"An Analysis on Design of Financial Proficiency in Indian Banking Industry in the Post-Deregulation Knowledge"

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Abstract – This paper analyses the trends of cost efficiency and its components across Indian public sector banks (PSBs) during the post-deregulation period spanning from 1992/93 to 2007/08. The study also examines the issue of convergence in cost, technical and allocative efficiencies levels of Indian PSBs. The empirical results indicate that deregulation has had a positive impact on the cost efficiency levels of Indian public sector banking industry over the period of study. Further, technical efficiency of Indian public sector banking industry followed an upward trend, while allocative efficiency followed a path of deceleration. We note that, in Indian public sector banking industry, the cost inefficiency is mainly driven by technical inefficiency rather than allocative inefficiency. The convergence analysis reveals that the inefficient PSBs are not only catching-up but also moving ahead than the efficient ones, i.e., the banks with low level of cost efficiency at the beginning of the period are growing more rapidly than the highly cost efficient banks. In sum, the study confirms a strong presence of s - and b - convergence in cost efficiency levels of Indian public sector banking industry.

One of the major objectives of Indian banking sector reforms was to encourage operational self-sufficiency, flexibility and competition in the system and to increase the banking standards in India to the international best practices. The second phase of reforms began in 1997 with aim to reorganization measures, human capital development, technological up-gradation, structural development which helped them for achieving universal benchmarks in terms of prudential norms and pre-eminent practices.

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INTRODUCTION

From the unanticipated 1970s through the late 1980s, the part of market drives in Indian banking system was just about missing, and overabundance regulation regarding high liquidity prerequisites and state intercessions in designating credit and figuring out the costs of financial items has brought about genuine financial repression. The fundamental result of this financial repression was a rising in the volume of terrible advances because of insufficient credit assessment system and poorer hazard evaluation approaches. Further, poor revelation principles abetted debasement by window-dressing the correct picture of banks. The overstaffing and over-expanding and undue obstruction by labour unions brought about colossal working misfortunes. This prompted a slow decrease in the gainfulness and efficiency of Indian banks, particularly of public sector banks (Psbs). Infect, in late 1990s, Indian banking system was very nearly an emergency and needing reasonability even in its fundamental capacity of financial intermediation.

Understanding the presence of the indications of financial repression and to get a departure from any potential emergency in the banking sector, Government of India (GOI) left on a comprehensive banking reforms arrange in 1992 with the target to make a more broadened, productive, proficient and flexible banking system. The expansive form of this arrangement was outlined by the Committee on the Financial System (Chairperson: M. Narasimham, 1991), while the positive shape to the arrangement was given by the Committee on the Banking Sector Reforms (Chairperson: M. Narasimham, 1998. The principle program of reforms process was to keep tabs on key zones: i) rebuilding of Psbs by granting more self-rule in choice making, and by imbuing crisp capital through recapitalization and halfway privatization; ii) making

contestable markets by uprooting passage hindrances for again domesticated private and remote banks; iii) enhancing the administrative and supervisory structure; and iv) reinforcing the banking system through solidification. To meet this program, the strategy producers proclaimed a scene of investment rates deregulation, institutionalized least capital prerequisites according to Basle standards, prudential standards identifying with salary distinguishment, possessions grouping and provisioning for terrible advances, and changes in administrative and nature's domain.

Given the wide draw of banking reforms depicted above, one may want if the efficiency execution from Psbs since the starting of reforms in 1992 has enhanced or not. In this paper, we made an endeavor in this bearing. Specifically, our endeavour here is to assess the execution of Psbs in the post-reforms period by taking a gander at the patterns of cost efficiency (CE) and union in its levels crosswise over banks. The paper has stretched out the existing expositive expression identified with the efficiency of Indian banks in two headings. Initially, this study reports the bank-wise analysis of patterns of cost efficiency and its segments, to be specific specialized and allocative efficiencies. Excepting a couple of special cases, the majority of existing studies on the efficiency of Indian banks have reported the outcomes for particular assemblies of banks (especially characterized by proprietorship and size) as opposed to those of distinctive banks. On the other hand, we may get a deceiving picture from an aggregation particular analysis if one or a set of some out-performing bank(s) supersede the grim efficiency levels of the remaining banks of the gathering. The bank-wise outcomes reported in the present study keep away from the issue of predominance of one bank over others inside the same assembly, and might be more handy in planning micro-level arrangements in the banking industry. Second, to best of our information, this is maybe the first observational study that has broke down the merging or dissimilarity in the levels of cost efficiency and its notable parts.

Our analysis develops in two steps. Initially, utilizing the information of 27 Psbs over a period 16 years (from 1992/93 to 2007/08), we ascertain cost efficiency (CE), specialized efficiency (TE) and allocative efficiency (AE) scores for distinct Psbs utilizing the method of information envelopment analysis (DEA), a deterministic non-parametric outskirts methodology of efficiency estimation. Lately, numerous studies have showed up in scholarly diaries that connected DEA to survey the relative cost efficiency of banks. Second, we utilize universal cross-sectional relapse approach for exploring the presence of s -union and b -meeting in CE, TE and AE levels. In the contemporary written works, comparative methodology has been utilized by Tomova (2005),Brack and Jimborean (2009) to analyze the joining in bank efficiency levels crosswise over European nations and by Daley and Matthews (2009) for testing the meeting in efficiency levels of Jamaican banks.

The Indian banking industry is measured as a flourishing and the secure in the banking world. The country's economy growth rate by over 9 percent since last several years and that has made it regarded as the next economic power in the world. Our banking industry is a mixture of public, private and foreign ownerships.

The major dominance of commercial banks can be easily found in Indian banking, although the co-operative and regional rural banks have little business segment. The Indian banking sector has two kinds of scheduled banks i.e. scheduled commercial banks and scheduled co-operative banks. Under the first category of scheduled banks, four types of entities have found based on their establishments and legal obligations. They are:

i) Public banks (28)3,

ii) Private Banks (25),

iii) Foreign Banks working in India (29) and

iv) Regional Rural Banks (91)

The second category of scheduled cooperative banks consists of:

i) Scheduled Urban Co-operative banks (55) and

ii) Scheduled State Co-operative Banks (16)

Under public & private sector, banks are more clearly defined according to nationalization and privatization. The banks under public banks are Nationalized Banks (20) and State Banks of India (with its associates, the number is come to 8). Under Private Bank category, banks are divided into two types i.e., Old private banks (17) and New-private banks (8).

REFORMS AND BANKING SYSTEM

From the late 1960s through the early 1990s, Indian banks, particularly the Psbs basically served as operators of the government in channelizing the speculation assets to chose sectors under the nation's economic advancement arrangement. The improvement system was intended to quicken India's move from an agrarian economy to a confident industrialized state. The immediate association of the state in economic advancement process brought about the intensely managed markets with bended

value system. The financial market was not a special case. Indian banking industry was vigorously regulated by the government, and portrayed by far reaching financial repression. The predominance of state-claimed banks was unmistakable and distinguishable since their allotment in industry's sum stakes was over 85 percent. The prime objective of the banking system was 'to serve better the requirements of the improvement of the economy in congruity with the national approach and goals' (Mohan and Prasad, 2005). In this period, Psbs extended through a system of more than 65,000 limbs and their operations were guided fundamentally by the social and political contemplations as opposed to by the contemplations of productivity.

Up until the starting of banking reforms in 1992, Government of India utilized the banking system as an instrument of public money (Hanson and Kathuria, 1999). Significant and expanding volumes of credit were diverted to the government at underneath market rates through high and expanding money save prerequisites (CRR) and statutory liquidity necessities (SLR) with a specific end goal to store a huge and expanding government shortfall at generally minimal effort (Sen and Vaidya, 1997)1. The commercial banks, particularly, Psbs were obliged to assign a generous a piece of their sum advance portfolio to "necessity" sectors, (for example, agribusiness and little scale businesses) at a rate that was beneath the market rate of premium. Moreover, investment rates on both deposits and developments were totally regulated by the RBI. There was for all intents and purpose no self-sufficiency to the banks even in taking choice to open new bank extensions. The government additionally firmly managed the authorizing of market entrance of new down home and remote banks. Thus Psbs overwhelmed the market. Indian Psbs faltered downhill all around the period 1980-1992 since non-performing holdings had kept on piing up whilst standard stakes were finishing little to give back any huge benefits for the banks. besides this, there were numerous shortcomings in the organizational structure of banks - absence of appointment, powerless inner controls, and nontransparent bookkeeping principles (Mohan and Prasad, 2005). In whole, all the indications of financial repression, for example, unnecessarily high- hold prerequisites, credit controls, premium rate controls, strict entrance restraints, operational confinements, pre-strength of state-possessed banks, and so on, were present in the Indian banking system.

The broadly repressed financial environment expedited inefficiency in credit allotment and dissolved the benefit of banks. The inefficiency in the organization of credit and breaking down bank benefit additionally ran as one with insufficient promotion and lacking procurements for awful obligations by the banks. Jagirdar (1996) watched that the normal profit for possessions (ROA) in the second 50% of the 1980s was just in the vicinity of 0.15 percent which was appallingly low by all gauges. Further, in 1992/93, non-performing stakes (Npas) of 27 Psbs added up to 24 percent of aggregate credit, just 15 Psbs attained a net benefit, and 50% of the Psbs confronted negative total assets (Shirai, 2002). On remarking the state of Indian banking industry in the pre-reform period, Sarkar (2004) commented that the rates of return were low by international benchmarks, the capital base had disintegrated, non-performing possessions were on the ascent, and client administration was beneath desire. Further, the absence of fitting revelation standards accelerated numerous issues being held under spread. Poor interior controls raised genuine questions about the uprightness of the system itself (Reddy, 1998). In such nature, Psbs had little cause to enhance their execution by diminishing working costs and enhancing the effective assignment of advances.

To get rid of distressed banking situation, the Government of India embarked on a strategy of reform measures in the financial sector, in general and banking sector, in particular. Note that the banking reforms in India had two distinct phases. The first phase of reforms introduced consequent to the release of the Report of the Committee on the Financial System (Chairperson: M. Narasimham), 1992.The focus of this phase of the reforms was economic deregulation targeting at relaxing credit and interest rates controls, and removing restrictions on the market entry and diversification. The second phase of reforms, introduced subsequent to the recommendations of the Committee on Banking Sector Reforms (Chairperson: M. Narasimham), 1998. This phase targeted on enhancing prudential regulations, and improving the standards of disclosure and levels of transparency so as to minimize the risks banks assume and to ensure the safety and soundness of both individual banks and the Indian banking system as a whole. On the whole, the key objective of the banking reforms was to transform the operating environment of the banking industry from a highly regulated system to a more market-oriented one, with a view to increase competitiveness and efficiency (Sarkar, 2004).

This paper seeks to determine the impact of various market and regulatory initiatives on efficiency improvements of Indian banks. The reform process has shifted the focus of public sector dominated banking system from social banking to a more efficient and profit oriented industry. While the reform process has resulted in the private sector replacing the government as the source of resources for public sector banks (PSBs), the infusion of private equity capital has led to shareholders challenges to bureaucratic decision making. PSBs also face increasing competition not only from private and foreign banks but

also from growing non-banking financial intermediaries like mutual funds and other capital market entities. The competitive pressures to improve efficiency in the banking sector has resulted in a switch from traditional paper based banking to electronic banking, use information technology and shift of emphasis from brick and mortar banking to use of ATMs.

MEASUREMENT OF INPUT AND OUTPUT VARIABLES

In processing the efficiency scores, the most testing assignment that an investigator dependably experiences is to select the important inputs and yields for demonstrating banks' conduct. It is worth noting here that there is no accord on what constitute the inputs and yields of a bank (Casu and Girardone 2002, Sathye 2003). In the written works on banking efficiency, there are essentially two methodologies for selecting the inputs and yields for a bank: i) the preparation approach, additionally called the administration procurement or quality included methodology; and ii) the intermediation approach, likewise called the stake approach (Humphrey 1985, Hjalmarsson et al. 2000). Both these methodologies apply the universal microeconomic hypothesis of the firm to banking and contrast just in the particular of banking exercises. The handling approach as pioneered by Benston (1965) treats banks as the suppliers of administrations to clients. The yield under this methodology represents the administrations gave to the clients and is best measured by the number and sort of transactions, archives processed or particular administrations furnished over a given time period. In any case, in the event of non-accessibility of point by point transaction stream information, they are substituted by the information on the amount of deposits and advance accounts, as a surrogate for the level of administrations furnished. In this methodology, data incorporates physical variables (like labour, material, space or data systems) or their partnered cost. This methodology centers just on working cost and totally overlooks investment expenditures.

The intermediation approach as proposed via Sealey and Lindley (1977) treats banks as financial mediators directing supports between depositors and leasers. In this methodology, banks produce intermediation benefits through the accumulation of deposits and different liabilities and their provision in premium gaining stakes, for example, advances, securities, and different ventures. This methodology is recognized from creation approach by adding deposits to inputs, with attention of both working cost and investment cost. Berger and Humphrey (1997) pointed out that not, one or the other of these two methodologies is immaculate since they can't completely catch the double part of banks as suppliers of transactions/document processing administrations and being financial middle people. All things considered, they proposed that the intermediation methodology is best suited for examining bank level efficiency, while the processing methodology is overall suited for measuring limb level efficiency. This is on the grounds that, at the bank level, administration will plan to diminish aggregate costs and not simply non-premium expenditures, while at the extension level countless administrations processing occur and bank financing and venture choices are basically not under the control of limbs. Likewise, in practice, the accessibility of stream information needed by the creation methodology is typically remarkable as opposed to in like manner.

Some prominent banking efficiency investigations that incorporate 'non-premium salary' as a yield variable are Isik and Hassan (2002a, 2002b), Drake and Hall (2003), Sufian (2006), Sufian and Majid (2007), Hahn (2007) around others. Further, dominant part of the studies on efficiency of Indian banks have likewise incorporated 'non-premium pay' in the picked yield vector. It is worth noting here that our decision of yield variables is reliable with the managerial destinations that are continuously sought after by the Indian banks. In the post-reforms years, serious rivalry in the Indian banking sector has constrained the banks to decrease all the information costs to the base and to win greatest income with less of less inputs. In this setting, Ram Mohan and Ray (2004) rightly commented that in the post-liberalization period, Indian banks are putting all their endeavors in the business of expanding earnings from all conceivable sources.

SPECIFICATION OF MODEL

Data Envelopment Analysis (DEA) was used to identify banks that are on the output frontier given the various inputs at their disposal. Efficiency of each institution is then derived relative to the best-practice bank on the frontier that uses a comparable mix of inputs. Efficiency of firm is measured in terms of its relative performance that is, efficiency of a firm relative to the efficiencies of firms in a sample. A formal econometric approach for estimating relative efficiency is with reference to the “best practice frontier”. Best practice frontier, a term originally coined by Farrell (1957) denotes maximum output that can be obtained with a given set of input quantities for a given set of firms in a sample. He also proposed that the efficiency of a firm consists of two components: technical efficiency, which reflects the ability of a firm to obtain maximum output from a given set of inputs, and allocative efficiency, which reflects the ability of a firm to use the inputs in optimal proportions, given their respective prices and the production technology. These two measures are then combined to provide a measure of total economic

efficiency. The output and input perspective will coincide when measuring technical efficiency under Constant-Return-to-Scale (CRS). The allocative and economic efficiency measures however are completely different in nature and are not likely to coincide for other reasons than by chance.

CONCLUSIONS

After years of financial repression because of overwhelming government administrative controls, the arrangement creators presented a comprehensive banking reforms programme in the year 1992 dependent upon the proposals of the Committee on the Financial System. The banking reforms process was further heightened after the acknowledgement of a large portion of the suggestions of the Committee on the Banking Sector Reforms by Reserve Bank of India in the year 1998. The push of banking reforms was not just on the change of cost efficiency through instilling the soul of rivalry around Indian banks additionally on fortifying the stun absorptive limit of the banking system through the appropriation of internationally acknowledged prudential regulations.

In sum, the aforementioned conclusions portray that to a large extent, the banking reforms process seems to be successful in achieving the efficiency gains in Indian public sector banking industry. This is evident from the fact that the deregulation process has strengthened the cost efficiency of the majority of PSBs. It is significant to note that the observed efficiency gains stemmed due to factors like heightened price and non-price competition among banks; rationalization of the labour force; more exposure to off-balance sheet activities; increased application of information and communication technology; and better recovery of non- performing loans. The empirical findings also indicate a grim aspect relating to the efficiency performance of Indian public sector banking industry. This aspect is that the CE levels of banks belong with SBI group have deteriorated during the post-deregulation years. This is really a matter of serious concern for policy makers and needs evolving of appropriate strategies to arrest further decline of cost efficiency in these banks.

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