offered above in respect of Luther and Raj committees should not be misunderstood and misinterpreted and misquoted and should not be taken as reflections on the competence of the members of these committees, as the limitations pointed out above were mainly due to the specific and limited scope of the enquiry assigned to them.

Subsequently, the problem of declining bank profitability drew the attention of scholars also and Professors S.P. Singh and Varde examined various dimensions of this problem in a number of research papers<sup>3</sup>

---

<sup>3</sup>S.P. Singh. "Profitability of Nationalised Banks", Economic and Political Weekly, Vol. IX, No.35, August, 1974.

V.S. Varde and S.P. Singh. "Banks Profitability, Factors Responsible for the Fall", Economic Times, 4th April 1979.

brought out by them during the last one decade. In their endeavour to critically examine the problem of bank profitability, they examined a number of bank profitability factors and their relationship with the profit behaviour of the banks but their works were scattered over a long period of time. Each work dealt with either one or two variables only. Resultantly their contribution, though extremely useful and thought provoking could not meet the need of an integrated analysis covering all the critical variables of bank profitability. Similarly, a number of other scholars and practicing bankers also examined the problem of bank profitability from time to time. For instance R. Raghupathy, P.D. Nambiar, R.C. Shah, K. Ganesan, F.K.F. Nariman, S. Kumary Dey, P.J.H. Seshadri, Narayanan Bhat, S.G. Shah and others examined and analysed the problem of declining bank profitability

---

S.P. Singh and V.S. Varde. "Towards an Analytical Framework for Profit Management in Banks", Vol. XXVIII, No. 12. The Chartered Accountant, June 1980.

V.S. Varde and S.P. Singh. "Measuring Cost of Funds for Commercial Banks", Indian Banking Today and Tomorrow, Vol. VI, June 1981.

S.P. Singh. "Unbundling Bank Services Problem in Bank Marketing", Prajnan, July-September, 1980.

with different backgrounds, different thrust and different objectives.<sup>4</sup> These studies again could not provide a body of research finding to offer remedial measures based on scientific analysis of data and the prevailing environment. Again V.C. Joshi, K.S. Rao, S. Singh and others also produced some literature on

---

<sup>4</sup>R. Raghupathy. "Economic Viability of Commercial Banking", Commerce, August 30, 1980.

R. Raghupathy. "Profit Planning in Commercial Banks", Indian Banks' Association Bulletin, May 1980.

P.D. Nambiar. "Improving Bank Profitability", Commerce, April 1979.

K. Ganesan. "Monitoring Profitability in Banks", Commerce, July 28, 1979.

R.C. Shah. "Perspective Planning in Banks", Commerce, July 28, 1978.

S.G. Shah. "Branch Profitability Consideration" Business India, August 1980.

Ramchandra Rao. "Branch Level Profitability of Banks", Financial Express, February 15, 1980.

F.K.F. Nariman. The committee on Branch Expansion Programme, Reserve Bank of India, Bombay, July 22, 1970.

M. Narayanan Bhat. "Declining Profitability of Banks", Commerce, September 18, 1974.

M. Narayanan Bhat. "Declining Profitability of Banks, Case for Efficient Cost Control", Economic Times, September 18, 1974.

S. Kumar Dey. "Public Sector Slump in Profits", Commerce, November 18, 1978.

J.H. Seshadri. "An Econometric Analysis in Commercial Banks", Prajnan, Vol. IX, July-September 1980.

one or the other aspects of bank profitability.<sup>5</sup> Yet they differed significantly from one another in approach, methodology and goal.

In view of the above, we felt that there was sufficient need and scope for a scientific probe into the problems of declining bank profitability in India. To meet this need, through an appropriate research methodology, we have endeavoured to take up this study.

#### Main objectives of the study

The main objectives of the present study are:

- (i) to examine the trends in the profitability of nationalised banks during the period covered by the study,
- (ii) to identify the key variables that have influenced the profitability of these banks, and
- (iii) to suggest some suitable measures to improve their operational profitability of nationalised banks in India.

---

<sup>5</sup>S. Singh. "Nationalised Banks' Manpower utilisation", Economic Times, November 21, 1975.

V.C. Joshi. "Manpower Planning and Development in Commercial Banks", Commerce, 1978.

K.S. Rao. "Personnel Policies in the Eighties", Commerce, August 30, 1980.



### Main Hypothesis

The main hypothesis for the purpose of the study is given below:

"Within the given policy constraints, uniformly applicable to all the nationalised banks, the profitability of these banks is differently affected by the degree of asset utilisation, profit margin, establishment utilisation, liability management and branch expansion at the micro level."

In order to test the principal hypothesis, a number of sub-hypotheses have been framed; covering each one of the very determinants of bank profitability, viz., asset utilisation, establishment utilisation and branch expansion, as given below:

### Asset Utilisation

- (i) "The asset allocation policy and the assets-mix of a bank directly affect its profitability as there is a positive relationship between the 'degree of asset utilisation' and 'profitability' subject to a uniform degree of expenditure control exercised by it."
- and,

- (ii) "The profitability of a bank, Cetirus Paribus, will be more if the weightage of high yielding assets in the total assets of the bank is high and vice-versa."

In order to test the above (i) and (ii), it must be understood that

"The main components of Low Yielding Assets (LYA) are 'cash balances and cash reserves' and 'investments in government securities', governed and regulated mainly by Reserve Bank of India through its CRR and SLR policies. Any change in these two is bound to affect proportionately the share of LYA in the total assets or in other words, a change in the share of High Yielding Assets (HYA) in the total assets."

#### Establishment Utilisation

Establishment utilisation is a one of the key profit variables in the main hypothesis, its effect on the behaviour of bank profitability can be examined with the testing of the sub-hypothesis that

- (i) "Other things being equal, 'establishment utilisation' and 'profitability' have a positive correlation." and that

- (ii) "The 'establishment utilisation' by the nationalised banks has declined during 1972-82 or, in other words, these banks have really over-spent on their staff during the period which has adversely affected the profitability of these banks."

### Liability Management

As liabilities have a carrying cost, their behaviour should affect the profitability of banks. To understand this, in the context of nationalised banks in India, the following sub-hypothesis has been framed.

"The carrying cost of liabilities, changes proportionately, in the same direction in which the size of liabilities changes."

Further, the changes in the size of liabilities have been related to equity base of banks. The other sub-hypothesis, framed for understanding the effect of EM and PM is as follows:

"The 'Equity Multiplier' and 'Profit Margin' have a negative correlation."

To further examine the importance of liability management in the field of profit management, a LCI

has been developed and used to test the following sub-hypotheses:

- (i) "Other things remaining the same, an increase in the 'Liability Cost Indicator' causes a decrease in the 'Profit Margin' of the banks." and
- (ii) "Other things being equal a change in the deposit-mix of the banks results into a change in the carrying cost of liabilities of the banks."

#### Branch Expansion

As branch expansion has been done by nationalised banks on an unprecedented scale during the period of the study, it was felt necessary to examine the impact of such expansion on the profitability of these banks by testing the following sub-hypothesis:

"Rapid branch expansion has adversely affected the profitability of the nationalised banks in India during the period of the study."

The main and the sub-hypothesis framed above have tested appropriately in the different chapters of the thesis.

### Coverage and Methodology

The study covers 14 nationalised banks for the years 1972 to 1982. The data and information as per the financial statements published by these banks for the years are collected and analysed to examine the problem. The profitability of these banks has been examined in relation to variations in their performance in respect of socially oriented, low-yielding and high-risk activities with a view to determine their effects on profitability. As nationalised banks are principal financial intermediaries the techniques of Financial Ratio Analysis relevant to the analysis of their data have been mainly used to analyse the various operational variables.

### Scheme of Presentation

In order to achieve the main object of the study, the main and sub-hypotheses have been tested and the analysis of data along with the findings have been presented in the following order.

### Trends in Bank Profitability

Certain key factors of profit have been carefully identified to draw 'relationship identities' of profit.

Data pertaining to these key factors have been drawn from the annual financial statements of the banks, to understand the impact of each one of these factors on the profitability of the banks. The trends in the profitability of these banks has been analysed in terms of a profitability ratio. The behaviour of the profitability ratio has been examined with the help of 'spread ratio' and 'burden ratio'. Further, an attempt has been made to examine the trends in the profitability of the nationalised banks with the help of return on investment (ROI) approach. The profitability of the nationalised banks measured through 'profitability ratio' (Net Profit/Volume of business) and through ROI (Net Profit/working fund) has been compared and examined in detail.

#### Asset utilisation

The assets allocation policy and the assets-mix of a bank directly affect its profitability. So, a suitable 'Asset Management Efficiency Model' (AME Model) has been developed for determining the degree of asset management efficiency of the nationalised banks for identifying their strong and weak asset management elements.

For the purpose of comparative analysis of the efficiency of asset utilisation of the banks, an 'asset utilisation indicator' has been developed.

In order to know the weak and strong asset management elements, the model has been further refined to identify the 'gross return' from major 'asset category' of a bank. The refined AME model incorporates the relative importance of each major asset category in the total assets and highlights the contribution of each asset category in the gross income or revenue of a bank during the period. This model highlights the strong and weak elements of a bank's assets-mix on the basis of which the management of the bank can redesign the asset-mix and improve their degree of asset management efficiency.

For the purpose of further, analysis, all the operational assets of the nationalised banks have been divided into two categories.

- (i) Low yielding assets, and
- (ii) High yielding assets.

"The profitability of a bank Ceteris Paribus, will be more if the weightage of high yielding assets in the total assets of the bank is higher and vice-versa"

The above hypothesis has been tested in the context of the earnings expressed through AUI of nationalised banks to examine the changes in the composition of

assets of these banks and interpret their impact on the earnings of the banks in relation to their assets.

Finally, an attempt has been made to examine the changes in the low yielding advances ratio and its impact on the profitability of these banks.

### Profit Margin

'Profit margin' has been identified as an indicator and has been used to analyse the profitability of the nationalised banks. The terms 'profit' and 'profit margin' are not the same. Profit is the excess of total revenue over total expenditure. Profit margin shows the cost incurred by a bank per unit of its gross revenue. It may be possible that for a given period of time the profit of a bank may increase but its profit margin may fall. The behaviour of profit margin has been examined for the periods 1972 to 1973, 1973 to 1978 and 1979 to 1982. The time series has been prepared to show the trends in the expenditure as percentage to total income. Further, each item of expenditure has been expressed as a component of total expenditure to find out the key expenditure factor affecting the profitability of these banks. This brings to the light the items inflating the total expenditure of the banks.



### Establishment Utilisation

Under this, an attempt has been made to test the hypothesis that the 'Establishment utilisation' by the nationalised banks has declined during 1972-82 or in other words to find out, if these banks have really over-spent on their staff during the period. The need for testing this hypothesis rests on the premises that other things being equal, 'Establishment utilisation' and 'Profitability' have a positive correlation.

In order to test the hypothesis, the operational data of these banks have been analysed through an indicator called 'Establishment Utilisation Indicator (EUI)'. The changes in EUI have been explained with the help of an identity called 'Establishment Utilisation Model'.

In this study, the following two aggregative indicators have been used to explain the changes in the EUI over time.

- (i) The ratio of total expenditure to total income; and
- (ii) The ratio of establishment expenditure to total expenditure.

The first indicator called 'Expense Indicator' shows the expenditure incurred by a bank to generate its

total revenue.

The second indicator called 'Composition Indicator' shows changes in the composition of total expenditure over a period of time. In our exercise this indicator has been used to explain the changes in the EUI of a bank and to point out as to how far the 'wage component' of 'total expenditure' has been responsible for the change in the establishment utilisation by a bank over a period of time.

The relationship between the Establishment Utilisation (EU) and the two indicators described above has been expressed in the form of the following identity.

$$EUI = \frac{EE}{TE} \times \frac{TE}{TI}$$

The 'establishment utilisation indicator', over time, is uniquely related to the changes in the two indicators.

An attempt has also been made with the help of an output technique to measure the establishment utilisation. The establishment utilisation has been measured with the help of 'Net Profit Per Employee' (NPPE), Advances Per Employee (APE) and Deposit Per Employee (DPE).

### Liability Management

The 'carrying cost of liabilities' is an important component of expenditure. Therefore, we have analysed this head of expenditure to ascertain, if an increase in the carrying cost of liabilities has adversely affected the profitability of these banks. For this purpose, we have examined the 'management of liabilities' by these banks during the period 1972-82.

In order to examine this, we have first analysed the changes in the size of liabilities of these banks during the period 1972-82 and then related the same with the changes in the carrying cost of liabilities. For this purpose the following hypothesis has been tested.

"The carrying cost of liabilities changes proportionately in the same direction in which the size of liabilities changes."

In order to test this hypothesis we have first of all analysed the changes in the size of liabilities of these banks and then related these changes with their carrying costs. We have taken 'Equity Multiplier' (EM) as an appropriate measure of change as it takes the size of the liabilities into consideration in relation to the respective equity base of the banks.

Further the relationship between the EM and LCI has been examined. The LCI of these banks has increased due to an increase in their EM. We have examined the effect of an increase in the carrying cost of liabilities of the banks on profitability through Profit Margin (PM).

In order to examine the relationship between the changes in the 'size of liabilities' of the banks and their 'profit margin' (PM) we have tested the following hypothesis.

"The 'equity multiplier' and 'profit margin' have a negative correlation."

In order to know, if the increase in the liability cost indicator (LCI) has any relationship with changes in the Profit Margin (PM) and if yes, in what direction, we have tested the following hypothesis.

"Other things remaining the same, increase in the LCI causes an increase in the PM of banks."

An increase in the Liability Cost Indicator (LCI) means that the carrying cost of liabilities of the banks has increased and it has adversely affected the Profit Margin (PM) of the nationalised banks. In order to ascertain the principle causative factors responsible for this change in the LCI we have tested the following

hypothesis.

"Other things being equal a change in the deposit-mix of the banks results in to a change in the carrying cost of liabilities of the banks."

For testing the above hypothesis, data of deposit-mix of the fourteen nationalised banks have been tabulated for the years 1972 and 1982. "The change in favour of high cost carrying fixed deposits has been responsible for a substantial increase in the interest expenses of the banks and has resultantly increased the carrying cost of liabilities of the banks" has also been examined.

#### Branch Expansion

An attempt has been made to test the hypothesis that rapid branch expansion adversely affects the profitability of the banks. We have made an attempt to test the hypothesis with the data and other information relating to the fourteen nationalised banks in India in respect of,

- (i) growth of branches and their impact on the profitability of these banks;
- (ii) changes in the branch-mix of these banks and their impact on their profitability; and

- (iii) On the basis of the findings of (i) and (ii) above, examine the strong causative factors determining the relationship between 'rapid branch expansion' and the 'profitability of the banks'.

Branch expansion during pre- and post-nationalisation periods has been examined. The impact of branch expansion on profitability of the banks has been examined with the help of 'Profit Margin' and 'Profit Expenditure Ratio'.

The branches have been classified into 'Profit making branches' and 'Loss making branches'. The loss making branches have been further stratified according to the area, age and the quantum of loss.

Finally, the factors affecting the branch level profitability have been identified and analysed.

#### Main Findings and Suggestions

At the end, we have summarised all the major findings and presented them in a systematic manner, followed by some suggestions to improve the profitability of the nationalised banks in India.

. . . . .