CHAPTER II

REVIEW OF LITERATURE

In this chapter the research works carried out on the profitability of the banking institutions have been reviewed by the researcher. This has been done to identify the research gap existing for the present study. The study has reviewed both Indian and foreign research works which are collected from various sources.

Yoram Kinberg and Ephraim F. Sudit\(^1\) analysed the potential effects of successive retention of funds, induced by portions of funds granted as loans being successively redeposited via a chain of market transactions in the same bank, on loan profitability. It identified sets of market conditions and loan terms under which the magnitude of the fund retention phenomenon could be significant, derives formulae to measure its magnitude, and suggested loan marketing strategies potentially capable of exploiting successive retention of funds to improve loan profitability. The potential role of the loan-induced retention process as an additional explanatory factor in the relationship between market structure and market performance in banking has also been discussed in the study.

Mark J. Flannery\(^2\) analysed the impact of market interest rate increase on commercial bank revenues, costs, and profitability. In the article published in Journal of finance, it has been stated that there is a wide spread notion that the commercial banks borrow short and lend long, implies that sharp market interest

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rate increases may induce a significant number of banking failures. He developed
a method for estimating average asset and liability maturities for a sample of large
money center banks. The analysis revealed that large banks have hedged their
positions quite well against the market rate fluctuations and market rates have no
significant long-run impact on net current operating earnings of the majority of the
banks. He also stated that the result of the study reveals that contrary to the
conventional wisdom, bank failures from negative cash flows are unlikely even if
market rates rise sharply.

Myron L. Kwast and John T. Rose\textsuperscript{3} in a research study used statistical
cost accounting techniques to examine the relationship between bank profitability
and two dimensions of operating performance — pricing and operating efficiency.
The traditional statistical cost accounting model, which related a firm's income to
its asset and liability mix, is expanded to account for differences in market
structure, regional demand and supply conditions, and macroeconomics factors.
The study focused on large (above $500 million in domestic deposits) banks,
comparing a sample of relatively profitable banks against a matched group of
much less profitable banks over the period 1970–1977. In the study after allowing
for regional supply and demand factors, the high and low-profit banks were
estimated to earn equal market rates of return on individual assets and liabilities.
The study concluded that there was virtually no evidence that differential prices

\textsuperscript{3} Myron L. Kwast, John T. Rose Pricing, operating efficiency, and profitability among large commercial
were an important discriminator between the two bank groups. Some evidence was found that the high-earnings banks experience lower operating costs on some liabilities, but the opposite was true with respect to selected asset items. After taxes were taken into account, however, any such cost differentials virtually disappeared, they stated. Overall, there was no compelling evidence that high-profit banks are characterized by greater operating efficiency than their low-earnings counterparts. This finding was consistent with the view that over time, and especially among relatively large banks, information flows and competitive pressures act to reduce operating efficiency differences that may appear in the short run.

Vashisht, Avtar Krishnan\(^4\) in his thesis titled, “Performance Appraisal of Commercial Banks in India,” attempted to evaluate the trend and progress of commercial banks in India during the period 1971 to 1983. Ratio analysis has been used to evaluate the performance of commercial Banks with respect to different indicators. However, overall performance of each bank is assessed with the help of relative growth indices. The analysis revealed that the commercial Banks did very well with respect to branch expansions, deposit mobilization, credit disbursement and priority sector advances. However, it was observed that banks are plagued with the problem of declining profitability. Indian Overseas Bank secured the top position and Dena Bank was placed the bottom with respect to overall performance indices.

Stephen W Looney et al\textsuperscript{5} examined the misclassifications with bank failure prediction models. In this research paper, the profile of the misclassified banks and the causes of their success or failure have been analysed. Here the misclassified bank is one, which is either predicted by a model to fail yet have not or those predicted to survive and yet have failed. Using the linear and quadratic multiple discriminant analysis models and Cox Proportional hazards models it was concluded that the models could be improved by the inclusion of variables representing agricultural loans and the nature of state branching laws. Inclusion of call and income report data also would be useful.

Philip BOURKE\textsuperscript{6} reviewed the performance of banks in twelve countries in Europe, North America and Australia. He examined the internal and external determinants of profitability of the banks. The study of Philip BOURKE showed that the capital ratios, liquidity ratios and interest rates as being positively related to profitability. Staff expenses showed an inverse but weak correlation with the return on assets. Similarly banks concentration had moderately positive relation with the pre-tax return on assets. This relationship changed into inverse relationship when the ‘value added’ is used as the dependent variable. In relationship to the dependent variable, net income before tax, staff expenses and loan losses to total assets the concentration of banks inverse relationship was

found. Thus the study provided the support for the hypothesis of risk avoidance by
banks with a high degree of market power.

Muhittin ORAL and Reha YOLALAN\textsuperscript{7} discussed the methodology of an
dempirical study that was employed to measure the operating efficiencies of a set of
20 bank branches of a major Turkish Commercial Bank offering relatively
homogeneous product in a multi-market business environment. Using the
methodology of Data Envelopment Analysis the study concluded that this kind of
approach is not only complementary to traditionally used financial ratios but also a
useful bank management tool in reallocating resources between the branches in
order to achieve higher efficiencies. It had also been observed that the service-
efficient bank branches were also the most profitable ones suggesting the
existence of a relationship between service efficiency and profitability.

Hassan Y Aly et al.\textsuperscript{8}, analysed the technical, Scale and allocative
efficiencies in U.S. banking. They used a non-parametric frontier approach to
calculate the overall, technical, allocative and scale efficiencies for a sample 322
independent banks. The sample was drawn from the Federal Deposit Insurance
Corporation tapes on the reports of conditions and reports of Income for the year
1986. In the analysis they found that there was a low level of overall efficiency
and the main source of inefficiency was technical in nature rather than allocative.

\textsuperscript{7} Muhittin ORAL and Reha YOLALAN, An empirical study on measuring operating efficiency and
\textsuperscript{8} Hassan Y Aly, Richard Grabowski, Carl Pasurka and Nanda Rangan, Technical, Scale and allocative
For the purpose of testing the effect of branching they constructed separate efficiency frontiers, however, the distributions of efficiency measures for branching and non-branching banks were not found to be different. They also found that the overall and technical efficiencies were negatively related to product diversity and positively related to the extent of urbanisation. In addition to this, pure technical efficiency was positively related to size, irrespective of whether size was measured in terms of total deposits or number of branches.

Amandeep in his thesis titled as “Profit and Profitability of Indian Nationalised Banks,” analysed the factors that influence the profitability of banks and suggested that in order to improve the banks’ profitability, the banks need to focus attention on the management of spread, burden establishment expenses, income and deposit composition. The study observed that priority sectors lending and rural banking do not have an adverse effect on the banks profitability to a significant extent. Hence, advance to the priority sector and opening of rural branches may be extended in the larger interests of the society.

Allen N Berger et al., analysed the efficiency of banks branches measuring the efficiency of 760 branches of a large U.S. Commercial bank. They used Fourier-flexible functional form and translog functional model for the cost function. In the study they examined the relationships of scale and efficiencies at the branch level with scale and efficiencies at the bank level. It was found that

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there were about twice as many branches as would minimise costs and that may be optimal from a profitability standpoint for the reason that over branching raises revenue from providing extra customer convenience. The study also found that X-inefficiencies were quite large over 20 per cent of operating costs.

**Bishoni.T.R**\(^{11}\) in his article titled, “Impact of Priority Sector Advance on Profitability of Public Sector Banks” concluded that as a result of simultaneous increase in interest subsidy and outstanding credit for priority sector since 1974, the computed interest income loss for public Sector Banks has increased from Rs.33.44 crores in 1974 to Rs.607.39 crores in 1986.

**Bramaiah B**\(^{12}\) analysed the operating and financial performance of leasing companies operating in India. For this purpose he used a sample of 31 leasing companies which accounted for 53 per cent of total lease business. Using variables such as total income, lease income, profit before interest and tax, profit after tax, gross fixed assets, leased assets and net worth for growth, Return on capital employed, net profit margin, return on equity, lease return to evaluate profitability, Earnings per share and Dividend per share for analysing the earnings the financial performance was analysed. Operating efficiency of the companies were analysed using operating expenses ratio, interest expense ratio and depreciation ratio. He concluded that the total income of the sample companies improved at a high growth rate of 42 per cent over the years. Despite the surge in the business

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activities the profitability of the leasing companies had declined. Increase in the depreciation and operating expenses have also caused for the decline of the profitability. During the period 1988 to 1989 the industry faced a cutthroat competition which led to crash of lease rentals. Regarding the profitability it was stated that small companies made better profit than the other companies. The study concluded with a remark that the ratios used are meant for the manufacturing companies and more research work needed in this area to develop a set of suitable ratios to study the finance companies.

**Philip Molyneux and John Thornton**\(^{13}\), in their note examined the determinants of bank performances across eighteen European countries between 1986 and 1989. The study found that the results do conform to the traditional US concentration and bank profitability studies. Support was found for the expense preference expenditure theories.

**Chidambaram. R.M and Alamelu.K**\(^{14}\) studied the problem of declining profit margin in Indian Public Sector Banks as compared to their private sector counterparts. It was observed that in spite of similar social obligations, almost all the Private Sector Banks been registering both high profits and high rate of growth with respect to deposits, advances and reserves as compared to Public Sectors Banks. They concluded that the regional orientation, better customer service,


proper monitoring of advances and appropriate marketing strategies are the secrets behind the success of Private Sector Banks.

Richard Grabowski et al\textsuperscript{15} analysed the effect of deregulation on the efficiency of U.S. Banking firms. Using a non-parametric frontier methodology to derive measures of efficiency for 669 U.S. banks for the years 1979, 1983 and 1987 a comparative analysis was made between the efficiency of the banks prior to and after deregulation. The result indicated that the overall and allocative efficiency have improved from 1979 to 1983 and then declined from 1983 to 1987. Technical and scale efficiency remained unchanged from 1979 to 1983 and then declined from 1983 to 1987. For the entire time period their study indicated that the overall, scale, technical and pyre technical efficiency have declined with changes in the later two being statistically significant. From result of the analysis it was concluded that the deregulation did not have a favourable effect on the economic efficiency of banking firms.

A. Steinherr and Ch. Huveneers\textsuperscript{16} in their paper raised two questions about the industrial economics of banking. The questions are first, why are financial market configurations so different across nations? Second, do the differences in regulation and structure matter? Throughout the paper they referred to two polar cases of financial systems: market (M)- and bank (B)-based systems.


As for banks, they distinguished between specialised and universal banks. In their study a first empirical test relating macroeconomic growth to financial variables suggested that these variables matter. Then they tested with a set of 88 banks the effects of regulatory and structural variables on the level and variability of bank performance. They concluded that universal banks achieve a better risk-return trade-off, due to superior monitoring and information collection capacity.

Anbumani et. al., 17 studied the growth of NPAs and its impact on profitability of PSBs. For the study, the trend in directed investments and direct credit programmes during 1980 – 90 was analysed. To analyse the trend, two measures such as SLR and CRR were taken. It was observed from the study, that the SLR and CRR have increased substantially over the years, their study revealed that directed investment adversely affected the profitability of PSBs, during the study period that the priority sector advances total credit was well above 40%. But the interest earned by the priority sector Advances was less than what the banks paid for the deposits. It is also been found that the fund locked up in sick industrial units has gone up by 5 times than when it was in 1980. Hence the funds deployed in directed credit programme adversely affected the profit and profitability. From the overall analysis, they suggested that the reduction of SLR and proportionate cut in the priority sector credit below 40% would significantly improve the profits and profitability of the commercial banks in the years to come.

John G. Gallo, et al.,\textsuperscript{18} in their paper examined the risk structure of bank holding companies and the effect of mutual fund activities on bank risk and profitability over the period 1987–1994. Results from a confirmatory factor analytic model employed to examine the impact of mutual fund activities on banks suggested that mutual fund activities moderated bank industry systematic risk during the sample period. Mutual fund activities also increased the profitability of banks. These results suggested that mutual funds represent a productive avenue of expansion for bank holding companies.

Lawrence G. Goldberg and Anoop Rai\textsuperscript{19} in their research analysed the relationship between market structure and performance extensively for European banking. Two explanations of a positive correlation between profitability and concentration have been advanced, the traditional structure-performance hypothesis (SCP) and the efficient-structure hypothesis. Previous empirical tests of the alternative hypotheses yielded mixed results but the tests were not robust because they did not incorporate measures of efficiency directly in the model. Their study applied a stochastic cost to derive measures of inefficiency and scale-inefficiency, under the assumption that the errors are distributed half-normal. They incorporated measures of inefficiencies directly into the tests and did not find a positive and significant relationship between concentration and profitability for a


sample of banks across 11 European countries over a four year period, 1988–1991. However, they did find evidence to support one of the two versions of the efficient-structure hypothesis for banks located in countries with low concentration of banks.

**Rudi Vander Vennet**\(^{20}\) based on a sample of 492 takeovers examined the performance effects of acquisitions and mergers between EC credit institutions over the period 1988–1993. The sample is subdivided according to the degree of managerial leverage on the part of the acquirer and the degree of operational integration. The results indicated that domestic mergers among equal-sized partners significantly increased the performance of the merged banks. Improvement of cost efficiency was also found in cross-border acquisitions. On the other hand, domestic takeovers were found to be influenced predominantly by defensive and managerial motives such as size maximisation.

**Abhiman Das**\(^{21}\) analysed the technical, allocative and scale efficiency of public sector banks in India since nationalisation, using longitudinal data. A non-parametric programming approach was used to calculate overall, technical, allocative, pure technical and scale efficiencies of public sector banks. The result of his study indicated that State Bank of India group was more efficient than the nationalised banks. The study found that the main source of inefficiency was technical in nature rather than allocative and the inefficiency in the public sector

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\(^{21}\) Abhiman Das, Technical, Allocative and Scale Efficiency of Public Sector Banks in India, Reserve Bank of India Occassional Papers, Vol. 18, Nos. 2 & 3, 1997, pp.279-301.
banks was due to the under utilisation or wasting of resources rather than incorrect input combination. The study concluded that the public sector banks have improved their allocative efficiency significantly in the post liberalisation period.

**Allen N. Berger and David B. Humphrey**\(^22\) surveyed studies that apply frontier efficiency analysis to financial institutions in 21 countries. The primary goal was to summarize and critically review empirical estimates of financial institution efficiency and to attempt to arrive at a consensus view. They found that various efficiency methods did not yield consistent results. They suggested that an area that deserves additional attention and research is efficiency comparisons among countries.

**Arurava Bhattacharyya et al.**\(^23\) analysed the impact of liberalisation on the productive efficiency of Indian Commercial Banks during the early stages (1986-1991) of the liberalisation process. They used Data Envelopment Analysis to calculate radical technical efficiency scores and then they used Stochastic Frontier Analysis to attribute the calculated efficiency scores to three sources: a temporal component, an ownership component, and a random noise component. In the study they concluded that publicly-owned Indian banks had been most efficient, followed by foreign-owned banks and privately owned Indian banks. They also found that a temporal improvement in the performance of foreign-

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owned banks, virtually with no trend in the performance of privately-owned Indian banks, and a temporal decline in the performance of publicly-owned Indian banks.

**Bhatia, Saveeta and Satish Verma**\(^{24}\) in their research article titled as, “Factors Determining Profitability of Public Sector Banks in India, An Application of Multiple Regression Model,” made an attempt to find out empirically the factors influencing profitability of Public Sector Banks in India by making use of the technique of multiple regression. Net profit as percentage of working funds has been used to measure the bank profitability during 1971 to 1995. The analysis revealed that priority sector advances, fixed/current deposit ratio and establishment expenses affected the profitability of Public sector Banks negatively. Net spread, which is to a great extent depends on the management acumen of the bank staff, influenced the profitability of banks positively and significantly. High credit – deposit ratio was also observed to be influencing profitability. However, its impact was found to be statistically insignificant.

**Dogan Titiroglu et al**\(^{25}\) made an investigation about total factor productivity growth and regulation in U.S Commercial Banking industry during 1946-95. In their study after controlling for several explanatory variables, they investigated about the influence of regulation on the total factor productivity growth of U.S commercial banking industry. In the analysis they concluded that


the overall impact of total factor productivity growth of regulation has been negative. The selected regulatory initiatives of U.S such as Federal Deposit Insurance Act 1950, the Competitive Equality Banking Act 1987, Depository Institutions Act of 1982 and Depository Institutions Deregulation and Monetary Control Act of 1980 have had the most influence on the Total Factor Productivity growth. They also reported that the Total Factor Productivity growth has been negatively related to both population and real GDP growth.

Paul W Bauer et al26 made a comparison among the frontier efficiency methods to find out the consistency conditions for regulatory analysis of Financial Institutions. They proposed a set of consistency conditions, which of the frontier efficiency measures should meet most useful for regulatory analysis or other purposes. The efficiency conditions must be consistent in their efficiency levels, rankings and identification of best and worst firms, consistent over time and with competitive conditions in the market and consistent standard non-frontier measures of performance. But the findings yielded mixed evidence regarding the consistency of the four main approaches such as Data Envelopment Analysis, Stochastic Frontier Approach, Thick Frontier Approach and Distribution Free Approach. In the article it was suggested that when performing regulatory analysis which depends on frontier efficiency measurement, the use of multiple techniques and specifications would likely to be helpful.

Mitchell Berlin and Loretta J. Mester\textsuperscript{27} provided evidence on the costs and profitability of relationship lending by banks. They derived bank-specific measures of loan rate smoothing for small business borrowers in response to exogenous shocks to their credit risk and to interest rates, and then estimated cost and profit functions to examine how smoothing affects bank costs and profits. Their results suggested that, in general, loan rate smoothing in response to a credit risk shock has not been part of an optimal long-term contract between a bank and its borrower, while loan rate smoothing in response to an interest-rate shock has been.

Andreas Soteriou and Stavros A. Zenios\textsuperscript{28} developed a framework for combining strategic benchmarking with efficiency benchmarking of the services offered by bank branches. That is a cascade of efficiency benchmarking models was developed guided by the service-profit chain. They developed three models-based on the non-parametric technique of Data Envelopment Analysis in order to implement the framework in practical setting: (i) an operational efficiency model, (ii) a service quality efficiency model and (iii) a profitability efficiency model. The empirical results of the study indicated that superior insights could be obtained by analysing simultaneously operations, service quality, and profitability than the information obtained from bench marking three dimensions separately while managing the banks.


\textsuperscript{28} Andreas Soteriou and Stavros A. Zenios, Operations, Quality, and Profitability in the Provision of Banking Services, Management Science, Vol. 45, No.9, September 1999, pp.1221-1238.
Lawrence M Seiford and Joe Zhu\textsuperscript{29} analysed the performance of the 55 U.S commercial banks using Data Envelopment Analysis via a two-stage production process that separates profitability and stock marketability. They found that close to 90 per cent of the banks were inefficient both in profitability and marketability. Further, relatively large banks exhibit better performance on profitability, where as smaller banks tends to perform better with respect to marketability. Their analysis on the bank acquisition for the data set indicated that such activity did not affect the performance of the banks involved in the acquisition, but did affect the attractiveness of other banks.

Raju.G and Ramachandra Nair.M.K\textsuperscript{30} in their research article titled, “Factoring –Its Impact on Liquidity and Profitability” concluded that the economic significance of factoring stems from the influence it will have on industry and trade. The immediate impact of factoring will be the promotion of efficiency and profitability of small and medium sized industrial and trading units by facilitating judicious credit control, efficient sales ledger administration and expeditious debt collection. Thus factoring also promotes professionalisation in debt collection management by encouraging a prompt payment culture. This paper ended with the common note that the factoring will actually improve the current ratio and enable the borrower to enlarge the scale of operation. However, factoring is always an

\textsuperscript{29} Lawrence M Seiford and Joe Zhu, Profitability and Marketability of the top 55 U.S. Commercial Banks, Management Science, Vol. 45, No.9, September 1999,pp.1270-1288.

optional or discretionary service. A decision is taken in the factoring service only when the benefits outweigh the costs of factoring.

N.B Shete\(^{31}\) conducted a study on “Banking Sector Reforms and priority sector credits”. He analysed the historical development and various facets of the Bank credit to priority sector. This paper focused on the expansion of credit to priority sector like agriculture, SSI and self employment which are considered as one of the most important objectives of the government policy. Various dimensions of the bank credit to the priority sector including the recovery aspect have also been analysed by the author. In the paper it was found that there was a overall improvement in the total credit to priority sector from 14.6% in 1969 to 45.4% in 1987. Though there was some positive improvement in the total credit expansion, the target of 18% of direct agricultural advances had not been achieved by the banking industry as a whole during the study period. The paper also concluded that the increasing trends of credit disbursal to a large number of small borrowers assisted with the introduction of banking sector reforms and the spread of banking credit facilities was halted. The reduction of lending to the priority sector is attributed by the banks to increasing the NPA level. Though the absolute amount was increasing during the reform period, the priority sector credit has shown that the NPA\(_s\) proportion has come down. The data on recovery of agricultural and IRDP advances of the priority sector banks showed improvement.

during the post reform period. He suggested that bankers should not be away from banking to rural areas only because of NPAs. They have to change their approach and modalities of lending to rural borrowers.

**Nayak D.N**\(^{32}\) made an attempt to compare Liquidity, Productivity and Profitability of Foreign and Domestic Banks in India during 1985 – 1986 to 1996 - 1997. The study is based on bank wise secondary data on a number of variables like employees, branches, total assets, interest paid and expended, total deposits and advances, profits and expenses. The results revealed that productivity in terms of labour, branches and profitability was higher in foreign banks than the Domestic Banks. Foreign Banks are least involved in social-economic policies of the government, on account of which they registered higher profits.

**Udegunam I Ralph**\(^{33}\) empirically analysed the determinants of performance differences among commercial banks in Nigeria, in the early 1990s. Using pooled time series cross section data and OLS estimation method two sets of regressions were run estimating two dependent variables that are Return on Assets and Return on Equity. The study concluded that capital adequacy, management quality and credit risks are the key determinants of bank performance.


Yener Altunbas et al.,\textsuperscript{34} analysed the effect of ownership pattern and efficiency in the German Banking market, using the banks’ balance sheet and income statement data between 1989 to 1996. They broke down the banks into three ownership types such as private commercial banks, public savings banks and mutual cooperative banks. Then the estimated cost and alternative profit frontiers for the three different ownership types were compared with the pooled cost frontier. In the analysis it was found little to suggest that privately owned banks are more efficient than their mutual public sector counter parts in the German banking market. Thus the result of the study concluded that the non-existence of the agency problems in the German banking market.

Debasish\textsuperscript{35} conducted a study on profitability of Indian commercial banks during the period of 1999-2000. For the purpose of analysis few representative determinants of profitability are selected. The determinants which had been chosen in this study are liquidity of the bank. Return performance Expense parameters and operational efficiency. The Bank’s profitability is measured by return on Assets (ROA), which is taken as the dependent variable. The analysis was carried out, by taking a sample of 78 banks, 27 public sector banks (PSB), 23 private sector banks (PVT) and 28 Foreign banks (FB). The multiple Discriminate analysis was carried out using SPSS – Software package and the process involved

\textsuperscript{34} Yener Altunbas, Lyne Evans and Philip Molyneux, Bank Ownership and Efficiency, Journal of Money Credit and Banking, Vol. 33, No.4, November 2001, pp.926-954.
\textsuperscript{35} S.S Debasish “Performance of Indian commercial banks identifying the key discriminators, The alternative, Department of Management, B.I.T. Journal,Vol.2 No.1, Oct.02 to March 03.
7 steps, with the final Wilk’ lambda of 0.573. The result of the discriminant analysis identified that only five variables, such as priority sector Advance\Net Advances, Interest Income \ Total Assets, Net Interest spread Total Assets, Non-Interest income\ Total Assets  Net Interest spread \ Total Assets (x6) and wage Bills \Total Expenses(X9) are significant to the bank profitability. To test the relationship between these variables with ROA, Correlation analysis was carried out. In that analysis, the variables such as X6 and X9 influenced the profitability in a better manner. In the overall analysis, the study found that one RBI factor Priority sector Advance\Net Advances(X4) three Return parameters Interest Income \Total Assets, Net Interest spread\Total Assets, Non- Interest income\ Total Assets (X5, X6, X7) and one expenses ratio Wage Bills\Total Expenses (X9) effected profitability in banks. Liquidity factors operation parameter did not figure in the discriminate function.

Aigbe Akhigbe and James E .McNulty\(^36\) made a study on the profit efficiency of small U.S. Commercial Banks for the period 1990-96. Assuming that small and large banks use the same production technology, they found that the small banks were more efficient than large banks. Small Banks in non-metropolitan areas were consistently more profit efficient than small banks in metropolitan areas. In their study of cross sectional analysis of the correlates of the profit efficiency estimates suggested that structure-performance factors,

relationship development factors and expense-preference behaviour played an important role in explaining the profit efficiency of small U.S. commercial banks.

Ana Canhoto and Jean Dermine\textsuperscript{37} analysed the banking efficiency in Portugal. Following the entry into European Community by the Portugal when the competition became high operational efficiency of the Portugal banks were analysed. By quantifying the magnitude of efficiency gains over the years 1990-1995, the study also documented the relative efficiency of new domestic banks. The technical efficiency was calculated by using the programming technique, Data Envelopment Analysis. Using the panel data the analysis found that the efficiency score improved over the time for all the banks in general. When the efficiency of the three groups of banks such as old commercial banks, savings banks and new commercial banks were analysed the study found new banks showed highest efficiency scores than the old commercial banks. Savings banks also had better efficiency scores than the old commercial banks.

Bertrand Rime and Kevin J Stiroh\textsuperscript{38} analysed the performance of the universal banks in Switzerland. The study examined the performance of Swiss banks from 1996 to 1999. Using a broad definition of bank output they found the evidence of the large relative cost and profit inefficiencies in Swiss banks. They also found evidence of economies of scale for small and mid-sized banks but little evidence that was significant scale economies remain for very large banks.


Finally, evidence on scope economies, they concluded, was weak for the largest banks that are involved in a wide variety of financial activities.

**Barry Williams**\(^{39}\) developed and tested a model that integrates the existing multinational bank literature with the domestic bank profits literature. Using data for Australia, he demonstrated that an integrated model resulted in a small increase in explanatory power when compared to models drawn solely from the multinational banking literature. The paper found that profits were a negative function of competitor market share and bank licence status, and a positive function of Australian size and home GDP growth. It is also argued that there is an incomplete integration between the market segments of domestic and multinational banks due to the first mover advantages of incumbent banks.

**Chiang Kao and Shiang – Tai Liu**\(^{40}\) predicted the performance of 24 commercial banks in Taiwan based on their financial forecasts. A Data Envelopment Analysis model for interval data was formulated to predict the efficiency. The predictions of the efficiency scores were presented as ranges. The result concluded that the efficiency scores calculated from the data contained in the financial statements fall with the corresponding ranges of the efficiency scores, which they had calculated, from financial forecasts.

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Ganeshan.P\textsuperscript{41} studied the impact of priority sector advances on profitability of Public Sector Banks in India by an empirical estimation. He computed mean lending rate, interest subsidy rate, interest, income loss and also credit outstanding by compound growth rate. In the study, he stated that in pre-reform periods as a result of concession lending on these sectors, the subsidy also increased over the years, whereas in the post-reform periods on account of monetary measures announced by Reserve Bank of India there was steep reduction in subsidy rates. The paper also found that in the post-reform periods, the Public Sector Banks advanced below the target level of 40 per cent and the ratio of priority sector credit outstanding by activity to total bank credit fluctuated over the period. The study conclusively ended with the finding that consequent to the introduction on liberalisation measures and reforms in financial sector, the banks began to step-down the target for priority sector credit and thus there was decline in the income loss ratios. This, subsequently increased the profitability ratios, thus establishing the fact that the priority sector advances, concession lending and cross subsidization of advances adversely affected the profitability of Indian Public Sector Banks.

Kusum W. Ketkar and et., al., in their study, “An Analysis of Efficiency and Productivity Growth of the Indian Banking Sector” have studied 39 banks with the composition of 7 State-Controlled, 19 Nationalised, 7 private and 6 Foreign Banks using the technique of “Data Envelopment Analysis (DEA). They examined the technical and scale efficiency of Indian banks for the years 1990 to 1995 using a Non-Parametric Production Frontier Approach. They found that, the overall inefficiency for the whole sample was rather stable for the period examined. The foreign banks appeared as the most efficient group. The size was positively related to the pure technical efficiency. They concluded that the Indian Domestic Banks need to improve their efficiency greatly through introduction of computer technology, improvement of managerial skills and through consolidation by merger of banks.

Leigh Drake and Maximilian J.B have analysed the technical and scale efficiencies in Japanese Banking industry using non-parametric frontier approach and data envelopment analysis. They conducted the efficiency analysis across individual banks, bank types and bank size groups. The study expressed that the Japanese banks exhibit considerable overall inefficiency and bulk of this inefficiency is attributable to pure technical inefficiency. The study also exhibited, that among the Japanese banking companies the Trusts and Long term credit banks form by far the most efficient sectors and small banks have more scale economies

than the large banks. The results of their study also stated that if the problem loans’ impact on the size-pure technical efficiency is considered the impact is fairly minimal for the large banks and very substantial for the smaller banks.

Milind Sathye measured the productive efficiency of banks in a developing economy that is India, using Data Envelopment Analysis. He constructed two models to show how efficiency scores vary with change in inputs and outputs. When the efficiency scores were measured for publicly owned, privately owned and foreign owned banks, it was found that the mean efficiency score of Indian banks compared well with the world mean efficiency score. Paradoxically, it was concluded that the private sector commercial banks as a group had lower efficiency score than that of public sector and foreign banks in India. Finally he recommended the policy of reducing non-performing assets and rationalization of staff and branches to be continued to obtain efficiency gains.

Nisar Ahmed khan analysed the performance of commercial Banks in post Reform period. The objectives of the study were to examine the performance of scheduled commercial Banks (SCBs) in general and public sector Banks (PSBs) in particular during the post reform period. This study compared the performance of three categories of banks in India that is public sector, private sector and foreign banks. The performances of the SCBs are evaluated on the

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second half of the post reform period using the parameters such as Capital Adequacy and Asset Quality, efficiency profitability and participation in rural areas. Regarding capital Adequacy and Asset Quality, RBI introduced minimum capital to Risk weighted ratio (CRAR). Accordingly all Indian banks and foreign banks have to achieve the ratio at 8% within the specified period. At the end of March 1996, 75 out of 92 SCBs in India had CRAR above 9%. The number of PSBs with net NPAs above 10% of net advances was 8 in the year 1996, which gradually declined to 3 in 2002. But same has not been the case with old generation private sector banks and foreign banks. The study found that the new generation private sector banks have been more careful in this regard and have never allowed their net NPAS to net advances exceed 10%. The study also found that the profitability of SCBs as measured by Return On Assets (ROA) have also shown significant improvement in their efficiency during the reforms period and at the same time the intermediation cost of SCBs declined during the period. The study ended with the conclusion that it is distressing to note that their participation in rural areas, in terms of number of effigies’, growth of credit, growth of deposits and credit deposit ratio, significantly declined during the reform period. Further, the fall in rural credit deposit ratio has been more alarming in case of poorer states. Thus the performance was good from the financial aspects.
Sanjay Choudhari and Arabinda Tripathy in their research article titled as, “Measuring Bank Performance: An Application of DEA,” evaluated the relative performance of Public Sector Banks in India by using a linear programming model in data envelopment analysis. They determined performance efficiency of public sector Banks using different indicators such as profitability, financial management, growth, productivity and liquidity. They concluded that the corporation Bank found to be efficient in all indicators, so it ranked first among the entire group of Banks. Corporation Banks was followed by Oriental Bank of Commerce. Both the banks form reference banks for most of inefficient banks and can be used as benchmarks for improving the efficiency of inefficient banks. On profitability and financial indicators, banks are having more efficiency when compared to that of productivity and liquidity indicators. It means that banks are mostly concentrating on profitability and financial management indicators rather than on productivity, growth and liquidity indicators.

William C Gruben and Robert P McComb analysed the privatisation, Competition and Super competition in the Mexican commercial banking system. In empirical analysis they found a structural break in the middle of the privatisation period that signals the start of an episode of super competitive behaviour. In that, banks run at levels of output where marginal costs exceeded


marginal revenue. They suggested that if the super competitive behaviour is widespread in the wake of liberalisation, the countries might likely to reduce bad fiscal and payments systems outcomes from risky behaviour by making sure banks and depositors understand that there will be no or only limited rescue operations.

Agu C.C\textsuperscript{48} in his research article titled, “Efficiency of Commercial Banking in the Gambia,” analysed the efficiency of the Gambia banks during the period 1983 to 1993. He stated that the functions of financial sector of any economy should be as follows:

1. Providing financial resources to meet the borrowing needs of individuals and households enterprises and governments.
2. The provision of facilities to collect and invest saving funds.
3. Providing a sound payment mechanism.

He examined the impact of regulations on the performance of these functions. He found that the efficiency of payments delivery improved during the period 1983 to 1993. The increase in the operations assets ratio and operating income ratio also have been pointed as the reasons for the operational inefficiency of the Gambian Banking Sector. The main cause of inefficiencies include the high regulatory framework, the oligopolistic market structure and the small banking market making the banking sector, a bank centric system as opposed to a market centric system, with the attendant diseconomies of scale.

Erotokritos Varelar et al., in their research article titled ‘Effects of Operational Cost of Bank Profitability and Bank Clients: A Methodological Approach,” has attempted to investigate the operational cost of a bank, which is actively involved in a specific sector of the economy, on the behavior of its clients who are the depositors and the borrowers by using the simulation model? They determined the optimal level of the time deposit and lending rates, which maximise the bank’s profits. They proved that as a result of an increase in operational cost, the bank increased the value of the lending rate, decreases the value of the time deposit rate and finally it achieved a lower level of profits. The shift in operational cost influenced not only the banking profits but also the borrowers and the depositor’s level of utility.

Shanmugam KR and Das have analysed the efficiency of Indian Commercial Banks during the reform period, by measuring the technical efficiency of banks in four different ownership groups in India during 1992-99. By employing stochastic frontier function methodology for panel data they found that efficiency of raising interest margin is time invariant while the efficiencies of raising other outputs- non-interest income, investments and credit are time varying. They expressed that the State Bank group and Foreign Banks are more efficient than their counterparts and the reform period witnessed a relatively high

efficiency for augmenting investments, which was consistent with economic growth objective of the reform measures. They finally concluded that there are still larger gaps between the actual and potential performances of banks.

Gian Kaur\textsuperscript{51} made a comparative study on efficiency and return of public and private sector banks. She analysed the trend in credit risk, operating cost, profitability, and the impact of NPAs along with other variables on the profitability of the banks. In the analysis she found that the operating cost ratio declined over the period of analysis, net profit to total assets ratio has increased during the same period. As far as the effect of NPA on the profitability is concerned it was concluded that the NPAs negatively affected the profitability of the banks irrespective of the ownership pattern.

Kulkarni S.K \textsuperscript{52} made a comparison between the co-operative banks and other banks during the reform period. For that, three parameters such as spread, Net profit and NPA have been taken. The analysis revealed that during the five year period from 1999 to 2004, the spread as a percentage of total assets, and net profit as a percentage of total assets had gone up in case of public sector banks and whereas, the same had gone down during the study period for the co-operative banks. From the analysis it was fond that for public sector banks the gross NPA as a percentage of gross advances was in decreasing trend. However in the case of co-operative banks the gross NPA as a percentage of gross advances had


\textsuperscript{52} S.K. Kulkarni, Co – operative Banking in India, Vision 2020, Southern Economist, May 1, 2005.
increased. He observed that the non-performance of co-operative banks are due to, absence of professionalism, low capital base, poor marketing strategy, financial Indiscipline and weaker financial system, Human Resources, low productivity per employee, Irregular entry into capital market, weak audit system and duality of control. He provided the evidence from the analysis that the co-operative banks have miserably failed to keep pace with the banking sector reforms. He also stated that the other banking groups have significantly surpassed the co-operative banking sector, not only in the performance but also in the market share in the core area so far dominated by the co-operative banks.

Milind Sathye53 in his article, “Privatisation, Performance and Efficiency: A study of Indian Banks,” examined the impact of privatisation on banks performance and efficiency using data of banks in India for the five year period from 1998 to 2002. Statistical analysis was performed using the difference of means test for three groups of banks partially privatized, fully state owned and private sector. The financial performance of the banks was measured using standards measures like Return on Asset, Spread to Working Funds ratio Establishment Expenses to Total Expenses ratio Loan out ratio and Non-Performing Assets to Net Advances Ratio. Efficiency of the banks was measured using accounting ratios such as Deposits per Employee Advance Per Employee and Net Profit Per Employee. He concluded that the partially privatized banks

have performed better as compared to the fully public sector Banks respect of certain financial performance and efficiency parameters. Partially privatized banks also seem to be catching up with the banks already in the Private sector. No significant performance or efficiency difference was seen in these two banks. Going by the results of this study, partially privatized banks have continued to show improved performance and efficiency in the years after privatisations.

Roji George\textsuperscript{54} analysed the performance of 21 banks consisting of 8 public sector banks, and 13 private sector banks, with the help of a measure called Economic Valued Added (EVA). In the analysis, EVA was compared with Non-performing assets (NPA) and employee productivity by using correlation analysis. In the study the correlation co-efficient revealed that there was a positive relationship between employee productivity and EVA and negative relationship between EVA and NPA. A comparison also has been made by him between public and private sector banks. Based on EVA rankings out of first ten ranks, private banks have occupied seven banks which found their place in the list. Out of the seven private banks placed in the list four banks were new generation banks. Applying the Mann-whitney “U” test a comparison between the performance of public sector and private sector banks was made. The Null hypothesis that there is no significance difference between the performance of public sector and private sector banks, was framed by the authors and from the result it was concluded that

there was a significance difference between the performance of public sectors and private sector banks. It was also found that the public sector banks out performs the private sector banks, during the study period, despite their higher cost of capital on the private sector banks. The authors concluded that the profitability of banks was increasing and the Indian banks would be able to reduce the level of NPAs, so in future, the banks could be able to show much more economic value addition in their performance.

Sathya Swaroop Debasish\textsuperscript{55} analysed the performance of Indian Banks Using the data envelopment analysis (DEA). In this paper 27 public sector banks, 30 private sector banks, and 36 foreign banks were taken for analysis. The study attempted to analyse comparative performance of selected Indian banks during the period of 1997 – 2004. Different input variables such as operating expenses, fixed assets, total borrowings, Net worth, total loan extended, total number of employees and total number of bank branches and output variables such as Non – interest income, Net profit and total deposits received and interest spread were taken for the analysis. According to this study all 93 banks were segregated into various peer groups depending on bank size, bank ownership and year of operation. Regarding, asset size there has been steady decline in number of small banks i.e., from 24 in 1997 – 98 to 15 in 2003 – 04 large banks which had totaled 42 in 1997 -98 to 54 in 2003 -04. Large banks were able to outperform smaller

banks in terms of average efficiency. Then in the study efficiency figures of bank groups segregated under the ownership status were analysed. The result revealed that foreign banks were found to be relatively more efficient than private banks except during 1998 - 99 and 1999 – 2000. Public sector banks remained by and largely less than sufficient in leverage efficiency measures. This study however did not include some of the important banking efficiency variables such as non-performing asset, capital adequacy measures, customer satisfaction index and other service quality measures. The study concluded that foreign banks were more efficient than others and new banks were more efficient than old ones, due to latter often burdened with old debts.

Yusuf S.A and Olasupo M.A\textsuperscript{56} have analysed the profit disparity among Nigerian commercial banks within the context of deregulation and liberalisation of the financial sector in Nigeria. Using the data for eight banks over a period of ten years they found that the banks had serious inconsistency in the growth pattern and banks also experienced fluctuations in their profit after tax values throughout the period of study. The panel data analysis revealed that about 65 per cent of the changes in the banks profit after tax is the result of their deposits and other accounts. Further the study also revealed the presence of significant difference in the sampled banks through the presence of fixed effects in the estimated model.

B.S Bodla and Richa Verma\textsuperscript{57} conducted a study on the performance of commercial banks in India. In order to compare the performance of public sector, private sector and foreign banks, two analyses were carried out viz., Temporal and spectoral analysis. For Temporal analysis the study period has been divided into three phases such as pre-liberalisation of reform, 1987-88 to 1991–92, First phase of reform, 1992–93 to 1998–99, Second phase of reform, and 1999–00 to 2003-04 Third phase of reform. The performance of banks has been measured using standard measures like deposits, advances, deposits per employee, advances per employee, non-performing assets as percentage to net advances, interest income as percentage to total assets, non-interest income as percentage to total income net profit/loss as percentage to total assists and net interest income as percentage to total assets. The private sector banks have registered a higher growth rate in its deposits as well as advances in post liberalisation era than that of pre-liberalisation period. In terms of deposits per employee, profitability of banks and the proportion of non-interest income to total income, foreign banks performed well. From the two analyses, the study concluded that the performance of banking industry in India has improved after implementation of reforms in 1991-92. The private sector and foreign banks have shown better performance in terms of various parameters in comparison to public sector banks.

Bodla. B.S and Richa Verma. C\textsuperscript{58} analysed the performance of banks through a model named CAMEL MODEL for the banks, SBI and ICICI. In this paper, performance of SBI and ICICI banks was analysed for the period 2000-2001 to 2004-2005. They measured the growth of each ratio in the model, using Annual Compound Growth Rate. The study found that both banks have succeeded in maintaining Capital Adequacy Ratio at a higher level and debt capital has decreased over the last five years. The asset quality ratios have registered a declining trend. ICICI has succeeded in maintaining high level of management efficiency than SBI. The earning quality measured in terms of the ratio of operating profit to average working funds, net profit to average assets and the like, showed that ICICI bank has outperformed SBI. The liquidity ratio (Liquid assets to total assets and government sectors to total assets) indicated better liquidity position of both the banks. Finally the study concluded that in the parameter of performance, SBI has outperformed ICICI bank in the areas such as government sectors to total investment and the like. ICICI has done better than SBI with regards to Advances to Assets, Total Advances to Deposits, Business Per Employee, Non-Interest Income to Total Income, Liquid Assets to Total Deposit and the like. Thus, it is indicated that on the whole, ICICI bank has performed better than SBI.

Fadzlan Sufian  used non-parametric Data Envelopment Analysis to investigate the long-term trend in efficiency change of Singapore Commercial banks during the period 1993-2003. He concluded that the listed Singapore commercial banks exhibited that the average overall efficiency of 95.4 per cent and the inefficiency was attributed to the scale rather pure technical. The results suggested that the small Singapore commercial banks have outperformed their large and very large counterparts. The large commercial banks exhibited slightly higher pure technical efficiency scores compared to small and very large commercial banks. The study also exhibited that the small banks outperform their larger counterparts on scale efficiencies.

Morris Knapp, et. al., examined the tendency for serial correlation in bank holding company profitability, finding significant evidence of reversion to the industry mean in profitability. Their study then considered the impact of mean reversion on the evaluation of post-merger performance of bank holding companies. The research concluded that when an adjustment is made for the mean reversion, post-merger results significantly exceed those of the industry in the first five years after the merger.

Nelson Bool and Emilyn Cabanda\textsuperscript{61} analysed efficiency measures using production efficiency factors covering performance of Philippine banks over the period 1998 -2003. In this paper, they investigated whether the age, size and ownership of the banks determine their technical inefficiencies. This analysis was done by applying stochastic frontier analysis. Regarding age of the companies the authors found that older banks are more technically inefficient than the younger banks. About the size of the banks, the result revealed that the bigger banks are more efficient than the smaller banks. In case of ownership, the result of this paper indicated that State Banks are more technically efficient than private banks. The result also exhibited that the technical efficiencies in the Philippine banks were significantly affected by for specific variables such as age, size and ownership.

Sharma Pankaj and Chaturvedi Varun\textsuperscript{62} analysed the various factors that contributed to the growth of industry and find out the most important factors among them. For this purpose, they have selected two industries, banking industry and Automobile industry. The sample of 17 companies of Banks and 23 companies of BSE Auto Index for the period 1999 – 2000 to 2004 – 2005 have been taken as sample. The study was carried out using multifactor regression model. In that study, six factors such as pre interest After Tax margin, productivity


Ratio, post Tax Interest Rate, Retention Ratio, Debt Equity Ratio, Beta of the particular company have been taken as proxy of growth and one dependent factor growth in PAT has been taken. The result of the paper found that Retention Ratio, and Debt Equity ratio are the major factors contributing to the growth of both the industries. Apart from the above two factors, pre interest rate were also found to be significant in the Auto industry.

Prakash Singh\textsuperscript{63} studied the correlation between actual financial performance and the stock market performance focusing on Indian banking sector. The study focused financial performance measures of ten banks comprising private, public and foreign banks. He analysed the correlation between the actual financial performance and the stock market performance. From this analysis he wanted to find out the effect of robust financial performance on the stock prices. The financial indicators such as Profit after Tax (PAT), PAT / Total Assets, PAT/Operating Income, Return on Net worth, Profit per Employee, Non interest Income to Total Funds and NPA to Total Advances have been considered to analyse the correlation between the financial variables and stock prices of the banks. He concluded that the stock market performance of the banks is correlated with the financial indicators except the non-Interest income to the total funds of the banks.

Kumar Vasam Anand\textsuperscript{64} defined NPA as a loan asset becomes non-performing assets when it ceases to generate income i.e., interest, fees, commission etc., to the bank. He made an attempt to analyse the trend of Net NPAs and made a comparison of the Net NPAs in different banking groups during the period 1996-2005. It is observed that of all the banking groups the RRB have been suffering with more net NPAs. They had 21.29\% of the Net NPAs to their total advances in the year 1996-97. Thereafter, this figure has started declining steadily to the level of 8.51\% in the year 2003-04. He also observed that except for the year 1995-96 there had been a steady decline in NPA to total advance of the public sector banks, Nationalised banks during the period 1996–2005. Regarding the private sector banks, Net NPAs of old private banks has gone up from 4.51\% in 1995–1996 to 6.65\% in 1996–97 and latter declined to 8.96\% in 1999-2000. Thus there was a fluctuating trend in Net NPA of old private banks. New private sector banks and foreign banks were able to reduce their Net NPAs well below 3\% by the end of March 2002. He further extended his study by identifying the measures taken by the RBI to reduce NPAs in banking sector such as prudential norms, on time settlement, lok Adalats, Legal services Authority Act, Debt recovery tribunals, Asset reconstruction companies, corporate Debts restructuring, and the like. He analysed the recoveries made by scheduled commercial banks through the above channels. From that analysis it was observed

that the measure taken by the RBI could yield a very limited result in reducing the NPAs of scheduled commercial banks. He suggested that a lot of stringent measures have to be taken by the RBI, Govt. of India, and commercial banks to recover their dues from defaulters and reduce their NPAs to the lowest level.

**Iyer Veena S**\(^{65}\) made an attempt to delineate the items of published information that have an impact on stock performance from those who do not for the Indian banking industry. Further she also analysed the extent to which these pieces of information actually impact profitability of the bank and how connected is this strategy-performance-returns framework. In this study she concluded that the market assimilates most of the relevant information in arriving at the stock price figures and most of the manipulatable and or transitory phenomena were duly discounted. Moreover, her study revealed that the stock market does not reward excessive risk taking and excessive conservatism but market attaches weight only to those variables that hold information about the future.

In the research paper of **Antonios Antoniou, et. al.**,\(^{66}\), it was investigated whether business cycle variables and behavioural biases can explain the profitability of momentum trading in three major European markets. Unlike previous studies, the paper nested both risk-based and behavioural-based variables in a two-stage model specification in an attempt to explain momentum profits. The


findings of the study showed that, although momentum profitability in European markets was unexplained by conditional asset pricing models, it is attributable to asset mispricing that systematically varies with global business conditions. In addition, it was also found that behavioural variables did not appear to matter much. Thus risk factors, which were undetected thus far and were largely attributable to the business cycle, could explain the momentum payoffs in European stock markets.

**Miyake Atsushi and Nakamura Tamotsu**\(^\text{67}\) investigated the short-run and long-run macroeconomic effects of bank net worth and capital adequacy regulations. They found that the long-run effects on bank net worth depend on the capital adequacy regulation. If the regulation is not binding then a negative productivity shock negatively affects the bank net worth. On the contrary, if the economy is under the regulation, when a negative productivity shock occurs the bank net worth increases gradually. Moreover, they found that when the financial authority strengthens the capital requirement regulation, the economy finally reaches a steady state with higher production although it is in a depression in the short term.

**Gunjan M. Sanjeev**\(^\text{68}\) investigated whether the banks have improved their efficiency in the deregulated regime and thereafter whether increasing the size of


the banks would actually increase the efficiency of the banks. In the study the non-parametric technique of Data Envelopment Analysis was used to analyse the efficiency levels of the Indian banks. The analysis took interest income and fees, commission as the outputs against these outputs interest expense and non-interest expense as the inputs. The analysis concluded that the efficiency levels of the public sector banks have generally been declining and non conclusive relationship was established between size and efficiency of the banks.

**Jaewook An et al**

used panel data to compare the performance of the Korean banks with and without effective government control of the appointment of the chief operating officers. They used variables such as total costs, net profit, all forms of customer loans, securities, price of loans, price of securities, price of deposit, price of labour, ratio of bad loans to loan loss reserves as political influence index, ratio of bad loans to total loans as political influence index, and a dummy variable for ownership type. The study found that despite substantial privatisation, government or government agency as a shareholder subjected most Korean banks to the facto government control and the banks subject to government control experienced disproportionately bad loan performance where as privately controlled banks have dealt effectively with their loans. Thus they ended with the conclusion that the appointment of top management at banks should be freed from government domination and regulations that the domestic institutions from foreign competition should be eliminated.

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Marianne Bertrand et al\textsuperscript{70} have investigated the effect of the deregulation of the French Banking industry in the 1980s on the real behavior of firms and the structure and dynamics of the product markets. Their study concluded that following deregulation, banks are less willing to bail out poorly performing firms and firms in more bank-dependent sectors were likely to undertake restructuring activities. At the industry level they observed an increase in the asset job reallocation, an improvement in the allocative efficiency across firms and a decline in concentration.

Sangeeta Arora and Karn Shub Preet\textsuperscript{71} analysed the financial performance of India Banking sector in post reform era. A Comparative appraisal was conducted to know the financial performance of public, private and foreign banks in India. For making comparative analysis, seven key indicators of financial performance like return on assets, capital assets weighted ratio, NPA to Net advances, business per employee, NPA level, Net profitability of banks and off-balance sheet operations of scheduled commercial banks were used. In case of Return on assets, capital asset risk weighted ratio, Business per employee and off-balance sheet operations, foreign banks performed well. During the study period, Foreign Banks were generating two times higher business per employee as compared to their counterparts of Indian private sector banks and public sector


banks. In the Indian context, both capital adequacy and asset quality have shown a significant improvement over the years. Though, in post reform era, performance of public sector banks has improved in terms of return on assets (ROA) and reduction in NPA level, but they differ significantly from new private sector and foreign banks in terms of operational issues, organizational culture, mindset and human resource issues etc. They suggested that public sector banks should control operating cost adopt rationalization of staff cost, develop better human resource, reduce NPA adhere to the funds in quality assets and upgrading the technology. Finally, it was concluded that banking sector in India has given a positive and encouraging response to the financial sector reforms.

**Jan-Egbert Sturm and Barry Williams** 72 analysed the factors determining foreign bank efficiency using a three stage research method. In the study it was found that host market incumbency reduced efficiency of foreign banks in Australia, resulting in over use of inputs. The study also found that Parent profitability was not found to result in increased host nation efficiency, while parent credit rating effects were mixed. Some evidence was presented that banks from more financially sophisticated nations were more efficient.

**Alicia García-Herrero, et. al.,** 73 analysed empirically what explained the low profitability of Chinese banks for the period 1997–2004. In the study they found that better capitalized banks tend to be more profitable. They also found that

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the same has been true for banks with a relatively larger share of deposits and for more efficient banks. In addition, their study found that a less concentrated banking system increases bank profitability, which basically reflected that the state-owned commercial banks – China’s largest banks – had been the main drag for system’s profitability. The researchers of the paper found the same negative influence for China’s development banks (so-called Policy Banks), which are fully state-owned. Instead, more market-oriented banks, such as joint-stock commercial banks, tend to be more profitable, which again pointed the influence of government intervention in explaining bank performance in China. These findings, they stated, should not come as a surprise for a banking system which has long been functioning as a mechanism for transferring huge savings to meet public policy goals.

Timothy H. Hannan and Robin A. Prager\textsuperscript{74} examined the relationship between the profitability of small single-market banks and the presence in the market of large banking organizations and banking organizations that operate primarily outside of the local banking market. In the study it was found that, in rural banking markets, the profitability of small single-market banks has been significantly related to the presence of both large and small primarily-out-of-market banks. The study also found that an increased presence of large or small primarily-out-of-market banks in rural banking markets reduced the positive effect of an increase in concentration on small single-market bank profits. In urban

banking markets, little evidence was found on any relationship between the profitability of small single-market banks and the presence of large or primarily-out-of-market banks.

_Ugo Albertazzi and Leonardo Gambacorta_ in their paper investigated how banks’ activity is affected by the corporate income tax. For this purpose they used aggregate data on all main components of the profit and loss account and on the interest rate applied on loans and on deposits for the banking sector of the main industrialized countries during the period 1981–2003. With such information they were able to disentangle the extent to which a bank was able to shift its tax-burden forward to its borrowers, depositors, and purchasers of fee-generating services. The main result in their research work is that the taxation of banks’ profit is equivalent to taxation on loans and as such it exerts a substantial impact on the composition of banking sector revenues. However, the study stated that the credit intermediaries have the ability to shift a substantial part of their corporate income tax burden and therefore differences in the level of taxation could not explain the dispersion observed in banks’ net profitability across industrialized countries.

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