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Comprehensive Study of Credit Risk Management With Reference to a Public Sector Bank

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ABSTRACT

The firms which are involved in foreign trade are exposed to exchange rate exposure. Exchange rate exposure is due to currency fluctuation. Currency fluctuation is the outcome of the floating exchange rate system. The exchange rate of one currency against the other is influenced by numerous factors such as demand and supply of two currencies, inflation, their economic performance, interest rates etc. This study aims to examine the foreign exchange exposure on the share prices of nifty 50 companies excluding the financial service companies. In this study, two factors are considered i.e. Nifty returns and exchange rate. For this study, Nifty 50 companies are considered and among the 50 companies, 10 companies have been excluded as they are financial service companies and the monthly data of 40 companies for the period of 5 years is being studied using two factor models. The result of this study shows that two firms are significantly exposed to foreign exchange risk and the companies have hedged their risk using derivatives.

Keywords: *bank, credit, hazard, risk management, settlement*

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INTRODUCTION

The English phrase bank is derived from the Italian phrase 'Banco' the Latin phrase 'Bancus' and the French phrase 'Banque' which means that Stemmed from the truth that inside the olden days, Jews, who have been cash lenders sat on benches to lend Money and in advance day and additionally from the German phrase 'Bank' this means that a joint stock fund or common fund (i.e., Heap of cash) raised from a massive quantity or member of public. The Banking employer in India has been defined within the companies act 1949 as 'which transacts the commercial enterprise of banking by accepting the cash from the public repayable on call for or in any other case and withdrawal by means of cheque, draft, orders, or in any other case'.

Corporation Bank has been got here into lifestyles as Canara Banking Corporation (Udupi) Limited, on twelfth March, 1906, in Udupi which changed into known as temple metropolis, with the efforts of the institution of visionaries. The Bank began functioning with simply Rs.5000/– as its capital and on the quilt of the primary day, the assets stood at 38 Rupees-thirteen Annas-2 Pies.

The Founder President Khan Bahadur Haji Abdullah Haji Kasim Saheb Bahadur, devoted to fulfill the long felt banking wishes of the people and additionally to inculcate the habit of financial savings, supplied the good deal-needed impetus to founding a financial institution that would result in prosperity to the society. The content material of the primary Appeal to the public dated 19th February, 1906 speaks quantity about the lofty beliefs and ethos in the back of the inspiration. The Founder President Haji Abdullah declared that: "The Primary item in forming 'Corporation' is not most effective to cultivate behavior of thrift amongst all instructions of human beings, without difference of caste or creed, but also behavior of co-operation amongst all lessons." "This is 'Swadeshism' natural and simple and every lover of the US is anticipated to come ahead and co-perform in reaching this end in view."

REVIEW OF LITERATURE

Credit hazard is defined as "the incapability or unwillingness of the patron or counter birthday party to meet commitment on the subject of lending hedging, settlement and other monetary transactions".

Author provided in his paper on Risk Management in Banking at Wharton financial within the 12 months 1996 has located the following, the commercial banking analysis covered a number of North American fantastic-nearby and quasi-cash center group in addition to numerous companies outdoor the U.S data acquired protected each the philosophy and exercise of monetary danger management. It reports the state of risk control techniques within the industry. It speaks the trouble which industry unearths maximum tough to deal with, shortcomings of current technique used to analyses danger and the element which can be lacking inside the contemporary processes of hazard management [1].

According to the have a look at author study on, "The Risk Management and Indian Banking Opportunity and challenges", in step with him bank need to develop fashions for hobby price cost at threat. Bank must take delivery of incentive to create such fashions internally. Another suggestion is that the bank should present their worldwide chance models to regulator, and if they may be right enough be, used the calculation of capital good enough ratio [2].

According to study of union bank of India on 'Risk Management', Risk is inherent part of Bank's enterprise. Effective Risk Management is crucial to any bank for attaining economic soundness. In the view of aligning Risk Management to Bank's organizational structure and enterprise method has turn out to be crucial in banking business. Over a period of 12 months, Union Bank of India (UBI) has taken various projects for strengthening threat management practice Bank has an integrated method for management of risk and in tune with this, formulated policy report thinking of the enterprise requirement high-quality global exercise or as in step with guidelines of the national manager. These policies address the exclusive chance training viz. Credit Risk, Market Risk and Operational Risk [3].

OBJECTIVES OF THE STUDY

The study was conducted with several objectives. This includes knowing the Credit Risk process, policies of the bank. The objective of the studies includes:

- To study the credit risk policies of Corporation Bank
- To know process of credit risk management
- To know RBI guidelines on capital charge for credit risk management
- To study the mitigation techniques with process of mitigation
- To know different type of risk involved in banking business.

NEED FOR THE STUDY

Credit risk is the most fundamental of all risks in the bank. Today's banking environment offers easy accessibility to loans advances. But the liberalized credit availability carries risk which has an impact on the profitability and growth of a bank

SCOPE OF THE STUDY

The scope of the study is limited to area of credit risk management of corporation bank. This Study enables researcher in-depth theoretical knowledge and practical about credit risk management. The study based on credit risk rating and credit assessment models in the Corporation Bank.

Methodology

The data for this research is collecting from primary as well as secondary sources.

SOURCES OF DATA COLLECTION

Primary data for this research is collecting directly from the interaction between staff members the bank. This is the first hand information collecting with the help of asking questions to employees of Corporation Bank.

Secondary type of the data has been used in order to collect the data. It has been drawn from annual reports, magazines, internal records, previous records, some of the information has also been explored from the books and from the website of the Bank as well as RBI.

Limitations of the Study

The following are the limitations for this research study

- The study is restricted only to area of Mangalore head office of the Bank
- The study has been conducted on the basis of information provided by the Bank
- The study mainly based on the secondary data which has been provided by Corporation Bank

RISK MANAGEMENT

During the year 1990s the government of India has been initiated the process of our financial service system which is the result of liberalization, deregulation and globalization due to which it has been exposed to number of changes taken place overseas markets, the economic, political and social changes across the abroad countries has been added new dimensions, so for as domestic countries economy is concerned. The adoption of proper approaches in the Indian banking system including financial institution has been forced by commercial institution for the growth and compulsion to survive which the grater steps are taken towards the Risk Management.

Definition

The risk has been an uncertainty which occurs during different events, which may have negative or positive effects on the goals of project. The different potential risk is important concept, because it's like trap which is natural thing to fall that the risk has its inherently negative effect. If you have more confidence ready to face risk you will have positive opportunities, you may make project smarter and more profitable. Risk can be defined as the potential loss which has been occur (it can be in the form of the securities borrowed the loan which has been sanctioned or transactions which made by the bank itself or for the customer) which can be a reason for suffering of banking system.

Why Do Risk Arise and What to Do With This?

The changes which have been taken place in the economy due to some prevailing events will cause the uncertainties. The changes in the economic, political and social factors and non-availability of information will have its impact. The aversion of risk will have negative effect on business and elimination of business. The managing, taking necessary advanced steps, along with identification of its effect will result in minimizing the risk

Why Risk Management?

The main aim of the risk management is to add value to stake holder and by taking corrective steps and maximizing profit and optimum capital funds for long term solvency of banking organization. The risk Management is very important factor for an organization. Organization avoids the uncertainties arising from internal and external sources by identifying and assessing risk to set up the objective for future.

PROCESS OF RISK MANAGEMENT

The Risk Management mainly follows same type of basic steps in process of risk management; sometime, it may follow different steps to explain different situations all will lead to same meaning. The risk management mainly has 5 process steps combine to deliver a simple and effective risk management process.

- Identify the Risk
- Analyze the Risk
- Evaluate or Rank the Risk
- Treat the Risk
- Monitor and Review the risk

Identify the Risk

Identify the danger specially involve the manner of information, uncovering and recognizing diverse varieties of threat. The threat may additionally have its impact to your enterprise or initiatives and its results the hazard may additionally have unsure occasions which may have an effect on negatively. The Risk must categorize into exceptional kind to make it easy to recognize the impact and to locate option to keep away from such kind of danger, so that risk management techniques can also have its complete consciousness on the precise risk component which have been arising because of various assets. Risk control group can avoid such varieties of danger in future.

Analyze the Risk

After identifying Risk factor the second steps is to analyze the risk. Assessment of risk can be done using degree of risk which the particular transitions or activities may have while dealing with different situations. Although the measurement of risk cannot be possible exactly but we can determine the level of risk and its impact with help of risk rating models, these are the ready models which will tackle the risk situation which arise in different activities and transitions. These models can be developed such way that it will help according to requirement of organization.

Evaluate or Rank the Risk

This is very important stage where you try to evaluate and control risk by giving rank to these different categories of risk. You may rank the risk according to its risk magnitude which is the combination of likelihood and consequence. Decision must be taken after ranking risk whether risk may be accepted or whether it needed any immediate solution so that risk level can be reduced. Ranking of risk one of important step in process of risk management which will be added to project risk register.

Treat the Risk

It is one most referred step which can treat as Risk Response Planning. During this step the risk which you have been ranked will be assessed according to the top rank given to each categories of risk which can be achieve acceptable risk levels by modifying or treating according to planned set out. This will help in enhance opportunities by minimize the probability of the negative risks.

You create risk mitigation strategies can be created along with preventive plans and contingency plans can be formed in this step. And you add the risk treatment measures for the top ranking or most serious risks to your Project Risk Register.

Monitor and Review the Risk

This is the step you will review and track the risk by referring to the project risk register. The bank will have the fixed parameter where they will test each transaction at different level to make sure no risk to viable of financial unit or investment of bank [4].

“RBI Guidelines on Risk Management”

1) “For countries party Bank has set up comprehensive risk rating systems”
2) “Banks must fix a definite time frame for moving over to value at risk”
3) “By Mar 2001 banks with international presence have to develop methodologies for estimating and maintaining economic capital”
4) “Banks should evaluate portfolio quality on an on-going basis instead of near balance sheet date”
5) “Investment proposals to be subjected to same credit risk analysis as in the case of loan proposals”
6) “Investment proposals to be included in the total risk evaluation”
7) “For off balance sheet exposure the current and potential credit exposure to be measured on a daily basis”
8) “Activities of ALCO and credit policy committee should be integrated”
9) “For managing liquidity risk banks should place limits on inter bank borrowings”
10) “Banks have to provide a contingency plan to meet adverse swings in liquidity conditions” [5]

VARIOUS KINDS OF RISKS

Risk assessment is a step to handling the risk with obtaining options and in order to determine risk has been analyzed in different ways in which the risk has been dealt with same ways or with some changes. The management must know all kinds of risks they must aware about different types of risks. Brief notes on various types of risks.

Financial Risk

Financial risk is main resource key for the losses like funding, etc. here the company will not have adequate funds for cash flow transaction and to meet the financial obligations. Credit risk, liquidity risk, market risk, operational risks are different types of financial risks.

Credit Risk and Investment Risk

Credit risk are those risk where the borrower becomes default due to fact that he is unable to make payments as he has been promised it is said to be Credit risk, also called default risk. Investment risk are those where investor losses his principal and interest which was associated his investments.

Liquidity Risk

Sometimes banks will have potential inability to generate enough cash to cope up with situation of decline in deposit or increase in assets. These kinds of risk arise due to mismatching in maturity pattern of assets and liabilities, which will effect on the interest rate as it is having obvious relationship with liquid risk. It can also be a situation where banks cannot sell market share to make profit or prevent loss this is what called as Liquidity risk.

Market Risk

Market risk arises when banks assets and liabilities face value has been affected by the market value due to adverse moments and holding of assets and liabilities with active trading of bank. Basically, it can be observed with moment of portfolio value. Foreign exchange rates, stock prices, interest rates, and commodity prices are the standard Market risk factors.

Process Risk
The Risk which will lead to failure of project due to Risky business processes are Process risks.

Intangible Risk
Those risks associated with brand of organisation or the risks which will damage the reputation of an organisation are Intangible risks.

Time Risk
Time Risk as name indicate these are risk associated with things which are connected or involved with time

Human Risk
It is risk which has been connected with manpower where the organisation will face loss due to loss of critical employees or knowledge.

Legal Risk
Legal Risk is that risk which will have its impact on operations of company and Losses include government regulations are Legal Risks.

Physical Risk
A physical risk is those due to natural disasters or man-made and loses of physical resources such as equipment, buildings, land, etc.

Interest Rate Risk
The movement of interest rate along with account of net interest rate has been moved adversely with risk against the interest rate is called interest rate risk. Net income has been adversely affected with changes in interest rate; it's also result in changes in value of assets and liabilities.

Forex Risk
The moment of exchange rate of bank foreign exchange assets and liabilities impact adversely is called Forex risk. The assets and liabilities of portfolio have been held by bank as evident of risk of various maturities and different currencies.

Operational Risk
Operational risk arises when the functions of the business organisation has been executed. These kinds of risks arise when the organizations have been operated with people, system and process. Fraud risks, legal risks, physical or environmental risks are other categories included under this.

Credit Risk Management
Credit risk has been defined as "The diminution in the credit quality associated with possibility of losses arising from barrower or counterparties". When it comes to the bank portfolio it has been seen as the inability or unwillingness of barrower or counterparties to meet the financial obligation or commitment in relation of final transaction, lending and other trading activities which is stem of outright default. The deterioration in credit quality which has been perceived or reduction in value arising of portfolio will result in losses which have been alternatively effect the financial activities of bank.

Credit risk management as name indicates it is process of managing capital assets and the loss of loan reserves. If the barrower does not meet the commitment which he has been made which will be referred as negative losses arises due to borrowers fail to repay debt of any kind. Managing credit risk is a way of improving efficiency and attaining a competitive edge.

Building Blocks of Credit Risk Management
Following are the distinct building blocks which have been comprised by banks, in an effective credit risk management framework.

(a) Policy and Strategy
(b) Organizational Structure
(c) Operations/Systems

POLICY AND STRATEGY

For the significant credit risk polices and reviewing credit risk strategy periodically. The Board of Directors of each bank have been held responsible.

Credit Risk Policy

- The credit risk policy has been approved by the board of director of each bank because every bank will have these facilities. The documents must contain mitigation techniques, including risk identification, risk measurement, risk control and grading, reporting, aggregation techniques, documentation, management of problem loans and legal issues.
- Credit risk policies must have maintenance procedures and guidelines for portfolio
- Management it should also define target markets, risk acceptance criteria, credit approval authority, and credit origination.
- For the credit sanction all the dealing of banks approach must be understood by banks officials. The branches/ controlling offices must be informed about approval of credit risk policy by Board and it should be communicated. Along with this the banks officials should clearly understand accountable for complying with established policies and procedures.
- The credit risk policy which has been approved by the Board must be implementing and the senior management of a bank is responsible for these implements.

Credit Risk Strategy

- For the credit-granting activities the bank's should plan and establish the objectives or it must own its credit strategy which every bank should develop, with approval of its Board, and such activities conducted with adopting necessary policies/ procedures. For this activities like trade off risk-reward must be accepted and these strategies should spell out clearly the organization's credit appetite.
- The granting of loan based on type of activities where these strategies should include the bank's willingness. Geographical location, currency, market, maturity and anticipated profitability these are various kinds of economic activities which help in granting of loans. When it comes to cost of bad debts and cost of capital in granting credit the business sector and target market must have preferred levels of diversification and concentration, this would necessarily translate into the identification.
- To form credit risk strategy there should be continuity in approach as it will also take cyclical aspects into account of economy and the overall credit portfolio its quality/compensation shifts must be taken as important facts. Through various credit cycle these strategies has been taken so that it will viable for long run.
- The credit risk strategy which has been approved by the Board must be implementing and the senior management of a bank is responsible for these implements [6].

ORGANISATIONAL STRUCTURE

For fruitful ramifications of powerful credit hazard administration the associations must frame Sound authoritative structure which is one of sine qua non for effective usage of a viable credit chance administration framework.

To have effective administration of dangers the general duties must be taken The Board of Directors. To execute this hazard administration strategy The Board ought to choose the hazard administration approach of the bank and set points of confinement for liquidity, financing cost, and outside trade and value dangers.

The Risk Management Committee will have the operational risk management committee along with Board level Subcommittee including CEO and heads of Credit, Mark. The credit risk of bank will include the various risk exposures which arise from integrated risk management which has been devised by various policies and strategies.

For this motive, this Committee need to correctly coordinate between the Credit Risk Management Committee (CRMC), the Asset Liability Management Committee and different chance committees of the bank, if any. It is imperative that the independence of this Committee is preserved. The Board must, therefore, make sure that this is not compromised at any price. In the occasion of the Board now not accepting any advice of this Committee, structures ought to be put in area to spell out the cause for such an action and must be nicely documented. This file ought to be made available to the inner and outside auditors for their scrutiny and remarks. The credit chance method and rules followed via the committee need to be efficaciously communicated at some stage in the employer.

Each financial institution might also, relying on the scale of the agency or mortgage/ investment e-book, represent a high degree Credit Risk Management Committee (CRMC). The Committee need to be headed by using the Chairman/CEO/ED, and have to contain of heads of Credit Department, Treasury, Credit Risk Management Department (CRMD) and the Chief Economist. The features of the Credit Risk Management Committee have to be as underneath:

- Be accountable for the implementation of the credit threat coverage/ method accredited by using the Board.
- Monitor credit chance on a bank extensive foundation and make certain compliance with limits authorized via the Board.
- Recommend to the Board, for its approval, clean rules on requirements for presentation of credit proposals, financial covenants, score requirements and benchmarks
- Decide delegation of credit score approving powers, prudential limits on massive credit exposures, standards for mortgage collateral, portfolio control, mortgage assessment mechanism, hazard concentrations, threat tracking and assessment, pricing of loans, provisioning, regulatory/legal compliance, and many others.

PRINCIPLES FOR THE MANAGEMENT OF CREDIT RISK

1) While monetary institutions have faced difficulties through the years for a large number of motives, the primary motive of serious banking issues is still without delay related to lax credit score requirements for debtors and counterparties, negative portfolio threat control, or a lack of attention to changes in financial or different circumstances which could result in a deterioration inside the credit standing of a bank's counterparties. This enjoy is common in both G-10 and non-G-10 countries.
2) Credit threat is most certainly described as the capability that a bank borrower or counterparty will fail to satisfy its duties in accordance with agreed terms. The purpose of credit hazard management is to maximize a financial institution's hazard-adjusted charge of return by way of maintaining credit score danger publicity within acceptable parameters. Banks need to manipulate the credit score chance inherent inside the whole portfolio as well as the chance in individual credits or transactions. Banks ought to

additionally don't forget the relationships among credit score danger and other risks. The powerful control of credit score hazard is a critical aspect of a comprehensive method to hazard management and important to the long-term success of any banking business enterprise.

3) For maximum banks, loans are the biggest and maximum apparent source of credit score danger; however, other resources of credit score danger exist all through the sports of a bank, consisting of within the banking book and within the buying and selling e-book, and each on and stale the balance sheet. Banks are increasingly more dealing with credit threat (or counterparty danger) in diverse economic gadgets other than loans, which includes acceptances, interbank transactions, trade financing, foreign exchange transactions, economic futures, swaps, bonds, equities, options, and within the extension of commitments and ensures, and the settlement of transactions.
4) Since exposure to credit danger is still the leading supply of issues in banks international-huge, banks and their supervisors need to be able to draw beneficial classes from past reviews. Banks ought to now have a keen consciousness of the want to identify, degree, screen and manipulate credit danger as well as to determine that they hold ok capital in opposition to these risks and that they are appropriately compensated for risks incurred. The Basel Committee is issuing this record in order to encourage banking supervisors globally to promote sound practices for handling credit danger. Although the principles contained on this paper are maximum in reality relevant to the business of lending, they have to be applied to all activities wherein credit chance is present.
5) The sound practices set out in this report particularly deal with the following regions: (i) setting up the suitable credit risk environment; (ii) running under a legitimate credit score granting procedure; (iii) retaining the ideal credit management, size and monitoring method; and (iv) ensuring ok controls over credit score chance. Although unique credit danger control practices may fluctuate among banks relying upon the nature and complexity of their credit activities, complete credit threat control software will cope with these four areas. These practices must additionally be implemented in conjunction with sound practices associated with the assessment of asset first-class, the adequacy of provisions and reserves, and the disclosure of credit score risk, all of which have been addressed in different current Basel Committee documents.
6) While the precise approach selected by way of man or woman supervisors will depend on a bunch of things, such as their on-site and stale-web site supervisory techniques and the degree to which outside auditors are also used in the supervisory feature, all individuals of the Basel Committee agree that the standards set out in this paper need to be used in comparing a financial institution’s credit chance management machine. Supervisory expectations for the credit score threat management approach used by individual banks need to be commensurate with the scope and class of the bank’s activities. For smaller or much less sophisticated banks, supervisors want to decide that the credit score threat control method used is sufficient for his or her activities and those they have got instilled sufficient hazard-return subject in their credit danger management tactics. The Committee stipulates in Sections II to VI of the paper, principles for banking supervisory authorities to use in

assessing financial institution's credit score hazard control structures. In addition, the appendix offers a top level view of credit score problems usually visible by using supervisors.

7) In addition, particular instance of credit hazard relates to the technique of settling economic transactions. If one aspect of a transaction is settled however the other fails, a loss may be incurred that is equal to the principal quantity of the transaction. Even if one celebration is really overdue in settling, then the alternative celebration may additionally incur a loss relating to missed funding possibilities. Settlement danger (i.e. the risk that the finishing touch or agreement of a financial transaction will fail to take region as predicted) accordingly includes elements of liquidity, marketplace, operational and reputational threat in addition to credit chance. The stage of chance is determined by the unique preparations for settlement. Factors in such preparations that have a concerning credit score threat include: the timing of the change of cost; fee/settlement finality; and the position of intermediaries and clearing houses.
8) This paper become at first published for consultation in July 1999. The Committee is thankful to the central banks, supervisory authorities, banking associations, and institutions that furnished comments. These comments have informed the manufacturing of this final version.

CREDIT RISK MANAGEMENT PRACTICE AT CORPORATION BANK

The basic function of the bank is to extend the credit which will involve risks. The decision which has been taken by bank may not always result in losses. The banks must plan its transactions such way that which will result in less likely arising of losses and main aim of banks should be the maximizing its returns with help of building the healthy credit portfolio.

Corporation Bank has been set up the credit risk management division(CRMD) under the guidelines which has been issued by the RBI on risk management, which has been involved various kind credit risk practices which has been managed by Credit Administration department.

A Credit Risk Management can be done at 2 levels

1) Presanction level
2) Postsanction level

In the Pre-sanction level can be in form of by taking care of barrowers and assessing is made in form of

- Collecting information of Marketing strength
- Financial analysis
- Industry prospects, etc.

For credit risk management here in this level various steps have taken by using different techniques they are grading system, keeping barrowers standards, forming approval grid for sanction, investing about the barrower, loan pricing etc. these are various kinds of functions which has been performed both in branches as well as in credit sanction division of Corporation Bank.
In post-sanction level functions can be performed by monitoring of accounts, loan review mechanism, and evaluating the sanction process

Credit Risk Mitigation Techniques At corporation bank to minimize the credit risk the bank has been following some of the techniques, the following are the important mitigation techniques used by Corporation bank.

- The bank will ask for the securities or additional collateral securities.
- For the low credit worthy creditor the bank will charge high rate interest.
- By placing the ceilings on possible exposure to any one sector the bank will ensure with diversification of assets and liabilities.
- Derivatives and hedging's can be done by using options such as futures and SWAPS.
- The bank has been setting aside reserves for the expected and as well as unexpected losses.
- To reduce the leverage of portfolio the selling of liabilities, paying down debts and assets has been taken place.

Role of Credit Risk Management Division (CRMD)

To improve the quality of credit portfolio and to evaluate efficiency of management system to manage credit risk is important role of CRMD.

Important functions of CRMD

- Under Loan Review Mechanism review of sanctions has been analyzed
- Portfolio Reviews
- Industry study
- Study of rating mitigation
- Review of Credit Management at Zonal offices through monthly/quarterly Reports
- Scrutiny of Register of sanctions of Zonal Heads
- Review of periodical review/renewal of barrowers accounts
- Review of time barred debts
- Conduct of stock audit
- Review of Risk Management System and procedures

DATA ANALYSIS AND INTERPRETATION

The Corporation bank has been developed score card for home loans some of process which has been followed by corporation bank has been taken into account to develop an credit risk free model which will help in reduce risk factors arising out of lending money for home loans has been analyzed and score card has been developed accordingly which will help corporation bank in near future.

DESIGN OF A RETAIL SCORECARD – AN OVERVIEW

A retail scorecard contains a number of risk drivers or variables grouped in broad categories like Personal or Demographic characteristics, financial strength, Relationship with the Bank and Transactional or collateral strength. Each of these groups would contain several variables like age at the time of application under Personal or Demographic characteristics, borrower's contribution under financial strength, net worth of guarantor as a percentage of loans of amount under Transactional or collateral strength. Each of the variables is divided into different attributes like age is divided into 4 or 5 categories say between 18 to 30, between 30 to 45, between 45 to 60 and above 60, etc. and each of these attribute is given a score, say between 0 and 100.

Score for each attribute is chosen based on its risk perception. For instance, for Home product, age of applicant at the time of application of loan, age between 18 to 30, is considered least risky and hence given score of 100 whereas age above 60 is considered most risky or undesirable is given a weight of 10. Scores for other age groups is decided accordingly between 100 and 10, depending on their perceived riskiness.

Then each variable is assigned a relative importance starting from 1 to say, 'marital status' and is scaled to maximum of 5 for say, 'number of years of service with the current employer'. This means that variable marital status is least important compared to 'number of years of service with the current employer' and all other variables in the group are given relative weights within the range of 1 to 5. Once this is done, weights are given to the group levels so that the total of the weights is 100%. For example, Personal or Demographic characteristics may be given a weight of 30%, financial strength may be given a weight of 45%, Relationship with the Bank may be given a weight of 10% and Transactional or collateral strength may be given a weight 15%.

In each group, there is a maximum and a minimum score which is the sum of scores given to each variable in that group and multiplied by the relative weight of that variable. The minimum and maximum score for each group is then calibrated to the minimum score of 0 and maximum score of 1000 for each group. Then, based on the weights assigned to each group, the score is multiplied by the weights and a final score in the range of 0 to 1000 is arrived at. This score is calibrated to a range of 300 to 850, which is an accepted international standard (e g. FICO or Fair Issac scores in USA for individuals follow this scoring range).

Finally, this score is broken into 7 grades from A, B, C, D, E, F and G breaking the scores into ranges like 750 to 850 for grade A, 650 to 750 for grade B etc. Each grade indicates relative riskiness starting from least risky (A grade) to maximum risky (G grades).
Thus, a scorecard gives a summary indicator of the riskiness of borrower based on the combination of various risk drivers and their assessment in a systematic and consistent manner. Scores for two borrowers can be compared in a relative manner and have no absolute meaning. Thus, a borrower with a score of 650 is less risky compared to a borrower with a score of 450. But amongst three borrowers with scores of say, 400, 500 and 600, one cannot come to conclusion that compared to a borrower with score of 600; the borrower with a score of 400 is doubly risky compared to borrower with a score of 500. Thus, scores indicate a relative and a summary risk profile of the borrowers. Scores are indicative of Probability of Default (PD) but linkages between score ranges and PDs will have to be empirically derived using the past data.

When bank scores an existing customer, the score will always be above a certain minimum level, as the customer has been accepted by the bank after he/she has fulfilled all the terms and conditions of the product program. Banks should ideally score every applicant (whether subsequently accepted for loan or rejected) and then use the scores to find out risk profile of its accepted customers.

Thus, when scorecards are used for existing customers, the score ranges are typically above a minimum range. Further, though theoretically there is a maximum score, exceptionally very few borrowers will get that score. Thus, for a bank, most of the borrowers will lie in the middle score range by default.

A high score does not mean that a borrower with a high score will not default. Defaults will occur at different levels of scores but one would expect that a good score card should have minimal defaults in the higher range of scores and default will increase substantially as the score range comes lower. How much percentage of default should be there in each grade is a bank specific issue and there can be no laid down norm for it.

Another issue with the use of scorecard is that it cannot be used to predict default or no-default of an individual borrower. Scorecards work in a statistical sense; a

2% default in D grade means any of the 2% of the borrowers in the grade D would default. Therefore, one ought not to take a particular borrower in Grade D, and find out why he/she has or has not defaulted. This would be an inappropriate way of using scorecards.

Scorecards are important for risk profiling the borrowers. In Table 1, finding homogenous pools of borrowers, doing data mining for MIS and business intelligence purpose, deciding on pricing of borrowers, offering cross sale or up sale for other products, monitoring borrowers who are considered weak, etc. Besides, Scorecards are useful for Basel II capital Accord IRB PD calculation purpose.

Table 1. *Home loan score card.*

Home			
Parameters	**Factor weight**	**Variable weight**	**Score**
Personal – Demographic (Customer Information)	20%		
Age (completed years) at the time of Loan Application		5	
Between 18–25 years			100
Between 25–40 years			70
Between 41–50 years			60
Between 51–60 years			40
Above 60			10
Marital Status		1	
Married			100
Single			80
Divorced			50
Widowed			50
Employment Status		2	
Employee-Public Sector/Govt			90
Employee-Private Sector			60
Business			40
Professional/Self Employed			50
Agriculture and allied activities			30
Nonearner			10
Our Bank Employee			100
Pensioner			20
Level of Education		3	
Post Graduate/Professionals			100
Graduate			90
Undergraduate/Diploma			60
Others/Not Applicable			10
No. of Dependents (including children)		4	
None or 1 dependent			100
2 or 3			80
More than 3			30
Years of service with the current employer		4	
Professionals and self employed			
Above 7 years			100
Between 3 and 7 years			80
Between 1 and 3 years			60
Less than 1 year			20
Salaried and others			
Above 6 years			100
Between 3 and 6 years			80
Between 1 and 3 years			60
Less than 1 year			40
Financial Strength	40%		
Net Monthly Salary/Income (applicant and co-applicant)		4	

Less than Rs 10000			10
Between Rs 10001 and 25000			30
Between Rs 25001 to 50000			50
Between Rs 50001 and 100000			60
Above Rs 100000			100
EMI for Home only/Net Monthly Income %		5	
Up to 20%			100
Between 20% and 30%			70
Between 30% and 40%			50
Above 40%			20
Monthly rental income or Notional Rental Savings/EMI(for proposed loan)		5	
Upto 20%			20
20% to 40%			40
40% to 60%			60
60% to 80%			80
Above 80%			100
Borrower's Contribution		5	
Greater than 35%			100
Between 25% and 35%			70
Between 15% and 25%			60
Between 10% and 15%			40
Below 10%			20
EMI or Notional Interest for all loans (existing & proposed)/Net Monthly Income (applicant & co-applicant)		4	
Greater than 50%			30
Between 40% and 50%			50
Between 30% and 40%			70
Less than 30%			100
Not Applicable (applicant has no loan other than housing loan)			NA
Collateral & Relationship with Bank	20%		
Credit information from Lenders		5	
Satisfactory			100
Non-Satisfactory			0
Not Applicable			NA
Guarantor – Relation with the borrower		2	
Third Party Guarantee			100
Person is a close relative			50
Not Applicable			0
Net worth of the guarantor to loan amount		2	
Greater than 5 times			100
3 to 5 times			70
2 to 3 times			50
1 to 2 times			30
Less than 1 time			10
Not Applicable			0
Cash collateral security in the form of our Bank's deposits, Govt Securities & life insurance policy		4	
Above 100%			100
Between 50% to 100%			70
Below 50%			50
No cash collateral			30
Banking with the Bank since		2	
Below 1 year			20
1 to 2 year			40
2 to 3 year			70
More than 3 year			100
Transactional Variables	20%		
Purpose of Loan		2	
Purchase of a plot & Construction of new house			10
Purchase of new house/flat			100
Purchase of old houses/flats not more than 10 years old			70
Purchase of old houses/flats more than 10 years old			20

Takeover liability from other institutions			20
To meet expenses towards additional construction, alterations or repairs carried out by the owner.			30
Loan Term		2	
Upto 5 years			50
5 to 10 years			70
10 to 15 years			100
above 15 years			20
Property location (including port town)		3	
Metro			100
Urban			60
Semi-Urban			40
Rural			20
Prop_dwelling_unit		4	
Possession Stage			100
Ready Built House			90
Intermediate Stage			50
Foundation Stage			30
Layout Stage			20
Litigations if any against the applicant		5	
Yes			0
No			100

From Figure 2 chart we can see the factor weights has been given for different parameter of home loan in its score card in this we can see that financial parameter has been given more weight(40%) than other parameter because for bank to avoid the risk factor analyzing the financial strength of customer is very much important so it has been given more weight other parameter has given same importance by giving lesser weight (20%) as it has been least important when we compare with financial parameter.

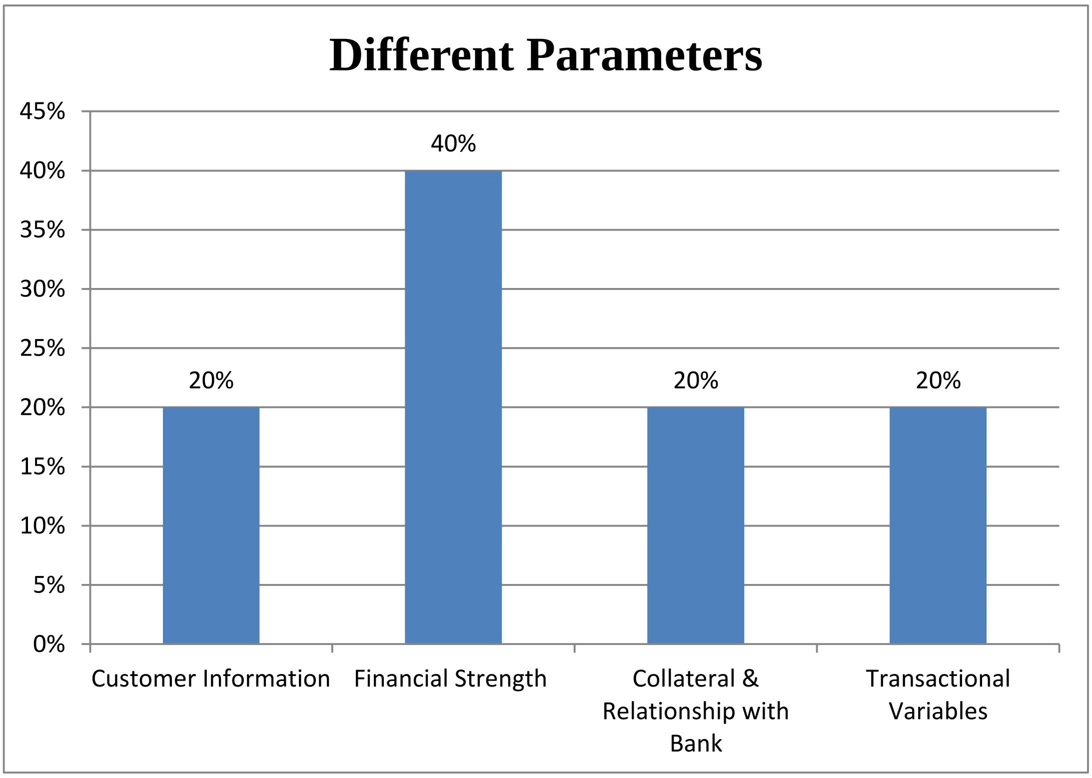

Fig. 2. *Factor weight given for score card of home loan.*

FINDINGS OF THE STUDY

- When we look in to the credit risk policy adopted by the corporation bank has been excellent with adopting some modern techniques which will help bank to achieve excellence
- The main aim of corporation bank was to sustain the quality of assets so that it will avoid the problem which is arising due low standard
- The bank is having excellent credit risk monitoring and control systems
- To reduce the credit risk the bank has been using various polices in there day today activities
- In order to mitigate risks, the corporation bank has been adopted following techniques
- Charges high interest rate for low credit worthy barrowers
- The bank is demanding the guarantees along with collateral securities
- The corporation bank has been using the RAM model for the excellent credit risk management and for the development of information system which will facilitate an effective management system
- The credit risk management practices of corporation bank have been formed according to guidelines of Reserve bank of India

SUGGESTIONS

- The bank should take necessary steps for the proper evaluation and analyzing the credit risk otherwise it may lead to non-performing assets
- To develop and to increase performance of the corporation bank the bank should give frequent visit its branches
- The bank must adopt modern and new models to minimize the credit risk. Now corporation bank has been using RAM model which is only credit rating model
- To avoid the defaulting of barrowers the bank must give importance to high worthy barrowers
- Bank may take necessary steps to decrease the interest rate that barrower may repay the money on time
- The must use modern type credit rating models so to avoid the credit risk

CONCLUSION

Credit risk is known as the default risk where the barrowers fail to keep his promise. Where the credit risk management has is managing the risk which has been arising out of lending of money. When it comes to the banking sector the lending of money has been one of important business where bank may face different kind of risk but bank must adopt necessary activities along with different type's credit rating models to avoid the credit risk by forming committee to manage the credit risk. Due to globalization the bank has been increased its lending activates year by year. The banks have been taken various steps to control and mitigate the credit risks. Now days the credit risk management has been one of important function of bank. The different banks have been maintained its credit risk activities one or another form. But the banks have been formed different types of models to manage these kinds of credit risks. The banks have been facing the stiff completion from private bank so the banks must take care of its lending activities along with its risks also. The banks have been believed in total quality at all levels. Thus, bank is all set for tremendous future.

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