

A STUDY ON INDIAN BANKING SERVICES RISK, CAPITALIZATION AND INEFFICIENCY IN INDIA- WITH SPECIAL REFERENCE TO TAMILNADU

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ABSTRACT:

This paper employs a simultaneous equations approach to measuring the tradeoffs between risk, capitalization and measured inefficiencies in a sample of 254 large Indian bank holding companies over the period 1986 through 1991. The results confirm the belief that these three variables are simultaneously determined. We find that as a market segment, insurance companies were exposed to more interest rate risk particularly in the period late 1980 s to early 1990 s. The interest rate risk premium for banks was among the highest of all financial intermediaries. Furthermore, asymmetries were identified in the relationship between risk and inefficiencies. Ineffective market discipline could make conglomeration optimal, even if conglomeration further undermines market discipline. We also show that an internal allocation of the cost of capital could add effective 'internal' discipline and improve on the outcome of conglomeration. Finally, evidence is provided that risk adverse managers tend to expend real resources to reduce asset risk, which makes them appear to be inefficient, when compared to efficiency measures derived under the assumption of risk neutrality.

KEY WORDS: Risk, Capitalization and Measured Inefficiencies, foreign banks, increasing Deregulation

INTRODUCTION OF THE STUDY

Recent work by Shrieves and Dahl (1992) and Jacques and Nigro (1995) suggest that changes in bank capital and risk positioning by bank management are simultaneously determined and are affected by both exogenous and endogenous factors. In general, management tends to offset increases in capital with increases in risk, but also these tradeoffs are significantly affected by regulatory pressure. In particular, regulatory pressure, as reflected in the new risk based bank capital requirements seems to have been effective in offsetting tendencies for banks with low capital to increase their risk taking and to engage in moral hazard behavior. In separate work, Kwan and Eisenbeis (1996) indicate that there are also tradeoffs between inefficiencies and bank risk taking and that the market prices both bank risk and inefficiencies.

These two streams of research suggest that it may be important to investigate further how management reacts to the market pricing of efficiencies and bank risk, and how this affects bank capital decisions as compared with incentives to engage in excessive perquisite consumption and or increased risk taking. In particular, Jensen (1986) and Stultz (1990) imply that there are theoretical reasons to believe that agency costs and information asymmetries may significantly

impact these tradeoffs and may explain why some institutions react to increased costs of capital by taking on more risk, why some may consume perquisites and why others may reduce risk. We draw upon agency theory to specify a simultaneous equations system which attempts to disentangle the differing incentives for management in managing risk, producing intermediation services and leveraging the organization, and how these incentives may be affected by regulatory. See Jacques and Nigro (1995).

The prevalence of reserve requirements, interest rate controls, and allocation of financial resources to priority sectors increased the degree of financial repression and adversely affected the country's financial resource mobilization and allocation. After Independence in 1947, the government took the view that loans extended by colonial banks were biased toward working capital for trade and large firms (Joshi and Little 1996). Moreover, it was perceived that banks should be utilized to assist India's planned development strategy by mobilizing financial resources to strategically important sectors.¹⁰¹ Reflecting these views, all large private banks were nationalized in two stages: the first in 1969 and the second in 1980.

The remainder of this paper first reviews the theoretical considerations and models of bank leverage, risk taking and inefficiencies. We then present the model and data. These are followed by a discussion of the empirical results. Capitalization Equations the last set of equations examine the relationships between capitalization, returns and inefficiency. The measured effects of inefficiencies are statistically negative and significant, suggesting that institutions with greater inefficiencies are less well capitalized, which is consistent with the moral hazard hypothesis and risk taking hypothesis identified in the BADLOAN equation. Except for the small size class of banks, imposition of regulatory capital requirements was insignificantly related to bank capitalization. In the case of small banks, the sign is negative and wrong, indicating that after the imposition of the Basle capital requirements, bank capital went down, rather than increased. ROA is positive and significantly related to capital, which is consistent with the results of Furlong and Keeley(1990) and Keeley and Furlong(1989).

OBJECTIVES OF THE STUDY

COST OF CAPITAL IN BANKING

An important issue is the cost of capital in banking. It seems a fact of life that banks consider capital very expensive, and therefore want to use their capital as efficiently as possible. In practice, bankers will tell you that capital costs say 15%, while debt (deposits) will not even cost half of that. In their minds capital has this *fixed* high price. It is therefore not surprising that they will choose to utilize this expensive capital as efficiently as possible. The problem with this line of reasoning is that capital does not have one price; the cost of capital is determined by the risks this capital is exposed to. This puzzle may have a straightforward resolution. The bankers' beliefs in expensive and fixed price equity may create a self-fulfilling prophecy. The market knows that banks will put to use any unit of idle capital (not using it, *given the high fixed price* is a waste!), and therefore the market anticipates that any capital granted to a bank will be exposed to substantial risks.

As a matter of fact, matters might even be worse. Banks will seek to put to use idle capital rapidly which elevates risk even more. These beliefs and anticipations create a perverse equilibrium. Given the bankers state of mind -fixed priced, expensive capital that needs to be put to use as quickly as possible the market responds rationally by charging a higher price for

capital. And given these anticipations by the market, the bankers' beliefs are justified and confirmed in equilibrium.

RESEARCH BACKGROUND

The Indian banking much of the literature on banking in emerging markets focuses on either the broad relationship between ownership and financial performance or the agency aspect of ownership, i.e., the impact of separation between management and ownership on the performance of banks (e.g., Gorton and Schmid, 1999; Hirshey, 1999). The focus on the relationship between ownership and financial performance of banks in emerging markets stems from concern about both the possibility of inefficient allocation of scarce financial resources in the presence of dominant public sector banks that often manifest McKinnon-Shaw type financial repression, and also from the concern about the possible fiscal impact of banking sector fragility in an environment where directed credit, political patronage, and severe moral hazard on the part of public sector bank officials can lead to significant accumulation of nonperforming assets (NPAs).

While the focus on ownership is not completely unjustified in the context of banks in emerging markets, it has drawn attention away from the fact that, unlike a manufacturing or services sector firm, a bank helps mobilize domestic savings for subsequent investment in various ongoing and new projects, and thereby is also the conduit for the transmission of monetary policy, and the facilitator of economic growth. Indeed, it is now stylized in the literature that the intermediary role of banks plays an important role in encouraging growth, even though in some countries a well-functioning credit market has added the unwelcome effect of increasing debt accumulation rather than improving total factor productivity (Gertler and Gilchrist, 1993; Ketkar, 1993; Ma and Smith, 1996; Bulir, 1998; Acemoglu, 2001; Bell and Rousseau, 2001; Da Rin and Hellman, 2002; Jeong, Kymn and Kymn, 2003). Thus, not only are a locative efficiency and financial performance of banks important, but so also is the amount of credit disbursed by these financial intermediaries.

Financial Structure

The Indian financial system comprises the following institutions:

1. Commercial banks

- a. Public sector
- b. Private sector
- c. Foreign banks

d. Cooperative institutions

- (i) Urban cooperative banks
- (ii) State cooperative banks
- (iii) Central cooperative banks

2. Financial institutions

- a. All-India financial institutions (AIFIs)
- b. State financial corporation's (SFCs)
- c. State industrial development corporations (SIDCs)

3. Nonbanking financial companies (NBFCs)

4. Capital market intermediaries

About 92 percent of the country's banking segment is under State control while the balance comprises private sector and foreign banks. The public sector commercial banks are divided into three categories.

Foreign Direct Investment (FDI)

Some important policy issues in the case of FDI in Services sector for India is the following:

- ✚ Opening retail trade, where FDI is prohibited (except single brand product retailing subject to 51% cap) while there is a large unorganized sector with low tax compliance. Along with allowing FDI in retail in a phased way beginning with metros, the existing mom and pop shops (kirana shops) could be incentivized to modernize and compete effectively with the retail shops foreign or domestic.
- ✚ Raising FDI cap in the insurance sector from 26% has been in the Government's agenda for long but could not be implemented for various reasons. Given the practical difficulty in raising FDI Cap in the insurance sector as a whole, at least some segments of the Insurance sector can be opened up further.
- ✚ One such segment is health insurance and FDI cap at least in health insurance can be raised in India on a priority basis as it will also help the export of super-specialty hospital services. There is also a 10 year disinvestment clause in the insurance sector which could be removed. FDI restrictions in reinsurance sector could also be removed and foreign reinsurance companies should be allowed to set up their representative offices and function in India through a network of branches and divisions.
- ✚ In the Banking sector there is scope for further liberalization. Though foreign investment (FDI+FII) of 74% is allowed, there are licensing requirements. There is also a limit of ten percent on voting rights in respect of banking companies. While many concerns have to be addressed here particularly in the light of the recent global financial crisis, at least some segments of this sector could be opened up to foreign investment in areas like rural Banking with the help of mobile technology.
- ✚ FDI in Animation studio needs to be liberalized as there is good scope for this.
- ✚ In Construction Sector, though 100% FDI is allowed under automatic route, there are conditions like minimum capitalization norms of US\$10 million for wholly owned subsidiaries and US\$ 5 million for joint venture, minimum area norms under each project 10 hectares in case of development of services, housing plots and built-up area of 50,000 sq. mts. In case of construction development project and any of the above in case of a combination project. Besides, original investment cannot be repatriated before a period of three years from completion of minimum capitalization. Some of these conditions could be relaxed.
- ✚ For Up linking News & Current Affairs TV Channel, foreign investment cap is 26% (FDI+FII) under FIPB route and not automatic route. Besides there are conditions like the portfolio investment in the form of FII NRI deposits shall not be "persons acting in concert" with FDI investors, as defined in the SEBI regulations; the Company permitted to uplink the channel to certify the continued compliance of this requirement through the Company Secretary at the end of each financial year; etc. While the foreign investment

cap could be raised at least up to 49% in the case of these services, other conditions mentioned above need to be examined for relaxation.

- ✚ Telecommunications: In the case of ISP without gateway, the 26% disinvestment clause in 5 years to companies listed in other parts of the world could be relaxed.
- ✚ Air Transport Services: 49% FDI is allowed (100% for NRI Investment) subject to no direct or indirect participation by foreign airlines thus preventing those with experience from operating in this sector. Ministry of Civil Aviation's initiative to liberalize this sector needs to be taken to its logical conclusion, while security concerns are also addressed
- ✚ FDI in railways: FDI is not allowed in railways. FDI up to 26% could be thought of which can help in modernization of railways.
- ✚ Besides the above, the whole FDI policy should be made available in the website in a user friendly way. At present, one has to search in many places and different Press Notes to understand the FDI caps and other regulations for different sectors. This has also been highlighted in the Economic Survey 2009-10 and later in the Budget 2010-11 it has been stated that the Government intends to make the FDI policy user friendly by consolidating all prior regulations and guidelines into one comprehensive document.

METHODOLOGY OF THE STUDY

We have selected 24 Indian Private Sector Banks in India (17 Old and 7 New) analyses for a period of nine years from 2001-2009. The Indian Private Sector banks that have been nationalized or declared insolvent have been kept outside the scope of study. This has helped to ensure balanced panel and avoid any irregularities and discrepancies. We use both the descriptive statistics as well as ANOVA to examine the variability among the sample banks with regard to various parameters. In addition, the cluster analysis using hierarchical and k-means methodologies have been done to find out and analyses if there are certain groupings within the sample on account of various attributes.

The descriptive statistics, ANOVA and cluster analysis have been carried out using. Finally the using advanced panel data techniques, the study seeks to examine the factors affecting problem loans of Indian banks in the private sector for the period **2001-2009**, taking into account bank level micro economic variables, which is the central issue of the study. The size of a bank, portfolio composition, operating expenses, net interest margins, profits, capital adequacy ratio, rapid credit and branch expansion are the variables, which have been analyzed with Arellano Bond dynamic panel data estimation technique run on We use the following model and present the results

PERIOD OF THE STUDY

Since the survey targets were mainly experts in India, and I had already tested it on a small sample of relevant respondents to make sure the survey was unambiguous and that respondents understood terms and would interpret terms in a similar manner. Data analysis consists of examining, categorizing, and tabulating the evidence to address the initial propositions of the study. In order to generate recommendations, this research project analyzed data in following three stages.

- The study seeks to examine the factors affecting problem loans of Indian banks in the private sector for the period **2001-2009**, secondary data in ten years in report taking

- into account bank level micro economic variables, which is the central issue of the study.
- Data reduction it edited and summarized the data collected from the survey and case studies, and looked for patterns and themes to reduce the data without significant loss of information. The main method used was coding or sorting the data into categories according to some criteria which appears to be reasonable based upon prior research.
 - Data display in this stage it used tables to display the results of the survey and enhance the
 - Understanding of the data.
 - Drawing valid conclusions it can be initially tentative, but firmed up as the analysis developed and needed to be verified by constantly referring back to the data.

HYPOTHESIS OF THE STUDY

Since 1991, India has been engaged in banking sector reforms aimed at increasing the profitability and efficiency of the then 27 public-sector banks that controlled about 90 per cent of all deposits, assets and credit. The reforms were initiated in the middle of a “current account” crisis that occurred in early 1991.

The crisis was caused by poor macroeconomic performance, characterized by a public deficit of 10 per cent of GDP, a current account deficit of 3 per cent of GDP, an inflation rate of 10 per cent, and growing domestic and foreign debt, and was triggered by a temporary oil price boom following the Iraqi invasion of Kuwait in 1990. Prior to the reforms, India’s financial sector had long been characterized as highly regulated and financially repressed.

Subsequently, quantitative loan targets were imposed on these banks to expand their networks in rural areas and they were directed to extend credit to priority sectors. These nationalized banks were then increasingly used to finance fiscal deficits. Although non-nationalized private banks and foreign banks were allowed to coexist with public-sector banks at that time, their activities were highly restricted through entry regulations and strict branch licensing policies. Thus, their activities remained negligible. In the period 1969-1991, the number of banks increased slightly, but savings were successfully mobilized in part because relatively low inflation kept negative real interest rates at a mild level and in part because the number of branches was encouraged to expand rapidly. Nevertheless, many banks remained unprofitable, inefficient, and unsound owing to their poor lending strategy and lack of internal risk management under government ownership. Joshi and Little (1996) have reported that the average return on assets in the second half of the 1980s was only about 0.15 per cent, while capital and reserves averaged about 1.5 per cent of assets. Given that global accounting standards were not applied, even these indicators are likely to have exaggerated the banks’ true performance. Further, in 1992-93, nonperforming assets (NPAs) of 27 public-sector banks amounted to 24 per cent of total credit, only 15 public-sector banks achieved a net profit, and half of the public-sector banks faced negative net worth.

The major factors that contributed to deteriorating bank performance included (a) too stringent regulatory requirements (i.e., a cash reserve requirement [CRR] 2 and statutory liquidity requirement [SLR] that required banks to hold a certain amount of government and eligible securities); (b) low interest rates charged on government bonds (as compared with those on commercial advances); (c) directed and concessional lending; (d) administered interest rates; and (e) lack of competition. These factors not only reduced incentives to operate properly, but also undermined regulators’ incentives to prevent banks from taking risks via incentive-compatible prudential regulations and protect depositors with a well-designed deposit insurance system.

While government involvement in the financial sector can be justified at the initial stage of economic development, the prolonged presence of excessively large public-sector banks often results in inefficient resource allocation and concentration of power in a few banks. Further, once entry deregulation takes place, it will put newly established private banks as well as foreign banks in an extremely disadvantageous position.

REVIEW OF LITERATURE

A few DEA based studies of efficiency in the Indian banking system have appeared in recent years. They have used a variety of specifications for inputs and outputs as evident from Inputs vary from purely financial such as interest and non-interest expenses to purely physical like number of branches and employees. Outputs are either income related interest or non interest income or product service related loans, investments and non-interest income. Deposits appear as inputs or outputs depending upon whether the authors work with the intermediation or production interpretation of banking business. The efficiency scores were found to be relatively sensitive to the specification in terms of inputs and outputs several theoretical explanations have appeared in the literature to explain fluctuations in credit policies of banks.

The most common reflection of this phenomenon arises from the fact that management compensation structures can generate perverse incentives, which in turn, is an aspect of the principal agent problem. Once managers obtain a reasonable return on equity for their shareholders, they may engage in activities that depart from the firm's value maximization. To the extent that managers have limited liability, a manifestation of this possibility could be to favor high risk-return strategies (i.e., over extension of credit) in order to increase the social presence of the bank managers or the power of managers in an enlarging organization (Williamson, 1963). Second, strong competition among banks or between banks and other financial intermediaries erodes margins and puts pressure on banks' bottom lines. To compensate for declining profitability, bank managers might sacrifice objectivity in credit evaluation standards and increase loan growth indiscriminately at the expense of the (future) quality of their loan portfolios. To the extent that such loans turn out to be non-performing only with a lag, it might encourage further loan growth

Nancy Leveson of MIT and her collaborators have argued that the chain of event conception of accidents typically used for such risk assessments cannot account for the indirect, non-linear, and feedback relationships that characterize many accidents in complex systems. These risk assessments do a poor job of modeling human actions and their impact on known, let alone unknown, failure modes. Also, as a 1978 Risk Assessment Review Group Report to the NRC pointed out, it is "conceptually impossible to be complete in a mathematical sense in the construction of event trees and fault trees. This inherent limitation means that any calculation using this methodology is always subject to revision and to doubt as to its completeness."

At Japan's Kashiwazaki Kariwa reactors, for example, after the 2007 Chuetsu earthquake some radioactive materials escaped into the sea when ground subsidence pulled underground electric cables downward and created an opening in the reactor's basement wall. As a Tokyo Electric Power Company official remarked then, "It was beyond our imagination that a space could be made in the hole on the outer wall for the electric cables." When it comes to future safety, nuclear designers and operators often assume that they know what is likely to happen, which is what allows them to assert that they have planned for all possible contingencies. Yet there is one weakness of the probabilistic risk assessment method that has been emphatically demonstrated

with the Fukushima I nuclear accidents the difficulty of modeling common cause or common mode failures:

From most reports it seems clear that a single event, the tsunami, resulted in a number of failures that set the stage for the accidents. These failures included the loss of offsite electrical power to the reactor complex, the loss of oil tanks and replacement fuel for diesel generators, the flooding of the electrical switchyard, and perhaps damage to the inlets that brought in cooling water from the ocean. As a result, even though there were multiple ways of removing heat from the core, all of them failed.

RESEARCH METHODOLOGY

Risk management tools:

Allow planners to explicitly address uncertainty by identifying and generating metrics, parameterizing, prioritizing, and developing mitigations, and tracking risk. These capabilities are very difficult to track without some form of documentation or, with the advent of information technology, software application. Simple risk management tools allow documentation. More sophisticated tools provide a visual display of risks, are able to aggregate risks into a coherent picture.

Types of Risks in Banking

The term Risk and the types associated to it would refer to mean financial risk or uncertainty of financial loss. The Reserve Bank of India guidelines issued in Oct. 1999 has identified and categorized the majority of risk into three major categories assumed to be encountered by banks.

These belong to the clusters:

- Credit Risk
- Market Risk
- Operational Risk

The type of risks can be fundamentally subdivided in primarily of two types, i.e. Financial and Non-Financial Risk. Financial risks would involve all those aspects which deal mainly with financial aspects of the bank. These can be further subdivided into Credit Risk and Market Risk. Both Credit and Market Risk may be further subdivided.

Non-Financial risks would entail all the risk faced by the bank in its regular workings,

- Capital asset pricing model Used to determine the appropriate required rate of return of an asset, if that asset is added to an already well diversified portfolio, based on non-diversifiable risk.
- Easy Risk Manager A Web-based project, business, and enterprise risk management tool; highly extendable to relate risk to any business model.
- IBM Open Pages GRC Platform Integrated enterprise governance, risk and compliance solution that includes modules for operational risk management, policy and compliance management, financial controls management, IT governance, and internal audit management
- Probabilistic risk assessment (PRA, also called Probability Consequence or Probability Impact Model) Simple model where estimates of probability of occurrence are multiplied by the consequence (e.g., cost or schedule delay).
- Reference class forecasting Predicts the outcome of a planned, risky action based on actual outcomes in a reference class of similar actions to that being forecast.

- Risk register A project planning and organizational risk assessment tool. It is often referred to as a Risk Log.
- Systems Analysis Programs for Hands-on Integrated Reliability Evaluations probabilistic risk and reliability assessment software tool.

Probabilistic risk assessment

Probabilistic risk assessment (PRA) is a systematic and comprehensive methodology to evaluate risks associated with a complex engineered technological entity (such as an airliner or a nuclear).

Risk in a PRA is defined as a feasible detrimental outcome of an activity or action. In a PRA, risk is characterized by two quantities:

1. the magnitude (severity) of the possible adverse consequence(s), and
2. The likelihood (probability) of occurrence of each consequence.

Consequences are expressed numerically (e.g., the number of people potentially hurt or killed) and their likelihoods of occurrence are expressed as probabilities or frequencies (i.e., the number of occurrences or the probability of occurrence per unit time). The total risk is the expected loss: the sum of the products of the consequences multiplied by their probabilities.

The spectrum of risks across classes of events are also of concern, and are usually controlled in licensing processes it would be of concern if rare but high consequence events were found to dominate the overall risk, particularly as these risk assessments are very sensitive to assumptions (how rare is a high consequence event?).

Probabilistic Risk Assessment usually answers three basic questions:

1. What can go wrong with the studied technological entity, or what are the initiators or initiating events (undesirable starting events) that lead to adverse consequence(s)?
2. What and how severe are the potential detriments, or the adverse consequences that the technological entity may be eventually subjected to as a result of the occurrence of the initiator?
3. How likely to occur are these undesirable consequences, or what are their probabilities or frequencies?

Two common methods of answering this last question are Event Tree Analysis and Fault Tree Analysis for explanations of these, see safety engineering.

In addition to the above methods, PRA studies require special but often very important analysis tools like human reliability analysis (HRA) and common-cause-failure analysis (CCF). HRA deals with methods for modeling human error while CCF deals with methods for evaluating the effect of inter-system and intra-system dependencies which tend to cause simultaneous failures and thus significant increases in overall risk.

In 2007 France was criticized for failing to use a PRA approach to evaluate the seismic risks of French nuclear power plants

In the case of many accidents, probabilistic risk assessment models do not account for unexpected failure modes:

Risk management in Indian banks is a relatively newer practice, but has already shown to increase efficiency in governing of these banks as such procedures tend to increase the corporate governance of a financial institution. In times of volatility and fluctuations in the market, financial institutions need to prove their mettle by withstanding the market variations and achieve sustainability in terms of growth and well as have a stable share value. Hence, an

essential component of risk management framework would be to mitigate all the risks and rewards of the products and service offered by the bank. Thus the need for an efficient risk management framework is paramount in order to factor in internal and external risks.

The financial sector in various economies like that of India is undergoing a monumental change factoring into account world events such as the ongoing Banking Crisis across the globe. The 2007, present recession in the United States has highlighted the need for banks to incorporate the concept of Risk Management into their regular procedures. The various aspects of increasing global competition to Indian banking by foreign banks, increasing Deregulation, introduction of innovative products, and financial instruments as well as innovation in delivery channels have highlighted the need for Indian banking to be prepared in terms of risk management

Indian banking have been making great advancements in terms of progress in terms of technology, quality, quantity as well as stability such that they have started to expand and diversify at a rapid rate. However, such expansion brings these banks into the context of risk especially at the onset of increasing Globalization and Liberalization. In banks and other financial institution risk plays a major part in the earnings of a bank. Higher the risk, higher is the return; hence, it is most essential to maintain parity between risk and return. Hence, management of financial risk incorporating a set systematic and professional methods especially those defined by the Indian norms because a essential requirement of banks. The more risk averse a bank is, the safer is their Capital base.

Risk ratio would be defined as the ratio of the probability of an issue occurring as against to an issue not occurring.

$$RR = \frac{P_{\text{issue occurring}}}{P_{\text{issue not occurring}}}$$

Total impact of the risk (TIR) occurring would entail as the impact (I), the risk would cause multiplied by the Risk Ratio. It is essentially how much a bank would be impacted in the chance that the risk did occur. This essentially helps ascertain what is the total value of their investments that may be subject to risk and how it would impact them.

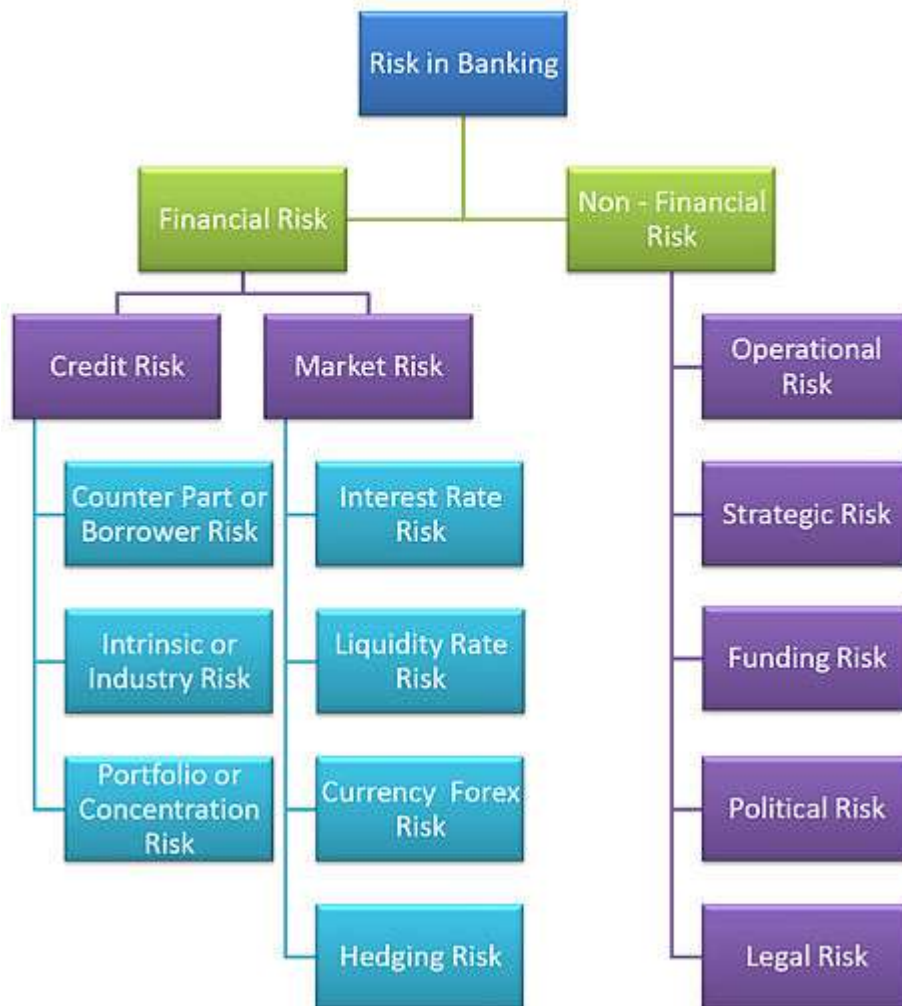
$$TIR = I \times RR$$

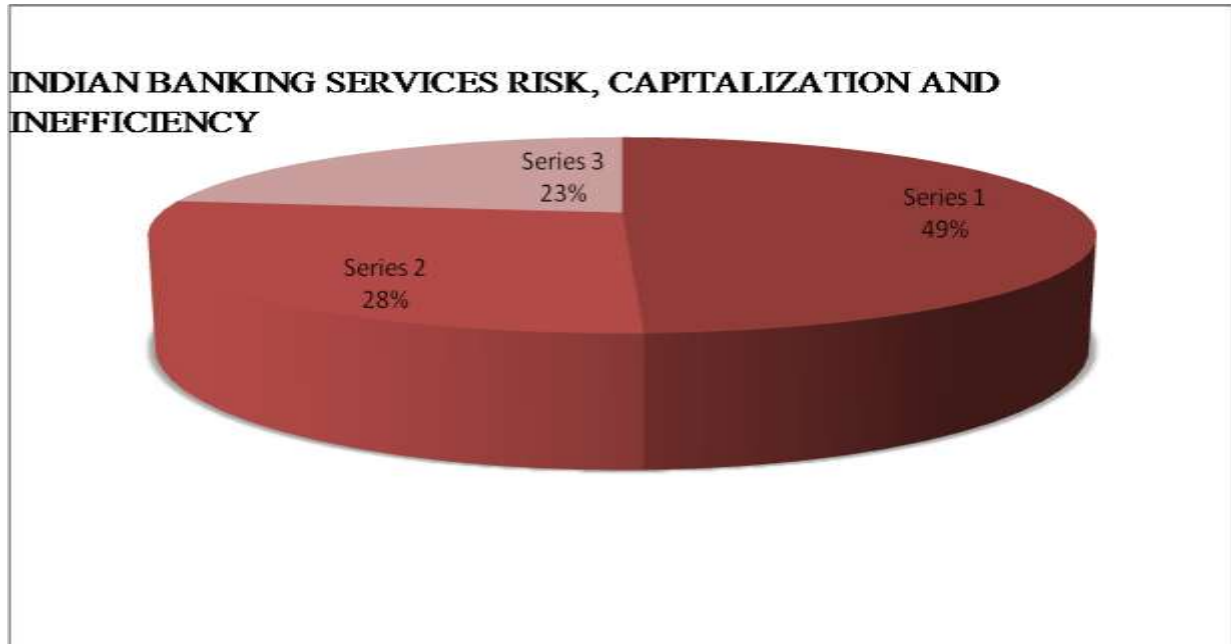
To calculate the total risk ensuing with the total expected return, a favored method is the use of variance or standard deviation. The larger the variance, the larger the standard deviation, the more uncertain the outcome. The standard deviation, E is a measure of average difference between the expected value and the actual value of a random variable (or unseen state of nature).

$$E = \sqrt{\sum P(n - X)^2}$$

Here, n stands for a possible outcome, x stands for the expected outcome and P is the probability (or likelihood) of the difference between n and X occurring.

Types of Risks in Banking





The above table illustrates the respondents opinion on the frequency of the usage of the Indian banking services risk, capitalization and inefficiency services by the customers, 9.1 percent of the respondents opined that they use the Indian banking services risk, capitalization and inefficiency services less than 3 times in a year , 17.7 percent of the respondents were use the service for 3 to 5 times, 25.4 percent of the respondents were 5 to 8 times, 47.7 percent of the respondents were using the Indian banking services risk, capitalization and inefficiency more than 8 times per years, it could be inferred from the empirical Evidence that the usage of Indian banking services risk, capitalization and inefficiency is high among the respondent in the study area, it is also found that the respondents were quite comfortable to utilize the electronic device for the transactions Frequently.

FINDINGS OF THE STUDY

CONCLUSION

To conclude, unless the risk of problem loans is given due and continuous attention, this problem can snowball into bigger financial problems having wider repercussions. Bank side factors of problem loans have not been investigated in depth by the earlier works. It has been observed and derived from the analysis that the problem of problem loans does display a declining trend. Various measures adopted by the regulatory authorities have enabled the banks to improve their asset quality. Moreover, the financial regulatory policies adopted in India have helped the Indian Banks to weather out the economic storm. As a result, India has not witnessed failures in the financial system as experienced by the developed world. However, the problem still has its presence and is continuing. Moreover, the global economic meltdown has thrown up new challenges for the Indian Banks to maintain a healthy credit portfolio and to control the problem loans.

The attempt to come up with an econometric model for bank-side factors of problem loans has shown certain important factors that can have important bearing on the non-performing assets of Indian Private Sector Banks. Various Indian Private Sector Banks differ on various efficiency, liquidity and profitability measures. Ensuring discipline with respect to the provisioning against problem loans is an absolute necessity as the econometric model has shown the past bad loans to be having significant effect on the present problems. Moreover, this problem seems to be more serious in case of old private sector banks. Also, the model has shown that declining margins have adverse impact on the problem loans and this tendency is more visible in case of new private sector banks, so banks need to curb their tendency of funding riskier projects in the situation of declining financial margins. The entire Indian economy is currently passing through a period of rapid economic liberalization. The banking sector of the economy, which since 1969 has grown up under protection and government regulatory control, has recently been moving gradually toward a more open and less regulated market system. In this study we have measured and endeavored to explain the performance of Indian commercial banks during the early phase of the government's liberalization program. To accomplish this task we have used DEA to calculate the efficiency of service provision for individual banks of three different ownership forms over a period of six years, and we have used SFA to attribute variation in calculated efficiencies to a set of temporal and government regulatory policy variables. We believe this to be the first such combination of DEA and SFA, and we believe that this study provides a methodological basis for future research into the performance of the banking sector in India and other developing economies

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