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FEASIBILITY STUDY OF CREDIT RISK RATING SYSTEMS IN BANKS

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Abstract

Credit risk rating is an important tool used by banks to quantify risk associated with lending. Accuracy of the rating mechanism is an important aspect as it affects the nature and quality of credit decisions made. A wrong rating may affect not only the sustainability and goodwill of the banks; it can even affect the overall economic harmony and balance, as banks are barometers of the economy. Recent global economic crisis of 2008, itself showcases a need for very strict and accurate credit policy. Under this back drop, present study aims to analyze the credit risk rating mechanism of banks. A comparative study of the different risk rating models adopted by public and private banks in Thiruvananthapuram district (Kerala, India) is made and study attempts to determine the lacuna in the present risk rating model, if any. The study aims to provide suggestions to improve the credit risk management of banks.

1. INTRODUCTION

Credit risk is the probability of loss from a credit transaction. It's a loss following a change in the factors that drive the credit quality of an asset. It's a risk that a borrower might fail to meet its obligations towards the bank in accordance with the agreed terms and conditions of sanction. It's a risk of default on part of borrower which could be due to either his inability or unwillingness to repay his debts. In other words, it encompasses genuine default and willful default. The credit risk architecture provides the broad canvas and infrastructure to effectively identify measure, manage and control credit risk both at portfolio and individual levels as per organization's risk principles, policies, and process and risk appetite. It aims to strengthen and increase the efficacy of the organization while maintaining consistency and transparency. Risk management is important as cost of not managing the risk is much larger than cost of managing it. Different security scams in India and high incidence of non-performing assets in financial organizations are examples of cost of ignoring risk. Out of the many types of risks that banks face namely, credit risk, interest rate risk, liquidity risk, pricing risk, operational risk, country risk etc., Credit risk occupies a pivotal role.

RBI issued a guidance note on credit risk management in September 2001, for risk management in banks. There are two determinants of credit risk: *Default risk and Portfolio risk*. Portfolio risk

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encompasses of intrinsic risk which is the inherent risk in products/areas and concentration risk due to over concentration of certain high risk sectors

Credit risk policy mainly comprises of risk identification, measurement, grading techniques, reporting and mitigation. Banks have to adopt a meticulous strategy to achieve a balance between the risk to be taken and profitability to be achieved i.e. *risk-return trade off*. The strategy has to spell out bank's credit appetite Vis -a –Vis acceptable credit risk. Proper credit risk policy aims to improve credit decisions, quality of credit portfolio and reduce loan losses.

Basel Committee was established by Central Bank Governors of group of 10 countries during 1974.Basel Committee Accord II of 1988, decided to introduce a capital measurement system for implementation of credit risk measurement framework. Basel norms are a set of global banking regulations put forth by the committee on banking supervision.

In order to reduce the growing NPA's Basel Committee recommended different guidelines to assess the risk exposed to, by banks. Moreover, when interest rate deregulations occurred, in order to justify the relaxation in interest, risk exposures needed to be assessed. Credit risk rating mechanism was adopted as one of the tools to analyze the same. The earlier adopted techniques were crude and unscientific. But over the years the systems have been revised regularly to meet the growing and changing needs.

Credit risk rating as per Basel committee is a summary indicator of the risk inherent in individual credit, embodying an assessment of risk of loss due to default of a counter party by considering relevant quantitative and qualitative factors. Thus it's a tool for measurement of quantification of credit risk.

1.1. Motivation for the study

A credit risk rating framework aims at assessment of loss /default in meeting payment obligations on a timely basis by assigning risk ratings to each transaction, which indicates risk for banks individual credit exposures. They determine the shape and nature of credit decisions that banks make daily. Understanding how credit risk rating systems are conceptualized, designed, operated and used in credit risk management is thus essential to understand how banks perform their business lending function and how they choose to control and monitor risk exposures for each client. It's also important to understand rating model's ability to distinguish accurately the riskiness of different exposures. So it is important to test the accuracy of the credit risk rating models adopted by banks to see if they are sensitive to real change and if they are validated from time to time.

Under this back drop, present study aims to understand the importance and working mechanism of different credit risk rating models adopted by banks and investigate the various factors that affect credit decisions of banks. It also aims to test accuracy and validity of credit risk rating models adopted by banks.

For this purpose, a comparative study is made regarding the rating mechanisms adopted by public and private sector banks. Five public and five private sector banks are chosen within Thiruvananthapuram district located in Kerala, India during the period 2013-14. Data are collected from both primary and secondary sources. Primary data is collected sample banks. Secondary data are based on documents, guidelines of various regulatory bodies/committees/guidance notes of RBI, various journals, research articles, reports, books and websites and published annual financial statements of the concern.

The study also attempts to determine weaknesses/shortcomings/lacuna in the present risk rating model, *if any*. The study aims to provide suggestions for the said weaknesses *if any* to improve the credit risk management of banks.

1.2. Significance of the study

Credit risk rating is an important tool used by banks to quantify risk associated with lending. Accuracy of the rating mechanism is an important aspect as it affects the nature and quality of credit decisions made. A wrong rating may affect not only the sustainability and goodwill of the banks; it can even affect the overall economic harmony and balance, as banks are barometers of the economy. Their well-being is quintessential for the economic development. Recent global economic crisis of 2008, itself showcases a need for very strict and accurate credit policy to avoid credit risk and economic downturn. In this scenario, it is highly imperative that a study is made to understand the accuracy of the mechanism and suggest for improvements; while making a comparative study of the risk rating system adopted by public and private sector banks.

The remaining paper is organized as follows: The second section reviews the literature on credit risk, risk management and credit risk management and risk rating framework of banks. The third section deals with analysis of primary data collected from sample banks taken from public and private sector. The fourth section summaries the major findings of the study. Last section concludes the study along with a few suggestions for improving the risk rating system in banks to make them more feasible and effective.

2. REVIEW OF LITERATURE

Credit risk management is an emerging area in the field of bank risk management. Global financial crisis which rocked the financial sector a few years back still has its aftermath going on. This has led to a need for a more comprehensive and sophisticated technique for risk management. A number of studies related to the field of risk management, credit risk (one of the most prominent of all risks) has been done over the past recent years. A brief overview of them is given below:

William and William (1998) in their study explains that assignment of risk rates to business loans have been a measure to reduce credit risk for a long time now. Rating system has become quite wide spread but smaller banks have fewer details available when compared to large banks. The study also assesses the relationship between risk rates and loan terms. Riskier loans carry higher interest rates. Banks of all sizes prices for risks.

Marc and Til (2003) in their study was oriented towards understanding the Accord's likely impact on the banking system, possible changes in bank behavior through different uses of the risk measurement framework, and important analytical issues around model development and validation in both credit and operational risk narrowly and the development of relevant risk summary statistics more broadly. The objectives of Basel II are to encourage better and more systematic risk management practices, especially in the area of credit risk, and to provide improved measures of capital adequacy for the benefit of supervisors and the marketplace more generally. A stated goal of the New Basel Accord is to keep the overall level of capital in the global banking system from changing significantly, assuming the same degree of risk.

Udo *et al.* (2005) in their study aims to examine how a risky loan portfolio affects optimal bank behavior in the loan and deposit markets, when derivatives to hedge credit risk are available. The paper presents a banking firm's model of dynamic risk management where the underlying source of the risky wealth is an unanticipated change in the default risk. A position in the credit derivative market is used to hedge, ex ante, the uncertain loan revenues. The purpose of hedging is to stabilize the consumption path through a reduction in the variability of the wealth accumulation path.

Tor *et al.* (2006) in their study aims at improving understanding of internal risk rating systems (IRS) at large banks and the way in which they are implemented, and at verifying if IRS produce consistent estimates of banks' loan portfolio credit risk. It also illustrates how banks and their regulators will come to interact after the implementation of Basel II. The findings in this paper illustrate why not only the formal design of an internal rating system (e.g. the number of grades), but also other

parameters (size; the preferred level of insolvency risk for a bank) and the way in which a rating system is implemented (e.g. the dispersion of credit over rating grades, and the degree of homogeneity within rating classes) is quantitatively important for the measurement of credit risk and thus for banks' desirable capital structure.

Bhanagade and Vinayak (2008) in their research paper illustrates about the importance of risk management practices in banks. Apt risk management is important to instill confidence in minds of stakeholders. It also enables comparisons of various institutions on uniform parameters i.e. Risk adjusted return on capital (RAROC). Also banks with views of no risk-no gain may follow aggressive strategies to mitigate risks. It also explains about the different risk mitigation tools like control system, trigger points, risk pricing, hedging and stress testing to quantify and mitigate risks

Gabriele (2008) in his study analyzes the history and new developments related to credit scoring models. They found that with the new Basel Capital Accord, credit scoring models have been re-motivated and given unprecedented significance. Banks, in particular, and most financial institutions worldwide, have either recently developed or modified existing internal credit risk models to conform with the new rules and best practices recently updated in the market. Moreover, they analyzed the key steps of the credit scoring model's lifecycle (i.e. assessment, implementation, validation) highlighting the main requirements imposed by Basel II. Study concluded that banks that are going to implement the most advanced approach to calculate their capital requirements under Basel II will need to increase their attention and consideration of credit scoring models in the next future.

Somanadevi and Ramachandran (2011) in their study titled illustrates how certain key credit risk ratios can be used to measure the credit risk in the banking sector. This study attempted to analyze various risk related ratios that could to be useful as an internal risk monitoring tool for the scheduled commercial banks The correlation analysis of the credit risk ratios with macroeconomic indicators also revealed some unique and interesting positive and negative correlations that would shed more light on the nature of the risks associated with the commercial banking sector in India. This trend needs better monitoring and requires necessary corrective measures. Since credit risk is associated with traditional lending activities of the bank, banks can monitor various credit risk associated ratios by using their internal data. Hence, with the Core Banking System (CBS) that is now being fully implemented in the Indian Scheduled Commercial Banks, the data for such ratios can be easily obtained and credit risk can be monitored effectively and internal corrective measurements can be taken on a timely manner to avert any catastrophic effects.

Anju (2011) in the study titled offers a comprehensive list of benchmark practices for credit risk management (CRM) at transaction level in commercial banks. The study aims to report the state of CRM operations followed by commercial banks in India and tries to determine their weaknesses. It also analyses bank's CRM practices vis-à-vis current practices as per Basel Committee. The study concludes that there is a fairly good scope for strengthening operations and systems at operation level. More focus needs to be placed on widening applicability of credit risk rating model and estimation of more number of statistical measures of credit risk and better use of rating for administrative and analytical purposes.

Sinha (2011) in the study explains that risk management needs executive attention at a strategic level. When a bank seeks risk management capabilities from a strategic point of view, these capabilities can be leveraged to gain competitive advantage. For this, first these capabilities need to be acquired and aligned with banking strategy. It explains the major drivers of risk management like technology revolution leading to increased complexity, globalization etc. Paper also sheds light on how Basel norms help in making risk management, a competitive tool for banks.

Kaushik (2011), in the research paper titled efforts to explain the concept of risk and risk management against the back drop of Basel framework. Risk management has assumed greater

importance post-crisis, and there is even a thinking of Basel III, even before Basel II is fully implemented. Paper sheds light on the importance of risk management in banks and also explains about the different risks like credit risk, market risk and operational risks. It also illustrates about Basel I, II and probable implementation challenges in Basel III. It concludes that proper risk management strategies as per Basel Committee recommendations will help in paving stability in financial system.

Thus, from the above literature, it is very clear that credit risk management assumes a pivotal role in the governance of banking sector. Credit risk is one of the most prominent of all risks that a bank is faced to assume and credit risk rating plays a quintessential role in helping the banks decide about the credit quality of borrowers.

3. EMPIRICAL ANALYSIS

3.1. Profile of the samples

The data was collected from a total of 10 sample banks for the present study, i.e. five banks in the private sector and five banks in the public sector in Thiruvananthapuram District based on judgment sampling technique using a structured interview schedule (*Please refer to Appendix*). Banks have been chosen so that they represent the entire gamut of banking sector judiciously and they all are leading banks in the banking field.

Table 1: Sector wise classification of samples

Banking Sector	No of respondents
Public	5 (50)
Private	5(50)
Total	10(100)

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

ANALYSIS OF DATA COLLECTED FROM SAMPLE BANKS

3.2. Existence of the credit risk rating model in banks

The below table aims to find out if a credit risk rating system exists in banks or not.

Table 2: Existence of credit risk rating models in banks

Whether exits or not	Public Sector banks	Private sector banks
Exists	5(50)	5(50)
Not Exists	0(0)	0(0)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 2 reveals that, from the total 10 sample banks, all banks (both public and private) do have a credit risk rating system in place. Thus, it is evident that all banks in both public and private sector have a credit risk rating model with them.

3.3. Modules used for various types of loans

The below table aims to analyze if banks adopt different modules for different types of exposures or not**.**

Table 3: Usage of different modules for different types of loans

Whether different modules are used or not	Public Sector banks	Private sector banks
Different modules	5(50)	5(50)
Same module	0(0)	0(0)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 3 reveals that from the total 10 sample banks, all banks (both public and private) use different modules for different types of loans. Thus, all banks in both public and private sector have developed different modules for apprising different exposures.

3.4. Basis for selecting each module

The below table aims to analyze the basis of selecting each module for rating different exposures. The decision regarding applicability of a particular model to a given exposure will depend upon nature of exposure. The bases range from exposure/credit limit to type of activity of borrower like manufacturing, services and trading.

Table 4: Basis of selection of each module for rating

Basis of selection	Public Sector banks	Private sector banks
Exposure (credit limit)	5(50)	5(50)
Type of activity (manufacturing, services, trading)	5(50)	5(50)
Total*	10	10

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks
*Represents that total do not add to sample total of 5 each, due to multiple responses

Table 4 reveals that from the total 10 sample banks, all the banks in both public and private sector adopt both exposure (credit limit) as well as type of activity of the borrower as the basis for selecting the apt module. Thus, there is no difference between the bases used for selecting various modules for different types of loans.

3.5. Category of loans exempted from rating requirement

The below table analyses the category of loans exempted from rating requirements. RBI in its guidelines recommended that all exposures be rated. However, the usual categories exempted are specified minimum size of exposures (below Rs.2 lakhs), staff loans, loans against deposits, retail loans (like car, housing and education loans), government sponsored scheme loans etc.

Table 5: Category of loans exempted from rating requirements

Exempted category of loans	Public Sector banks	Private sector banks
Specified minimum size(below Rs.2 Lakhs)	5(50)	5(50)
Staff loans	5(50)	5(50)
Loans against deposits	5(50)	5(50)
Retail loans(like car, housing and educational loan)	5(50)	5(50)
Government sponsored scheme loans	5(50)	5(50)
Total*	25	25

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks
*Represents that total do not add to sample total of 5 each, due to multiple responses

Table 5 reveals that from the total 10 sample banks, all banks have the same category of loans exempted from rating requirements. All staff loans, loans against deposits, retail loans, and govt.

sponsored loans and small loans (less than Rs.2 lakhs) are exempted. Thus, there is no difference in the category of loans exempted from rating requirements in both public and private sector.

3.6. Applicability of rating for funded and non -funded businesses

The below table analyses if banks rate funded businesses like term loans/working capital only or non-funded business like bank guarantees/letter of credit or both.

Table 6: Applicability of modules for both fund based / non fund based in banks

Type of applicability	Public Sector banks	Private sector banks
Fund based only (Term loans, working capital)	0	0
Non fund based only (letter of credit, bank guarantees)	0	0
Both	5(50)	5(50)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 6 reveals that from the total 10 sample banks, the entire banks rate both fund based and non - fund based businesses equally. Thus, all banks in both public and private sector rate both funded and non-funded exposures equally.

3.7. Parameters rated in rating modules

The below table analyses the different parameters that are rated in rating modules. A bank must build up a comprehensive and elaborate credit risk rating model to include all parameters that have a bearing on capacity and willingness of borrower to service his debt. Usually all banks rate a holistic set of parameters like financials (like various ratios, past performance etc.), nature of business/industry of borrower, type of management (character, capacity etc. of management), conduct of account in case of existing borrowers (like operation of account, quality of account maintained etc.), type of security pledged for loans (like primary and secondary security) etc.

Table 7: Parameters rated

Parameters	Public Sector banks	Private sector banks
Financials	5(50)	5(50)
Nature of business/industry	5(50)	5(50)
Type of management	5(50)	5(50)
Conduct of account (in case of existing borrowers)	5(50)	5(50)
Type of security (primary and collateral)	3(30)	3(30)
Total*	23	23

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks
*Represents that total do not add to sample total of 5 each, due to multiple responses

Table 7 reveals that from the total 10 sample banks , all the banks in the public and private sector uses parameters like financials, nature of business and industry, type of management and conduct of account for their rating. In addition to this, out of the 10 sample banks, three banks in the public and three in the private uses type of security also as a parameter for rating.

3.8. Weights assigned to each principle risk parameter in credit risk rating model

The table analyses the different weights assigned to different risk parameter in the models adopted by banks. The scores obtained under various evaluation criteria are aggregated and borrower is placed in a given credit rating category. Scores are multiplied by weights to get final score. The

respondent banks have assigned weights to various parameters based on its relevance and impact of the parameter on final rating of the exposure.

Table 8: Weights assigned to each principle risk parameters in credit risk rating model

Parameter	Weights assigned (%)	
	Public sector banks(5)	Private banks(5)
Financials	40-65%	40-50%
Nature of business/ industry	20-25%	25%
Type of management	15-25%	15%
Conduct of account	10%	10%
Value of security*.	0-15%	0-15%

Source: Survey data (2014)
Note: *only 3 Public sector and 3 Private sector banks are giving weightage to value of security for credit rating)

Table 8 reveals the various weights assigned to different parameters in the model. Some of the sample banks were hesitant to share information about the exact weights that are assigned to each of the above mentioned parameters. But from the broad overview of the range of weights that they disclosed, in both public and private sector banks, it can be concluded that maximum weight is assigned to financials, closely followed by nature of industry and type of management.

3.9. Grades used in the model

The below table reveals the grade points assigned by banks for various risk exposures. Grades in the rating scale indicate level of risk associated in each credit transaction. It also helps to decide the frequency of credit rating review, i.e. high grades need only yearly review. The grade points range from 2 grades to a maximum of 16 grades. Most banks fix a hurdle or cut off rate (usually a median grade point) as the eligibility criteria for an exposure.

Table 9: Grades used in the model

Number of grades used	Public Sector banks	Private sector banks
Less than 5	0(0)	1(10)
Exactly 5	1(10)	0(0)
More than 5 but less than 10	1(10)	4(40)
Exactly 10	2(20)	0(0)
More than 10	1(10)	0(0)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 9 reveals that from the total 10 sample banks, 2 public sector banks use a 10 point grade, followed equally by a five point and more than 10 point scale. 4 private banks use a grading scale between 5-10; while one use a grading scale of less than 5 points.

3.10. Mode of developing the model by banks

The below table analyses how the banks developed their risk rating model. The banks either internally developed the model with the help of an expert internal risk management committee of the bank or developed the model with the help of outside agencies.

Table 10 reveals that from the total 10 sample banks, 4 banks in public sector and the entire private banks have internally developed the credit rating module. Only one bank in public sector has taken outside agencies' help in developing their module.

Table 10: Development of models in banks

Mode of development	Public Sector banks	Private sector banks
Self / internally developed	4(40)	5(50)
Developed with the help of outside agencies	1(10)	0(0)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

3.11. Uses of credit risk rating for banks

The table below analyses the different uses of the credit risk rating for banks. Banks usually uses the rating model either for taking credit decision (whether to give loan/not, line of credit etc.), monitoring existing loan account or for loan pricing decisions (like interest, repayment schedule etc.).

Table 11: **Uses of credit risk rating**

Uses	Public Sector banks	Private sector banks
Credit decision	5(50)	5(50)
Monitoring existing loan accounts	5(50)	5(50)
Loan pricing decision	5(50)	5(50)
Total*	15	15

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks
*Represents that total do not add to sample total of 5 each, due to multiple responses

Table 11 reveals that from the total 10 sample banks, entire banks in the public and private sector use the rating system for their credit decisions, monitoring of existing loan accounts and loan pricing decisions.

3.12. Review of the rating model

The below table analyses if banks review their rating models or not. For the rating system to be effective, they must be tested and revised periodically, to ensure its sensitivity to real changes.

Table 12: **Review of rating models in Banks**

Subjected to review in banks	Public Sector banks	Private sector banks
Review	5(50)	5(50)
Not review	0(0)	0(0)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 12 reveals that from the total 10 sample banks, all the banks in both public and private sector subject their rating module for reviewing.

3.13. Frequency of review of the model

The below table analyses the frequency of review of the rating model adopted by banks. This review will help banks to add accuracy in expected loan loss calculations and to redefine loan terms. It will also help to track deteriorating credit quality and help to take remedial measures. Banks usually review their model either quarterly, half yearly, yearly (at time of loan renewal review).

Table 13 reveals that from the total sample banks, all the banks in both the public and private sector conduct their review of ratings yearly.

Table 13: Frequency of review

Frequency of review	Public Sector banks	Private sector banks
Quarterly	0(0)	0(0)
Half yearly	0(0)	0(0)
Yearly	5(50)	5(50)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

3.14. External rating of exposures by external agencies

The table analyses if banks go for external rating of exposures along with internal rating using own risk rating model.

Table 14: Existence of external rating in banks

Whether external rating is there/not	Public Sector banks	Private sector banks
External rating exists	5(50)	4(40)
External rating not exists	0(0)	1(10)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 14 reveals that from the total 10 sample banks, all banks in the public sector have external rating for their loans. All banks in private sector except one have external rating facility.

3.15. Basis for applying external rating for loan exposures

The below table analyses the basis used for applying external rating for loan accounts along with internal rating using own risk rating model. Banks usually go for external rating based on the credit limit of the borrower.

Table 15: Basis for external rating

Basis of external rating (limit based)	Public Sector banks	Private sector banks
Above Rs.5 crores but less than Rs. 10 crores	5(50)	2(20)
Above Rs.10 crores	0(0)	2(20)
Not applicable	0	1(10)
Total	5	5

Source: Survey data (2014)
Note: Figures in brackets indicate percentage of total banks

Table 15 reveals that from the total 10 sample banks, all banks in public sector go for external rating when the loan limit is between Rs.5 crores and Rs.10 crores. 2 banks in private sector go for external rating when loan limit is above Rs. 10 crores and 2 banks in private sector go for external rating when loan limit is between Rs.5 – Rs.10 crores. One bank in private sector does not go for external rating at all.

4. SUMMARY

We can thus find that the Credit Risk Management system adopted by the leading Nationalized banks and the leading private sector banks are more or less similar in nature and mainly exposure oriented. All the banks (Public and Private sector) have a credit risk rating system in place. There is no significant difference in the rating system adopted by the two banking sectors and all of them

have different modules for rating different types of loans. Though the weights assigned to various risk factors may differ slightly from bank to bank, the overall perception of risk, adoption of parameters for measurement and quantification of risk and grading of risk is more or less same.

As the financial statements give only a static view of the assets and liabilities at the end of the year and may not reflect the true picture of the company in its day to day operations. Besides, the computation of the data depends on the analyst's views, approach, perception and subjectivity, particularly while identifying the components of the ratio. The reliability and authenticity of the data is of paramount importance and as such, the banks have to be extremely vigilant in accepting the classification of various assets and liabilities and its quality to ensure that values assigned to them is realistic. Even assuming that the financial statements are of 100% accuracy and dependable, and the rating mechanism will give a reasonably accurate assessment of the risk, there are subjective parameters to be taken care of. Even under "Financials**"**, subjective parameters relating to "the transparency in accounting, quality of inventory, realisability of debtors, etc. are to be reckoned with and as these parameters are likely to be manipulated, it results in slight distortion while assigning weightage for the risk parameters, despite the fact that appropriate use of accounting ratios can mitigate the distortion of these parameters to some extent.

The parameters for business performance are mostly based on the audited profit and loss statement; still, certain element of subjectivity exists in all the modules, in a limited way. In parameters for industry outlook and quality of management, though to certain extent, past /present performance of the company or its peer can help, most of the parameters are susceptible to subjectivity. The parameters for Industry Outlook are assigned risk weights in comparison with the risk weights assigned to another company engaged in similar line of activity and need not necessarily reflect the average performance of the industry as such. In the process of adjusting the score obtained by the company rated with the peer, the possibility of getting a better/ worse score cannot be ruled out, depending on the current performance of the company against which comparison is done. Assessment of Quality of Management is dependent more on intangibles and highly subjective parameters and the distortion in assignment of score can be adjusted to some extent on the actual performance of the company in its debt repayment and timely execution of its earlier project. Conduct of account is another area where parameter can be assessed with a high degree of accuracy.

It is noticed that scores obtained under various evaluation criteria are aggregated and theses scores are multiplied by the weights given to each parameter to arrive at the final score. Therefore, weights given to each parameter has an important impact on effectiveness of the rating module. Majority of the sample banks assigned 40% weight to Financials, thus, Start-up borrower's may end up getting a low score as the scores for conduct of business, strength of management gets relegated.

6. CONCLUSION

Credit Risk Management systems adopted by all the sample banks are similar in nature and different modules are used for different categories of borrowers/exposures. Parameters adopted for rating are more or less same, with slight variation in the assignment of scores. Basically, for all the banks, financial data is at center stage in rating exercise. Therefore, reliability and accuracy of the data assumes paramount importance and as such, distortions / inappropriate classification of data is likely to impact the accuracy of the rating. Besides, all the parameters used for rating are susceptible to subjectivity, which, if not carefully dealt with, would distort the outcome of rating process.

I have the following ***suggestions*** for addressing the lacuna pointed out through the study to improve the existing risk rating systems in Banks, so that they can prove to be more effective and feasible

1. The risk exercise would be more effective, if evaluation of the parameters is done on the basis of authenticated monthly/quarterly data of performance instead of annual audited balance sheet and

P&L account, so that vibrancy of the operational efficiency of the company can be assessed. As this involves a lot of time and cost, company or bank concerned should upgrade/streamline systems for expediency in obtaining data.

2. Accuracy of analysis of data depends much on correct classification of assets and liabilities (especially financial parameters). Hence, the officials concerned should have thorough knowledge of the classification of assets and liabilities and ensure that classification of the same, of the company to be rated is done as per latest guidelines of the authorities concerned or in accordance with universally accepted accounting norms.
3. Apart from this, rating officials besides having thorough knowledge of accounting practices, should also have practical knowledge about the company to be rated, beyond the books and should have access to correct market information regarding activity of the company. This will help to remove, to an extent, element of subjectivity regarding quality of management parameter. The above two suggestions will also help to remove subjectivity factor from financials and business evaluation parameters also.
4. Rater should also confirm the quality of inventories from the official who is in charge of monitoring /inspecting the working of the company periodically (as rater is unconnected with credit) and if possible he must also visit the company concerned along with an independent auditor at least once in six months.
5. In designing the credit risk rating systems, bank management must weigh numerous considerations like cost, efficiency in information gathering, consistency of ratings produced, staff incentives, nature of bank's business and uses of rating.
6. Banks can employ a larger number of grades in their rating scale for better discrimination of credit risk and can also avoid granularity. However, rating systems with large grades are costlier to operate due to extra work needed to distinguish fine degrees of risk. Banks making heavy use of rating for analytical activities can afford to bear theses extra costs.
7. Practice of restricting risk measurement to only large sized exposures may exclude retail loans which occupies a sizeable chunk of loan exposure and as such, it is prudent to rate all exposures.

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Appendix

INTERVIEW SCHEDULE

Identification No:
Date

1. Does a credit rating model exist for your borrowers or not?
2. If yes, whether the same module is used for different types of borrowers?
3. If not, what are the modules?
4. On what basis different modules are used?
5. Is it on the basis of Exposure, and /or Category of borrower and/or on basis of activity (i.e. manufacturing, services, trading etc.)?
6. Whether any category of loans is exempted from rating requirements?
7. Whether rating is used for Term loan/Working capital /Non Funded Business (Bank guarantees / letter of credit)?
8. Is there a minimum size for an account for applying the rating model?
9. What are the different parameters that are rated?
    a) Financials
    b) Nature of Business/ industry
    c) Type of Management
    d) Conduct of account (in case of existing borrower)
    e) Any other criteria
10. What are the broad parameters used on the above aspects?
11. What are the weights assigned to each of the parameters?
12. How many grades are used in the model?
13. Is the model internally developed?
14. If not, is it developed with the help of an outside agency?
15. Is the model used for taking credit decision only or for monitoring existing loan accounts also?
16. Whether credit rating is used for loan pricing decisions?
17. Is the rating model subjected to review?
18. If so, what is the frequency of such review?
19. What is the time period for which the rating model remains valid?
20. Who is the rating or vetting authority in your concern?
21. Do you go for external rating of accounts? If so, what is the basis for such external ratings?
22. Do you feel that there are any shortcomings in the existing rating model used by your concern?
23. Do you have any suggestions for improving the model?