Chapter 5

Main Conclusions and Policy Recommendations

This chapter presents a summary of the main findings of the study with a view to reach at some specific and precise conclusions regarding the efficiency measurement of banking industry in India since the onset of reforms. In the light of the inferences drawn from the analysis, it also recommends polices to make banking system more efficient, viable, productive and competitive in the context of banking scenario through which banking sector in India is currently passing.

The main focus of the present study has been to investigate the effects of deregulation on the overall efficiency and its measures of Indian banking sector as a whole as well as classified into different groups based on ownership viz. public sector banks and private banks using non parametric methodology of Data Envelopment Analysis (DEA). This study also estimates TFP growth of Indian commercial banks and its decomposition by using Malmquist Index. The analysis is attempted over 24 years (1981-2004) out of which 12 year period belongs to the deregulation period, if we use the generally accepted period of 1992-93 as the cut off date for the big push in bank deregulation.

The importance of the study lies in the fact that no definite and precise conclusion regarding the effect of deregulation on efficiency and productivity of banks emerges from the statistical studies undertaken in the context of developed as well as developing countries including India using different methodologies and different time period.
5.1 Main Findings of the Study

5.1.2 Trends in Important Banking Indicators during 1981-2005

Deposits and Credit

The PSBs continued to play a very prominent role in both deposit mobilisation and credit disbursal even after the implementation of reforms since 1991. They contribute about 75 per cent of the total deposits mobilised and total credit advanced by all scheduled commercial banks. The entry of domestic private sector banks has been altering this trend to some extent since the late nineties.

There has been a significant change in the composition of deposits, with a clear shift in favor of term deposits, whereas demand deposits witnessed a decline. The share of savings in bank deposits remained more or less constant. It is observed that more funds of short-term nature in the form of demand deposits are parked with the foreign banks group. This may be an indication that the business class is attracted towards better service offered by foreign banks.

Trends and Pattern of Investments

Even though the SLR requirements have been reduced to the statutory minimum of 25 per cent, banks still prefer to invest large portion of their investments in approved securities, due to the risk free and assured returns they get through such investments. However, in the case of private sector banks in the domestic sector, there is a clear preference for investments in other securities and a reduction of investments in government and other approved securities. Since the year 2000, with the entry of more private sector banks, this group invested more than one third of their total investments in non-SLR securities, which indicates that the private banks, of late, are currently venturing into more riskier, nonetheless challenging business.
Income composition

The share of non-interest income in the total income has been increasing across the different bank groups. This is a welcome trend as it may reduce the risks arising out of the sole dependency on interest as the source of income.

Wages as a percentage of operating expenses of public sector banks is more than 60 per cent. Banks in the private sector both foreign and domestic private sector banks, however, have reduced their wage component in the operating expenses and are spending more for other business working measures like software development etc.

Number of Bank Offices and Branches

There has been a spurt in the number of banks during the late 1990s, which decreased during the early period of the new millennium. This could be reflective of the consolidation process, and in particular, the mergers and acquisitions that are the order of the banking system at present. The number of bank offices increased significantly during the early 1980s. After a consolidation phase during the late 1980s and early 1990s, there has been a moderate increase in the number of offices mainly due to the entry of new generation private sector banks since late nineties.

Asset Liability Management (ALM) System

ALM system has been analysed by examining indicators such as non-performing assets, capital adequacy ratio and return on assets.

Non-performing Assets level

Across the bank groups, there has been a significant reduction in the non-performing assets (NPAs). The composition of NPAs of public sector banks interestingly reveals that NPAs connected to nonpriority sector has increased, whereas, NPAs relating to priority sector advances exhibited a
decline. This goes to explode the commonly held myth that the problem of NPAs is caused mainly due to the credit allocation made to priority sectors.

**Capital to Risk Weighted Assets Ratio**

The capital to risk weighted assets ratio (CRAR) is an indicator for assessing soundness and solvency of banks. All banks in the State Bank group maintained capital to risk weighted assets ratio of more than 10 per cent in 2004-05. In the Nationalised Banks, 17 banks reached more than 10 per cent CRAR level except two banks whose CRAR during 2004-05 was between 9-10 per cent. During 2004-05, there were 2 banks in the old private sector category whose CRAR was less than 9 per cent.

**Return on Assets**

Return on assets (ROA) is an important performance indicator of banks. Return on assets has been worked out by taking the ratio of net profit or loss to average advances and investments. For all scheduled commercial banks, the ROA increased from 0.1 per cent in 1980 to 1.1 per cent in 2005. Amongst the bank groups, the ROA of foreign banks group is the highest at 1.8 per cent in 2005. Compared to the pre-reform period, the ROA of PSBs improved significantly after the initiation of reforms. In contrast to all other bank groups, majority of the foreign banks were placed in the category of high ROA of more than 1.5 per cent.

**5.1.2 Measurement of Efficiency and its Measures**

The average OE of all commercial banks has increased from 0.086 in 1981 to 0.772 in 1992 but declined to 0.538 in 2004 despite fluctuations in some years implying that deregulation in the Indian banking sector has resulted in an increase in the overall inefficiency. An inefficiency to the tune of 46.2% (1-0.538) implies that banks have the scope of producing 1.85 (=1/0.538) times as much output from the same amount of inputs. Even the scores of TE (0.408
in 1981, 0.878 in 1992 and 0.764 in 2004) and AE (0.113 in 1981, 0.861 in 1992 and 0.693 in 2004) move in the same manner as OE moves but TE score is more than the AE score in most of the cases implying thereby that commercial banks are more technically efficient than allocatively efficient. Further looking at the components of technical efficiency, scale (0.703 in 1981, 0.953 in 1992 and 0.882 in 2004) and pure technical (0.604 in 1981, 0.922 in 1992 and 0.846 in 2004), it can be seen that pure technical efficiency was the main source of technical inefficiency. Therefore much of the lost output was due to the pure technical inefficiency i.e. underutilisation or wastage of resources which could arise in the form of inputs.

It is also observed that among four ownership categories of banks, State Bank Group was more efficient in each of the efficiency estimates during the period under study, followed by nationalised banks, domestic private banks and foreign banks in most of the years. Even the PSBs are more technically and allocatively efficient than the domestic private banks and foreign banks. The explanation could be that there has been a change in orientation in PSBs from social objectives towards an accent on profitability, especially given that some of these have come to be listed on the exchanges and have private investors. Also PSBs enjoy a huge advantage in terms of scale operations over private sector banks. The OE of domestic private banks remained satisfactory up to 2001 but subsequently underwent a negative change for the years 2002 (0.202) and 2003 (0.167), but the trend again reversed for the year 2004 (0.882). It is also observed that, in mid 90s and early 2000s, the OE of foreign banks and domestic private banks suffered fluctuations due to the allocative inefficiency that is inefficiency in the form of allocative distribution of inputs and outputs, with respect to their prices, showing that the competence of private and foreign banks has not been at par with PSBs in dealing with distribution of mobilized funds -among competing demands which could be because domestic private banks took the lead in investing in new revenue generating practices in the form
of computerisation of branches, setting up of Advanced Ledger Posting Machine (ALPM) branches, computer training of employees, upgradation of technology, etc which led to higher revenue as well as to a lot of additional costs.

Section 4.2.2 calculates different efficiency measures of all PSBs individually in the pre and post reform period. All PSBs were found to perform above the high level of efficiency (0.75) during the period under study. It is also observed that all PSBs, in general, have registered an improvement in OE (from 0.873 during 1981-92 to 0.90 during 1993-2004), AE (from 0.911 during 1981-92 to 0.94 during 1993-2004) and TE (from 0.948 during 1981-92 to 0.962 during 1993-2004) and the increase is more pronounced after reforms. It is also observed that PSBs are more technically efficient than allocatively efficient. In the post reform period, Oriental Bank of Commerce (0.988 in 1993-2004) is the most efficient bank followed by State Bank of Hyderabad (0.979 in 1993-2004). These banks are well managed and have healthy capital adequacy ratio. The OE score of Union Bank of India, Dena Bank, State Bank of Mysore, State Bank of India, Vijaya Bank, State Bank of Bikaner and Jaipur, and State Bank of Saurashtra decreased marginally, while Oriental Bank of Commerce, Bank of Baroda, Corporation Bank, Canara Bank, Punjab National Bank, Allahabad Bank, State Bank of Hyderabad, State Bank of Travancore, State Bank of Indore, Andhra Bank, Syndicate Bank, United Bank of India, Indian Overseas Bank, Uco Bank, State Bank of Patiala, Indian Bank and Punjab and Sind Bank registered a noticeable and consistent improvement in overall efficiency in the reform era.

5.1.3 Measurement of Total Factor Productivity growth and its measures

TFP growth of all banks increased from 1.006 in 1981 to 1.576 in 1992 but declined to 0.821 in the year 2004 despite fluctuation in some of the years. The total factor productivity growth at 0.821 % means that the all banks had the
productivity growth of \{1-0.821 = (-0.179)\} percent. The shift in TFP growth is due to both technical efficiency change (catching up effect) and technological efficiency change (frontier effect). The technical efficiency change of commercial Banks decreased from 1.3 in 1993 to 1.001 in 2004 despite variation in some of the years and the decline is in respect of pure technical efficiency change as well as scale efficiency change because resources are under-utilised mainly in the form of inputs. The introduction of new technology has resulted in improvement of technological efficiency change of Indian commercial banks.

The behaviour of State Bank Group is more consistent than other categories of banks. Among all categories, after reforms foreign banks have shown the technological efficiency improvements. However none of the bank groups alone dominated the Malmquist Index scores as a source of efficiency improvement.

Section 4.3.2 shows the geometric mean of TFP growth indices of all the PSBs. On an average, the TFP growth of all PSBs has improved after deregulation from 0.94 during 1981-92 to 102.3 during 1993-2004. However, all PSBs were driven by technological efficiency changes rather than technical efficiency changes. The decomposition of the catching up effect reflects that both scale efficiency and pure technical efficiency change have more or less the same impact on technical efficiency of PSBs as values of both kinds of efficiency change are close to unity. Thus, all the banks are performing at optimal stage under variable returns to scale i.e. pure technical efficiency change. PSBs were operating at constant rate of return to scale except Bank of India, Punjab national Bank, Oriental Bank of Commerce, Canara Bank, Dena Bank, Corporation Bank, Bank of Baroda and Union Bank of India which are operating at diminishing returns to scale. In general, the TFP growth of PSBs in
India is satisfactory over a period of 12 years. But consistency in the performance is not up to mark.

In nutshell, the efficiency and TFP growth of commercial banks have declined in the reform era. PSBs have shown the consistent good and sustained behaviour then other categories of banks.

5.2 Policy Recommendations

At present, when the Indian economy is facing serious macroeconomic concerns due to rapidly rising inflation and interest rates, a growing trade deficit and an uncertain global environment which involves risk of sudden adjustment in the currency value and corrections in financial markets in what follows are suggested some necessary measures to stabilize and improve efficiency and soundness of the Indian banking sector to face macroeconomic challenges in the light of the major findings of the study.

Most important cause of inefficiency in banks is the higher cost of financial inputs viz. per unit labor cost and per rupee borrowing cost. Their intermediation cost also is much higher by global standards. Banks need to charge for various financial services with proper cost benefit analysis periodically. The RBI, the regulator of banks in India, should inculcate a culture of cost consciousness in the banking industry. While it is essential to provide banking services at minimum cost, there is prima facie no justification to enter into loss-making areas.

Banks should make efforts that fresh accrual of bad loans is avoided and the amount blocked in NPAs should be taken out. For preventing fresh accrual of NPAs banks need to revitalize their credit appraisal techniques. They should follow the basic principles of lending including safety of advances, purpose for which loan is given, liquidity, security and profitability. After credit is imparted its effective follow-up and close monitoring is equally important. For effective resolution of the problem of NPAs there is need for improvement in managerial efficiency, skill upgradation for proper assessment of credit worthiness risk
appraisal and legislation enforcement of creditors’ right. The reduction in NPAs will result in increase in the profitable assets, net-interest income, net profits, total credit and decline in provisions and contingencies. Banks have to develop a quick, systematic and sustainable strategy to clean up their contaminated credit portfolio for their survival and global presence in the near future.

The need for capital is a crucial challenge facing the Indian banks. There are number of factors that would lead to additional capital requirements- continuing strong credit growth, migration to Basel II framework, consolidation in the domestic banking industry as well as acquisitions overseas. Also there would be a growing need for tier I capital which was important for international valuation of banks, the banking system being dominated by PSBs will face a constraint in issuing equity to the public because the minimum government shareholding cannot be relaxed or the government cannot take up its pro-rata share in future offerings. Banks should raise capital in domestic and overseas markets in addition to normal plough back of profits to meet the challenging business growth and expanding role overseas.

Basel II prescriptions have ushered in a transition from the traditional regulatory measure of capital adequacy to an evaluation of whether a bank has found the most efficient use of its capital to support its business i.e., a transition from capital adequacy to capital efficiency. In this transition, how effectively capital is used will determine return on equity and a consequent enhancement of shareholder value. In effect, banks should adopt a more dynamic approach to use of capital, in which capital will flow quickly to its most efficient use.

As part of the risk management exercise, against possible volatile and extraordinary risks like sudden economic downturn, interest rate fluctuation, foreign exchange rates, collapse of communication system, natural disasters, stock market crash, depletion of country’s foreign exchange resources etc, banks
should take remedial action which include reduction of risk limits, enhancing collateral requirements, amendments to pricing policies, augmenting capital and increasing source of funding to guard against possible danger to their solvency.

Banks are increasingly using outsourcing for achieving strategic aims leading to either rationalisation of operational costs or tapping specialist expertise, which is not available internally. Typically outsourced financial services include applications processing (loan origination, credit card), document processing, investment management, marketing and research, supervision of loans, data processing and back office related activities etc. Outsourcing might give rise to several risks including strategic risk, reputation risk, compliance risk, operational risk, exit strategy risk, counterparty risk, country risk, access risk, concentration risk and systemic risk. It would, therefore, be imperative for the bank outsourcing its activities to ensure effective management of these risks so such arrangements should neither diminish the bank’s ability to fulfill its obligations to its customers and the RBI nor impede effective supervision by RBI.

As investment constitutes a significant component of the total asset portfolio of the banks and also contributes a good portion of their income, it is essential that bank management must frame investment policies judiciously. For sound portfolio management, banks should have written investment policy spelling out the essential features like objectives, strategies and organizational set up. For this, the information base in banks has to be strong and sound. Some banks have not yet totally computerised their investment operations, which is very essential as some of the risk return models can be implemented only through software packages.

Technology is a key driver in the banking industry which creates new business models and processes and also revolutionizes’ distribution channels. Banks which have made inadequate investment in technology have consequently faced an erosion of their market shares. Banks should ensure that they derive maximum advantages from their investments in technology and
avoid wasteful expenditure which might arise on account of uncoordinated and piecemeal adoption of technology, adoption of inappropriate/inconsistent technology and adoption of obsolete technology.

Banks should apply the concept of recycling of funds in their investment in approved securities. Banks should be encouraged to purchase deposit linked approved securities to broaden the resource base and also to some extent improve their profitability.

Profitability is an essential objective of fund management in banks. To be profitable banks not only should show healthy short term earnings but should also manage liquidity risk and earnings through recovering business cycles for long term survival. To achieve the maximum interest margin, management must coordinate and balance the maturity interest rate structure and credit quality of its assets and liabilities. If the maturities of bank’s assets and liabilities are approximately matched, then the banks know what its interest spread will be for a specific period because the spread is locked in by March. Currently, Indian banks are increasingly giving term loans to industry, especially to finance infrastructure projects of longer duration. However, the sources of funds for banks are essentially deposits the majority of which are of short term duration. This has created a serious situation of asset liability mismatch for Indian banks. India’s infrastructure can not be financed entirely by the banking sector. The transformation of the two development institutions the ICICI and the IDBI into banks have left a void in the area of long term finance. That is particularly felt in the infrastructure areas. There is need to enhance the role of long term financial institutions like insurance companies, provident and pension funds and NBFCs for financing long term infrastructure projects.

As banks move from a financially repressed regime to a more liberalized one, there is no escape from risk, it is to be managed to keep it within sustainable levels. In this era of globalisation, banks will have to learn risk taking and get into venture capital funding. The Indian banking sector has a tremendous
potential for globalisation and though banks are not lacking in competitiveness, they have to learn to be futuristic in taking risks. Though banks needed to exercise caution while getting into venture capital funds, the banks could strike a balance by allocating a certain portion of finance and operational services for venture capital, but keeping the major part of finance for other retail services so as to lower losses that might be incurred through venture capital funding.

Corporate governance is the foundation for effective risk management in banks and thus the foundation for a sound financial system. Banks have to cultivate a good governance culture building inappropriate checks and balances in their operations. In addition, it is important that key personal are fit and proper for their jobs. The general principles of sound corporate governance should also be applied to all banks irrespective of their unique ownership structures.

The improvement in profitability can also be attained through the proper management of manpower expense ratio. It has increased rapidly after revision of salary of staff. It can be reduced by adopting Voluntary Retirement Scheme and full utilization of their services through encouragement of banking business (i.e. deposits and credit).

Further, profitability performance can be improved by increasing non interest income in the form of commission, brokerage etc. by offering more prompt services to the customers through computerisation of bank offices, providing modern banking facilities etc. In order to enhance the potential of banks, increase in the growth rates of total credit and total deposits is a must criterion. To achieve this increase, the adoption of aggressive marketing strategies, customer friendly attitudes, product innovation, rapid computerization and net working of branches and above all, overall change in the work culture are imperative pre-requisites in the present competitive era.

The core function of Human Resource Development (HRD) in the banking industry is to facilitate performance improvement. Thus, in order to
improve the efficiency of PSBs, developments in the sphere of human resources should be embarked upon. Factors such as skills, attitudes and knowledge of personnel play a critical role in determining the competitiveness of the financial sector. Human Resource Management (HRM) strategies include managing change, creating commitment, achieving flexibility and improving teamwork among others.

The PSBs may be given more freedom in appointing more number of independent directors, professionals on their boards. These banks’ boards may be given enhanced freedom in - (i) operational decision-making including various issues related to information technology, human resources and other business areas, and (ii) laying down the policies on accountability and responsibility of bank officials in order to remove undue fear of outside agencies like Central Bureau of Investigation/Central Vigilance Commission. This would result in the creation of level-playing field between the PSBs and the private/foreign banks.

The lack of full autonomy to the banking sector's regulator gives rise to problems like regular waiver of prescribed limits, forbearance and lifeboat scheme for non-viable institutions. Full autonomy to the banking regulator is a precondition for the soundness of the banking sector. The problem of multiple regulators and lower degree of coordination among different regulators create opportunities for regulatory arbitrage for smart players.

Banks will have to begin to function increasingly under competitive pressures. These pressures may emanate from within the banking system as well as from non-banking institutions. The banks should be able to derive the maximum competitive advantage from their extensive branch network, both in the mobilisation of funds and in the design and sale of suitable financial products for some segments of the urban markets as well as rural and semi-urban clients.
Domestic banks require greater encouragement and operational freedom to place themselves at par with foreign banks to meet the challenges of globalisation.

The structure of the Indian financial system, particularly relating to banking, could be well posed with the challenge of redefining its attributes. A choice will have to be made between the appropriateness of the "commercial banking model" similar to that in the USA, the UK and Canada versus the "universal banking model" as is prevalent in Germany, Austria and Switzerland. In India, the experience of ICICI and SBI with universal banking models has proved beyond doubt that “size” matters. A look at the international scene also suggests that size does matter.

In view of this, the policy-makers should take concrete steps in near future to kick start the consolidation process as that alone will force the PSBs to acquire scale from both the business and technology perspectives. However, as suggested by the Narsimham Committee, "mergers" in the banking sector should be market-led and synergy-driven instead of externally imposed. In the past, mergers were initiated by regulators to protect the interest of depositors of weak banks. This need not be the case in the future. The focus should be on achieving better segmentation in the market. Most mergers, such as those of Nedungadi Bank with Punjab National Bank, Lakshmi Vilas Bank with Canara Bank, Benares State Bank with Bank of Baroda, Sikkim Bank with Bank of India, Global Trust Bank with Oriental Bank of Commerce and United Western Bank with IDBI happened because of the precarious financial position of the weaker institution.

In the years to come, there is no doubt that the Indian financial system will grow in size and complexity. Different segments of the market will become closely linked and it will become difficult to influence or act on only one segment without affecting the others. There will be increasing specialisation; simultaneously, there can emerge financial conglomerates
dealing in different financial products and services. The existence of healthy and sound financial institutions should be able to put pressure on investors and other borrowers to use resources in an efficient and productive manner in order to repay the existing obligations and to qualify for new finances.

Most significantly, macro-economic control is must. Fiscal and external policies must support monetary policy in maintaining the overall macroeconomic balance. During the reform period, prudential regulation must be introduced and adhered in order to help safeguard against a financial crisis and prevent the undermining of monetary control and macroeconomic adjustment. The Government must simultaneously implement wide-ranging reforms in other sectors, especially those which require support from the financial system. The adjustment and reorientation required by many business undertakings both in the public and private sectors in response to widespread reforms could be difficult and will require careful planning.

To sum up, the basic objective should be to survive, survive with growth and growth with profits. The future of the Indian banking system would be for the efficient and performing banks. The banks which are unable to keep pace with fast changes would be left behind in the race or just vanish. Through the various reform measures the foundation of an efficient and a well functioning financial system has been laid but still we have miles to go.