Chapter II

REVIEW OF LITERATURE

In this chapter, an attempt has been made to present a review of the literature available in the area of bank management, in general, and performance appraisal of commercial banks, in particular. We have, however, selected only the empirical studies conducted on the subject. The review of literature, albeit in brief, is likely to provide a bird's eye view of the work done in India and abroad relating, directly or indirectly, to the subject matter of the present study. It may also indicate the research gap that exists today in this important area of management of commercial banks, particularly in India.

The available literature, as mentioned above, divides itself into two groups, namely:

1. Bank management in general; and
2. Performance appraisal of banks.

II.1 Bank Management-General

Quite a large number of empirical studies are available on operations and management of commercial banks. Most of these studies have, however, been made in western countries, particularly U.S.A. Hopefully, of late, a number of studies have been conducted in India in hitherto neglected area of bank management. Some of the literature deemed important in this area is being reviewed in the following pages.
Frey (1970)\textsuperscript{1} in his study on 'Optimal asset and liability decisions for a rural bank' concludes that the extent to which rural bank should make loans hinges on the feedback relationships. Results showed the model bank often meeting less than 50 per cent of its loan demand. In general, the policy constraints caused a higher proportion of loans to be made than when the constraints were removed. The higher interest rates generated a modest increase in loan activity. The study revealed that decreasing capital and liquidity constraints increased profits of the bank. The study also serves as a useful point of departure in exploring bank behaviour in relation to the increasing farm loan needs.

Walker (1971)\textsuperscript{2} studied 'portfolio behavior on commercial banking'. The study indicates that deposit stability increases—i.e., the risk of unexpected deposit losses falls—as deposit size increases and as the ratio of time deposits to total deposit rises. At this stage, bank management can shift the composition of their asset portfolio toward longer-term, higher-yield assets. The empirical results of the study clearly indicate that deposit mix affects asset portfolio composition in the expected manner. The effect of deposit size is somewhat ambiguous, but it is generally in agreement with a priori expectations.

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Moore (1974)\(^3\) analyses the determinants of the short-run financial behaviour of the commercial banking sector disaggregated by size and location. The results of the estimation suggest that the two groups of banks under study do indeed behave differently in their allocation of funds. The interest rate responsiveness was fundamentally similar between bank groups, particularly during recent years. The overall sensitivity to interest rates exhibited by these banks is substantially greater than that found in prior studies. The result strongly support the argument that the flow of loanable funds to the business sector is effectively insulated from restrictive monetary policy.

Atkins (1973)\(^4\) in his study on 'Commercial bank portfolio management' concludes that the bank's risk-adjusted cost of equity capital and the optimal bank portfolio are determined simultaneously. It is also established that the optimal portfolio is sensitive to relative interest rate elasticity differences between demands for risk-free securities and risky loans and between the supplies of bank deposits and equity funds. This latter finding indicates that neither a high ratio of bank deposits to bank capital nor a low ratio of risk-free securities


to bank loans is necessarily in commensurate with shareholder wealth maximisation.

Buschmann (1979)\(^5\) investigates empirically the portfolio behaviour of a sample of commercial banks. And it is found that some banks are more willing than others to adjust their asset-mix and to purchase funds in order to accommodate variations in loan demand over the credit cycle.

Cheatam (1974)\(^6\) in his study on 'Comparative analysis of composition changes in the investment portfolios' concludes that the comparison of Arkansas bank data with national data for equivalent deposit size banks revealed the same trends as when data for all Arkansas banks were compared with data for all United States Banks. But, compared to national ratios, Arkansas banks in general had higher net income-to-operating ratios, lower interest on deposits-to-total operating income ratios, and higher income from municipal and agency securities-to-operating income ratios even though the trends in these ratios were the same as trends in the national ratios.

Paul (1977)\(^7\) studied on 'Bank balance sheet behavior concerning deposits expectations'. In the study, it is found

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that the model yields forecasts, which track the observed series quite well, indicate that a substantial proportion of the overall variability in bank deposits is systematic and can be predicted from past knowledge of the series. Additionally, support is found for the hypotheses that deposit generating structures differ from bank to bank, that for short time horizons time deposits are more predictable than demand deposits, and that sequences of time deposits and demand deposits are independent. Further, it is found that expected responses of bank balance sheet adjustment based on such models are highly sensitive to specification of the mechanism whereby banks are assumed to form expectations concerning the future course of their deposits.

Jones (1978)\(^3\) determines the implication of liability management activity for the efficiency of monetary policy and he concludes in his study that it is largely through these results that liability management will serve to thwart or offset a restrictive monetary policy. Further, it is observed that liability management activity may drive interest rates above targeted ranges.

Ali (1977)\(^9\) studied the effects of accounting alternatives

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on lending decisions of commercial banks. The study concludes that, at a significance level of 5 per cent, the use of different acceptable accounting principles by a business firm to measure the same economic events does influence the lending decisions of the commercial bankers surveyed in this research.

Diamond (1978)\(^{10}\) studied the effect of supplemental replacement cost disclosures on bank loan decisions. The major findings from this study were that first supplemental replacement cost data had little impact on the bank loan decisions. It neither changed the loan officers' pricing decisions nor improved the quality of those decisions. Second, the debt to net worth and the rate of return ratios had the most explanatory power in the regression equations. Further, it was also found that the loan officers had little self insight into their own decision process, but that they did exhibit a moderate degree of inter-judge agreement.

Joaquin (1974)\(^{11}\) in his empirical study on 'Profitability of banks' concludes that (i) the rediscount rate is positively related to profitability; only local banks have a negative relationship between return on owner's equity and rediscount rate; (ii) the relationship between profitability and rate of growth


\(^{11}\) Joaquin, Veray Lopez e, Profitability of Spanish Private Banks, Ph.D. Thesis (University of Michigan, 1974).
is not consistent; and (iii) for national banks there is a positive relationship between return on owner's equity and size.

Klein (1977)\textsuperscript{12} studied the impact of long range planning on profit and growth of commercial banks. The study indicates that bank size is an important variable affecting growth trends in commercial banks. Further, the extent of long range planning efforts undertaken does influence growth trends.

Weight (1970)\textsuperscript{13} conducted a study on the cost of servicing demand deposits. The study developed a model of demand deposit service-costs that may be applied to small banks. Specially, a four-variable demand deposit costing model is developed from original data furnished by banks in Oregon and Washington. The model, utilising the deposit ratio (average balance per account) as the output variable, is subjected to regression analysis for the purposes of forecasting specific cost relationships and determining the presence of economies of scale. The data indicate the presence of a highly significance curvilinear cost function for all the variables inferring that small and medium sized banks have relatively similar costs for providing demand deposit services. Economies of scale were present in all four cost variables. Further as the deposit ratio increased, the cost of performing each service charge function declined.


Schweitzer (1970)\(^{14}\) studied 'Cost and production factor in banking industry' and the results suggest that decisions of the banking regulatory agencies on bank applications for merger and for holding company affiliation can influence not only competitiveness of banking markets, but also the efficiency at which the banking system operates. But, these results pertain only to private costs and any extension of them to statements about social efficiency must account for divergencies between private and public costs.

Divatia and others (1978)\(^{15}\) worked on 'Cost of banking services' and the results of the study provide a profile of the servicing cost of the various activities undertaken by banks. The results show a remarkable degree of consistency when compared with the Banking Commission's cost study of 1970.

Tuchman's (1970)\(^{16}\) study on cash flow analysis relating to commercial bank liquidity suggests that the primary implication for bank management is that loans provide a large source of liquidity. Further, the bank needs to improve its information system so that cash flows can be forecasted with greater accuracy. Moreover, the traditional treatment of loan liquidity in a stock

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sense is found to be inadequate. Regulating agencies must consider the net cashflow generated by loan repayments relative to the bank's needs for cash if the deposit declines.

Booth (1971)\(^{17}\) wanted to create a portfolio management model for banks, which will give a bank (especially a small bank) the opportunity to improve its investment and liquidity decisions. Using range analysis, he discovers that in the selected economic environments the investment and liquidity decisions suggested by the model are, ceteris paribus, in some states of nature sensitive to the forecasted maximum amounts of loans that are demanded by the public, and in most states of nature sensitive to the forecasted maximum amounts of deposits that are provided by the public. These decisions are found to be sensitive to the forecasted maximum levels of non-deposit liabilities in any state of nature. When the conditions of ceteris paribus are removed, it is found that the investment and liquidity decisions are somewhat less sensitive to the loan demand and deposit level parameters. This finding support the contention that the model's output may be interpreted in a dynamic context.

Domonkos (1972)\(^{18}\), in his study on 'The management of


commercial bank liabilities', concludes that cost variance declined with increase in yields offered on savings deposits (holding the costs of demand deposits constant) only if there existed negative correlation between demand and savings-deposit flows. Further, the reduction in the cost variance was found to be greater the more negative the degree of deposit correlation, the lower the ratio of the cost of savings deposits to the cost of demand deposits, and the greater the variance of demand-deposit flows as compared to the variance of savings-deposit flows.

Prestopino (1974)\textsuperscript{19} studied the impact of differential reserve requirements on the operating policies and portfolio composition of commercial banks. The results show that most banks can consider required reserves an important source of short-term liquidity, though the required reserves are not liquid assets. Hence, a positive liquidity effect is conceivable. Banks may very well feel more liquid as reserve requirements rise.

Nnedu (1977)\textsuperscript{20} studied customers' perception of commercial bank services. The main findings are: (i) The commercial banks are satisfying the older bank customers more than the young ones. (ii) Older bank customers, as a group, are more aware of the existence of the various services provided by the banks than the


young customers. (iii) Commercial banks are satisfying the female customers more than the male customers. (iv) College education or the lack of it does not significantly affect the perceptions of bank customers. (v) Occupational membership (white or blue collar) and residential location do affect the perceptions of bank customers in varying degrees.

Sterk (1978)\(^{21}\) in his study on "The customer relationship and optimal bank portfolio allocation" reveals that a bank's loan-deposit relationship can be estimated by properly aggregating individual customer data, and how aggregates data can be used to identify and estimate the bank's loan-deposit relationship.

Sack (1974)\(^{22}\) tested the applicability of the Delphi Method in short-term forecasting. The study concluded that the Delphi group was more accurate in its forecasts but not at the prescribed alpha test level. Moreover, when the participants are relatively well informed concerning the variables they are forecasting, the value of the Delphi process can appear to be in the basic design of its systematic procedure rather than availability of information.

Orlando (1974)\(^{23}\) compares the interest rate predictions,


\(^{23}\) Orlando, Frank Salvatore, *The Interest Rate Behaviour of Banks - Reserves and Flow-of-Funds Financial Models*, Ph.D. Thesis (Purdue University, 1974).
forecasts and responses to policy shocks of two competing quarterly financial models. The study indicates that the overall performance of the flow-of-funds and bank reserves models is approximately equal. Further, the equilibrium interest rate responses to changes in bank reserves and reserve requirements against demand deposits differs significantly in magnitude.

Scharlau (1974)\textsuperscript{24} suggested to use BU-MOD Computer model for commercial budgeting. The study concludes that BU-MOD has a wide range of alternative uses. It provides the banker with an economical computer forecast to aid in budget projections. It also allows bank management the opportunity to train bank employees through the use of model projections. The employees can make several "what if" decisions in developing the forecast which, in turn, provide the employees with a better understanding of banking.

Hobson (1976)\textsuperscript{25} investigates the use of cluster analysis as a method of forming homogenous groupings of banks which do not depend on the subjective specification of grouping criteria. The overall results indicate that the more profitable banks tend to be those which minimise expenses. Banks in the more profitable cluster tend to make judicious use of their employees in managing


\textsuperscript{25} Hobson, Hugh Alvin, \textit{Analysing Co-variation of A Measure of Commercial Bank Profitability to Determine Homogenous Groupings of Banks}, Ph.D. Thesis (University of Georgia, 1978)
their assets, tend to minimise the expenses of non-deposit sources of funds, and tend to be located in areas of stable economic growth.

Wood (1977)\(^26\) investigated the nature and effectiveness of formal planning in large U.S. banks. The study led to the conclusion that formal planning in the form of profit planning and strategic planning was increasingly being integrated into the management system of large U.S. banks.

Jackerson (1978)\(^27\), in his study on 'Informational and behavioural considerations of bankers in the small business loan decision', suggests that accountants should be responsive to bankers who have special information needs regarding small businesses. Further, the study reveals that (i) neither the form of the information nor bank size had an impact on the loan decision; (ii) the reliability of the source of repayment was the discriminating variables for this particular loan decision; (iii) both behavioural measures, job-felt pressures and attitude towards risk had no impact on the decision outcome; (iv) bankers made subjective estimates of the probability of payback as part of their decision process; and (v) a decision model which incorporates comparisons of payback probabilities to minimum acceptable levels was shown to be consistent.

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Most of the literatures reviewed above relate to the Ph.D. work conducted at different universities in the U.S.A. Copies of some of these thesis and the dissertation abstracts of others are made available by the University Microfilms International, U.S.A. Unfortunately, such facilities are not readily available in the country. However, a general scanning of the literature available in India from different published sources indicates that very few detailed research studies have been conducted in this country. Moreover, whatever little is available it normally relates to the traditional economic analysis of banking industry in general.\(^\text{28}\)

 Hopefully, after the nationalisation of 14 commercial banks in India, banking operations and management have started receiving greater attention of the academicians and experts alike. In this effort, the contribution of National Institute of Bank Management is praise-worthy. A number of articles and empirical studies relating to various aspects of bank management have been regularly appearing in the journals like Prajnan, The Journal of the Indian Institute of Bankers and other financial journals. Some of these are reviewed here under:

\(^\text{28}\) See for example:


(c) Sharma, A.G., \textit{State in Relation to Commercial Banking in the Developing Economy of India} (Delhi, Sterling Publishers, 1969).
Kapur (1972)\textsuperscript{29} examines portfolio behaviour of commercial banks. The objective of this paper is to demonstrate empirically the determinants of portfolio behaviour of commercial banks in India. The study makes general analysis of portfolio behaviour, articulating a model to test alternative hypotheses regarding portfolio decisions with respect to excess and borrowed reserves, investment in securities and the supply of commercial loans. Then four sets of equations of these dependent variables are estimated so as to shed light on the role of interest rates, deposits, lagged variables like seasonal variation and impact of nationalisation in the portfolio decision by commercial banks.

The study concludes that rate of interest turns out to be a key determinant of several variables and it can be taken as a policy variable. Results show a fairly high and variable response of dependent variables to change in deposits. Further, the differential impact of time deposits and demand deposits has been found in the study.

Singh (1979)\textsuperscript{30}, in his study on the relationship between cost of bank credit and prices, concludes that (i) it would be wrong to argue that the present high rates of interest produce in general a significant tendency for the prices to rise further;

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(ii) the effect of rise in interest rates is somewhat significant only in case of those companies which are inefficient and burdened with excess borrowing from commercial banks; and

(iii) the percentage spread, or the difference between interest received and interest paid, has been declining for the banks.

Shah (1979)\textsuperscript{31} in his article highlighted 'some aspects of bank profitability'. He concludes that profitability cannot and will not improve merely by increasing the margin between lending and borrowing rates, or by minimum service charges for all banks. On the contrary, any increase in income will be observed by latent efficiencies in cost structure. Further, the spread between interest earned and interest paid is declining, not because interest margin has been squeezed but because staffing and working patterns are inefficient, funds and investment management is poor, credit is not supervised and procedures and forms are complex and wasteful.

Ganesh (1979)\textsuperscript{32} in his paper on 'The system of profit monitoring in banks' emphasises that the effectiveness of monitoring system would depend upon profit plan, identification of profit centres, setting standard for comparison and a proper management information system. The study indicates that the

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\textsuperscript{32} Ganesh, K., "Monitoring Profitability in Banks", \textit{The Commerce}, 130, 3954 (July 28, 1979), pp 25-27.
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working funds as the base for the purpose of comparing profitability at branch level has been found inadequate and relating it to the total business (i.e., the sum of the total deposits and total advances) will be more suitable. Finally, the study suggests a proforma of monthly profitability monitoring for reporting to central office.

Patil and others (1975)33 made a case study on the framework for banking development programme for a state. In the study, the authors pointed out that the proper branch expansion and location planning were crucial to the fulfilment of the developmental objectives of the banking system. Further, any programme of branch expansion within a specified plan period is constrained by the organisational, manpower and profit considerations for the system as a whole during the plan period. Keeping these constraints in view, the programme consists essentially of two components:

(a) Determination of total number of branches of different types to be opened in a state, district or block;

(b) Given the total number of branches to be opened, to determine the approximate location of such branches, so that the developmental objectives are adequately served.

The study discovered that, (a) the action plan so evolved should clearly indicate the implementation agency/agencies and

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underpin their responsibilities; (b) the experience of the district coordination committees and the State level Consultative Committee was not very helpful in development of banking in the state; (c) the whole process was multi-dimensional, involving actions and interactions among the different agencies. As many of these dimensions were highly correlated, the final plan would have to be arrived at in an interactive manner and would undergo changes during the implementation.

Varade et al. (1975) studied 'branch expansion planning for the banking industry' in depth and formulated district-wise branch expansion plan for the fifth year plan period, 1974-79. The objective of the study was to evolve a branch allocation scheme for branches to be opened, so as to bring about maximum reduction in the currently existing disparities in respect of banking presence among various districts of the country, between under-developed areas, and within each district. The study concluded that the planning process evolved could be better termed as need-based branch allocation which balances demands on banking structure with the capacity of banks to respond to the demands. Further, the study suggests that if the banks feel that they have some more capacity to open branches, it would not be incompatible to permit them to open remaining branches wherever they wish.

Padwal and Bandyopadhyay (1973)\textsuperscript{35} examined the question of 'bank branch location in rural areas'. The objective of the study was to develop a scientific framework for analysing environmental data and to arrive at a meaningful location and branch expansion plan for the district. The results of the study give indication that, (a) from the long term interest of the bank's business it is profitable for the bank to open the maximum number of branches in the earlier years of the planning horizon; (b) the micro level decision-making, whether for branch location or for formulation of specific schemes, is not possible without having the data at the micro level; and (c) the high cost of starting and operating new branches calls for a sound decision-making based on objective criteria rather than on subjective judgements.

Patel (1974)\textsuperscript{36} studied 'problems and challenges of rural credit' and concluded that despite institutional finance being a subject of major controversy and rural credit presenting inherent difficult problems, the nationalised commercial banks need not be afraid of accepting the challenges of rural development. They may very well identify the specific local problems of rural finance, discipline the borrowers, involve the voluntary institutions, input dealers and make available to the farmers package of


practices-cum-technical services. With the adoption of this integrated agricultural credit-cum-service concept, (a) the element of risk would be reduced to the minimum; (b) production efficiency would increase; (c) 'borrowing power' of the farmers to secure credit and 'bargaining power' to sell the produce would increase; and (d) repayment of loan instalment can be better ensured.

A study by Vaghul (1976) on 'Employee development for efficient customer service' has two major objectives: (a) to provide empirical evidence in regard to the extent of customer satisfaction/dissatisfaction in the banking industry; and (b) to identify specific areas of bank’s operations where customer dissatisfaction is high so that action strategies could be developed around such areas.

The main findings of the study are: (a) delays in customer service flow not only out of defective systems, but attitudes of employees; (b) even if systems are modified, unless the employee attitudes change, the desired results cannot be achieved; (c) employee attitudes are not susceptible to change through class-room training, they can be changed only through experiences; (d) the most appropriate time to inculcate new value systems and attitudes on the part of employees is when they join the organisation, because at this moment they are most susceptible to be influenced by organisational values and practices; (e) the

strategy of exposing employees to customers can also be followed in respect of existing staff, even though in their case values and attitudes may have, over a period of time, been hardened; the employees should be actively involved in developing new work systems with the twin objectives of speedy customer service and greater fulfilment of their own psychological needs; (f) complaints of borrower clientele regarding delays in processing loan applications, etc., can be avoided through better systems; and (g) smaller offices are in a position to give better customer service because of greater cohesion of work groups and, consequently, a better industrial relations situation. Varade (1976)\textsuperscript{38} has also supported, in his study on customer service of banks, the last finding of Vaghl.

Bhise (1977)\textsuperscript{39} studied 'Customer service and systems and procedures of banks'. The study identified several causes of slump in the quality of the customer service of the banks that has taken place in recent years. The survey findings indicate that some of the customer's complaints may be arising on account of existing systems and procedures. Further, the study indicates that systems and procedures should be placed in the assiduous care of a specialist department, so as to weed out outmoded practices and introduce new ideas and methods in order to maximise customer satisfaction by giving quick service with minimum of strain on the staff.


II.2 Performance Appraisal of Commercial Banks

Despite the fact that most of the research work appears to have been done in the area of operations and management of banks in general, several studies are available on the performance appraisal of commercial banks which we review hereunder.

Keen (1972)\textsuperscript{40} made a study on 'Market structure and bank performance'. His thesis explores the impact of market structure by utilising balance sheets of individual Wisconsin banks for census year 1870 to 1900. A model of individual bank behaviour and performance is developed that generates predictions about prices charged and loan output. The major hypothesis is that the structure of the local banking market (country or city) exerted a significant influence on bank lending performance as measured by the ratio of loans to local assets. Specifically, the number of banks and the concentration of banking assets should be important determinants of bank lending performance. Specific hypotheses about the impact of demand, organisational and internal variables are formulated and tested along with the major hypothesis. The major conclusion is that the performance of individual banks was not influenced much, if at all, by the structure of local loan markets, despite considerable diversity in market structure at any time and substantial changes over time.

Daniel (1973)^41 in his study on the relationship between bank market structure and performance of small banks measured by loan rates, came to the conclusion that, in general, market structure, when measured by the number of competing banks, had a negative but statistically insignificant effect (at the 5% level) on the average rate earned on a bank’s loan portfolio. The managerial cost of loans and the managerial deposit cost of loans were found to have a positive and statistically significant effect (at the 1% level) on loan rates. The results relative to the effect of product differentiation arising out of advertising were considered inconclusive.

Jackson (1974)^42 made a study which identifies the determinants of commercial bank’s social efficiency. It utilises both theoretical and empirical micro-economic analyses to examine the competitive effects of banking influences. These analyses reveal that from eleven to sixteen variables significantly explain banking performance. The same variables do not enter all equations, however, and some variables do not support several theoretical explanations of social efficiency proxy measures. Tentatively, relatively "desirable" banking performance is associated with several traits, including: bank assets size, non-bank competition, low cash holdings, low labour cost, multi-bank holding company

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legislation, national bank status, low time deposits and low equity capitalisation. Demand effects and temporal variations also significantly affect banking. Moreover, some variables favourably associated with one performance characteristics tend to be adversely related to another. The study shows that the complex, interactive effects of banking activity's causes may thus generate unanticipated, if not undesirable, effects on the American banking system, if new regulations designed to limit financial competition are applied to the industry.

Sapp (1978)\textsuperscript{43} investigates the relationship between long-range planning and bank performance. The purpose of this study was to examine the extent of long-range planning by commercial banks and to study the relationship between such planning efforts and bank performance.

Eight testable hypotheses were derived from the general hypothesis that banks which engage in long-range planning will perform better than banks which do not. The analysis of variance procedure (ANOVA) was used to determine the significance of the variance in the performance measure that could be "explained" by the levels of long-range planning.

This study mainly concludes that: (1) Measures of bank profitability (i.e., return on assets and return on equity) were found to be not significantly related to levels of long-range

\textsuperscript{43} Sapp, Richard Wilson, \textit{An Empirical Investigation into the Relationship Between Long-Range Planning and Bank Performance}, Ph.D. Thesis (Houston, University of Houston, 1978).
planning. (2) The measure of deposit growth was found to be significantly "explained" by long-range planning efforts. (3) As with deposit growth, loan yield was also significantly related to long-range planning efforts. (4) As the planning level increases, the required capital necessary to support a given risk asset base decreases.

Allison (1971)\textsuperscript{44} made comparative study of bank performance under branch and unit system. In the study, the findings regarding the impact of market structure on bank performance are brought together in a re-evaluation of the various claims commonly made on behalf of one or the other form of banking structure.

Hashem Mohammed Ali (1972)\textsuperscript{45} has studied the utilisation of managerial accounting concepts and techniques in branch bank management. The purpose of this study was to establish an optimum theoretical accounting information system for a branch bank, and to establish the extent to which a branch bank, in fact, has evolved such a system.

The findings of the study are:

1. Managerial accounting concepts and techniques can be utilised to better manage branch banks.

\textsuperscript{44} Allison, Theodore Edward, \textit{A Comparative Study of Bank Performance Under Branch and Unit System}, Ph.D. Thesis (University of Illinois at Urbana, 1971).

2. The long term success objective of the branch bank can be served by a managerial accounting system which is oriented towards reasonable profits and customer satisfactory goals.

3. "Functional accounting", "Goal congruence", and "Responsibility accounting" are used in managing a major branch banking operation under study.

Hegstad (1978)\textsuperscript{46} studied the influence of management control system on the performance of branch bank officers. This study sets forth a model symbolising the management control process, intended to be sufficiently generalisable to accommodate any organisational context. The model is tested in a branch banking environment.

The general model set forth in this study hypotheses that managers' individual performance ratings are related to their perceptions of firm goals, individual performance criteria, expectancy, valence, ability, promotion criteria, and dissonance measures. Since the study is exploratory, several secondary hypotheses are tested for possible inclusion in the formal model.

Factor analysis with orthogonal rotation is used to make the data conform to the assumptions of a discriminant analysis model and to reduce the number of independent variables. The data are then subjected to discriminant analysis to test the degree of association between performance rating and the independent

variables. Performance is measured on a dichotomous scale, represented as "high performers" and "all others".

Results from testing the secondary hypotheses suggest that organisational climate is a variable which should be incorporated formally into the model. In terms of methodology, a trichotomous scale (rather than a dichotomous one) is recommended for future research, since this would permit comparison of a low performing group with a high performing one.

As regards Indian Banking, much work does not appear to have been done on the specific subject of performance evaluation of commercial banks and their branches. A few studies are available, but these generally relate to the economic performance of the Indian banking system, efficiency of rural branches, performance budgeting, or transfer pricing system. Only one detail study has tried to evaluate Indian banks performance in terms of various quantitative indicators. We, however, review all these studies so as to have a general idea about the works are done in this important area of performance appraisal of commercial banks and their branches.

Bhatia (1978), in his Ph.D. thesis on banking structure and performance, attempts to describe and analyse the economic performance of the Indian Banking System as it is reflected in output, price and profitability performance during the period 1950-69.

A banking system, as a service industry, suffers from output measurements problems. Surrogates were used to measure the output of the Indian Banking System. A weighting scheme was devised to improve the accuracy of the output measurements. The price performance was analysed using the yield on financial instruments owned by the Indian banking system. Profitability of the banking system was measured by the ratios of profits before taxes/capital and profits before taxes/assets.

The hypotheses that: (i) demand, policy and structural variables significantly affect the performance of the Indian Banking System; and (ii) there are insignificant differences in the performance of the various banking sectors in India were tested in this study. The first hypothesis was formulated to analyse the performance of the Indian banking system and to help resolve the controversy surrounding the 'structure performance' hypothesis in the banking literature. The second hypothesis helped in a disaggregated performance analysis of the banking system.

A schematic model was developed to express theoretical relationships among demand, policy and structural variables, and performance variables of a banking system. Econometric models, deduced from the schematic model, were used to test the first hypothesis for the Indian banking system. For testing the second hypothesis, superior performance of a banking sector in a given year was defined as better than the average performance of the banking system as a whole in that year, and was measured with the help of performance realisation ratios.
To evaluate the intersectoral output and profitability performance of the Indian banking system, an analysis of covariance model was developed. Annual time series data from Statistical Tables Relating to Banks in India, and the Reserve Bank of India Annual Reports on the Trend and Progress of Banking of India, were used to test the hypotheses.

The major findings of this study are:

1. The performance-profit of the Indian Banking System during 1950-68 had an upward trend.

2. The structure of the banking system proxied by the number of bank offices and the deposit concentration ratio had an insignificant effect on its performance during the period under review. The weight of empirical evidence is, thereby, tilted in favour of rejecting the 'structure performance' hypothesis for banking industry.

3. There were significant differences in the levels of intermediation by various banking sectors of India during the 1950-68 period. None of the sectors, however, had significant profitability differences.

4. The study suggests that the banking regulations in India should not emphasize direct regulation of the rate of return as much as the regulation of the asset portfolio of banks, in order to improve the output performance of the Indian Banking System.
Varade (1973), in an empirical study on efficiency of rural branches, maintains that the success of a rural branch has to be judged in relation to the objective of rural banking, which is two-fold: to act as an active catalyst in the integrated socio-economic development of the area served by the branch, and to become a commercially profitable unit of banking. The study concludes that: (a) the rural branches operating in groups of 4-5 sufficiently proximate branches would function more effectively than single individual branches; (b) it would be appropriate to follow the principle of determining the manpower requirements individually for an individual rural branch instead of a standard complement of staff; (c) location of a rural branch should be at the hub of activity; (d) it is necessary and possible to make efforts to rescue the rural branches operating at a low volume of business and those having large overdues; and (e) some of the new rural branches may be opened in such a way that a group of 4-5 rural branches get formed around an existing rural branch.

Mampilly (1975) studies 'performance budgeting at branch level'. In this study, it is discussed as to how the branches, as basic units of business, will draw up their business programmes or the Performance Budget. The study suggests that (a) budgets


should more be governed by the will of the branch management to restrict the amounts to certain limits; and (b) the final budget -- credit, deposit, profit and inputs -- emerges only after the Regional Manager and the branch staff jointly consider possibilities and strategies.

In a study on 'Transfer price mechanism for performance evaluation,' Zahir (1980) advocates that transfer pricing is one of the important methods of evaluating branch level performance of commercial banks. The study advocates the concept of opportunity cost for determining the transfer price for branches which should be taken as natural 'profit centres'. To encourage branch managers to meet the bank objectives of priority sector lending at concessional rates, it further suggests, the branches should be given credit at a minimum of transfer price at which excess funds are transferred to the H.O. Again, necessary weighting should be given to management objectives other than profits, such as deposit mobilisation, priority sector lending, recovery, etc., for proper evaluation of branch level performance. However, the profitability objective should in no case be lost sight of completely.

When applied to a selected number of different kinds of branches of a particular nationalised bank, the above transfer pricing mechanism made the profit statements of branches more meaningful and informative for evaluating branch level performance.

Moreover, the system was claimed to have provided built-in incentives to the branch managers who started seeing the impact of their day-to-day decisions on their profit performance without sub-optimisation of overall objectives of the bank.

In a recent study, quite a good effort has been made to evaluate the performance of public sector banks in terms of quantitative indicators in different spheres where much was expected of the banking sector. In the study, six indicators, viz., branch expansion; priority sector credit; deposit mobilisation; export credit; net profits to working funds; and wage costs of business development, have been considered to prepare Performance Index of each public sector banks. This was called the Integrated Priority Index (IPI). IPI incorporated the above leading indicators which were assigned appropriate weights. Apart from inter bank comparison based on these performance indices, the study also suggests that (a) necessary loaning power should be vested with the branch managers; (b) counselling and expert advice to the priority sectors on diversified activities is essential; (c) not only the top level of management but also the staff at lower level should be actively involved in the priority sector credit; and (d) the banks, whose performance is below the national average, should have a second look into their liabilities management, so that factors influencing cost of operations could be kept under control.

To sum up, the review of literature shows that with the possible exception of integrated Priority Index model proposed by Makarand (1979), no serious research efforts have been directed towards the development of a comprehensive model for evaluating the overall performance of commercial banks and their branches in this country, particularly in the context of the new banking policy which departs fundamentally from the traditional banking practices. While there have been several interesting studies on performance budgeting, transfer pricing, and control, the results lack a general theory/model and are essentially exploratory in nature. Hence, the need for a comprehensive study on the subject can hardly be overemphasised.

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