Effectiveness of Corporate Debt Restructuring Mechanism in India: A Study of Select Industries

Thesis submitted to the University of Hyderabad in partial fulfillment for the award of

DOCTOR OF PHILOSOPHY
In
MANAGEMENT

By
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DECLARATION

I, **KAMBAKULA APPA RAO**, hereby declare that the thesis "**Effectiveness of Corporate Debt Restructuring Mechanism in India: A Study of Select Industries**" submitted by me under the guidance and supervision of **Prof. V. Mary Jessica** is a bonafide research work, free from plagiarism. I also declare that it has not been submitted previously in part or in full to this University or any other Institution for the award of Degree or Diploma. I hereby agree that this thesis can be deposited in Shodganga/ INFLIBNET.

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This is to certify that the thesis entitled "**Effectiveness of Corporate Debt Restructuring Mechanism in India: A Study of Select Industries**" submitted by Kambakula Appa Rao bearing Regd.No. 11MBPH15 in partial fulfillment of the requirement for award of Doctor of Philosophy in the School of Management Studies is a bonafide work carried out by him under my guidance and supervision.

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Further, the student has the following publications before submission of the thesis/ monograph for adjudication and has produced evidence for the same in the form of acceptance letters or reprint in the relevant area of this research. (Note: at least one publication in referred journal is required)

1. Published paper titled "Corporate Financial distress – Corporate Debt Restructuring mechanism in India" in PEOPLE: International Journal of social science, ISSN-2454-5899.
2. Published paper titled "Successful turnaround through Corporate Debt Restructuring Mechanism – A Case study of India Cement Limited", Fraudulent Financial practices in Indian Capital Market – Issues and Concerns, ISBN – 978-93-85518-05-08, August 2016.

3. Published paper titled “Emergence of Stock market (BSE) in the event of the general elections 2014 (pre and post period)” in EPRA International Journal of Economic and Business Review (online) ISSN 2347-9671, Volume-3, Issue 12, December, 2015.
4. Paper presented titled “Impact of Corporate Debt Restructuring on Indian Banking Sector” in the International Conference on Social Sciences & Humanities (ICSSH), NOV, 2017, Bangkok, Thailand.

Further, the student has passed the following courses towards fulfillment of course work requirement for Ph.D:

Course Name	Credits	Pass/ Fail
1. Quantitative Methods	3	Pass
2. Research Methodology	3	Pass
3. Financial Management and Strategic Finance	3	Pass
4. Financial Services and SAPM	3	Pass

Supervisor **Dean of the School**

(Prof. V. Mary Jessica) **(Prof. P. Jyothi)**

ACKNOWLEDGEMENTS

First of all, I bow my knees before Almighty God for his plan, love and abundant blessings for what I am today.

With a sense of utmost gratitude, I would like to place on record my sincere thanks to the various individuals who extended their cooperation at different stages of my research. With their continuous support and encouragement, my journey has become gratifying and complete.

From the very beginning, I have been privileged to receive unstinting and invaluable support from my mentor and guide, Prof. V. Mary Jessica. She deserves a special mention not only as my research supervisor but also because her expert guidance and patience has made this research possible by boosting my confidence and lifting my spirits at every stage. Her excellence and expertise in the area of restructuring has been a significant value addition, and was instrumental in the selection of my topic of research. Her critical suggestions, timely recommendations and directional cues guided me in framing the objectives of the study and in developing a better understanding of the subject. Her constant presence and understanding has been a reassurance even during the most testing times. Without her knowledge, vast experience and exceptional individual qualities, I would only fathom the idea of completing my research.

I express my gratitude and thanks to present Dean Prof. P. Jyothi, and former Deans, Prof. B. Raja Shekhar, Prof. V. Sita and Prof. V. Venkataramana for their support during my research work. My sincere thanks to all the Doctoral Committee members and other faculty who always encouraged me to hone my skills and improve my knowledge- Dr.S.Mallikharjuna Rao, Dr.K.Ramulu, Dr.Lokananda Reddy, Dr.Chetan Srivastav, Dr. G.V.R.K Acharyulu, Dr.Sapna Singh, Dr.D.V. Srinivas Kumar and Dr.Murugan.

My heartfelt thanks to all my friends and fellow research scholars Renuka, Azhar, Ramesh, Lakshmi, Rukhsana, Kamala, Richa, Asif, Ashish, Manisha, Athira, Shalu, who helped me in realizing my strengths and overcoming my weaknesses. And Special thanks to Syed Azhar, Vijaya Raghavan, Sai Ram, Rajesh Itammala and Haritha who helped me in data analysis and thesis writing.

I express my sincere thanks to Mr.Jitendra Danane and Mr. Suresh, Charted Accountant who has given insights to move ahead when I was in tough time during Ph.D.

I express my sincere thanks to Phani Bhushan, Jaiwardhan Gaikwad,Koushik, Aneerudh, Anil and Naveen for all their support technically in writing thesis.

Before concluding, it would be worthy to mention that Katakam Vinay Raj's family encouragement and support during my research. Really I am indebted to this family for their hospitality in Hyderabad.

My mother Kambakula Manikayam and father Surya Narayana, I have no words to acknowledge the sacrifices you made, prayers and love towards me. I thank my beloved elder sister Bagaram, Younger brother Raja and younger sister Suneetha who gave me extraordinary support and well wishes to complete my research. I thank my whole family for inspiring me with confidence and motivation with strength and soundness of mind and soul to enable in the completion of this research.

This acknowledgement would not have been complete without mentioning the support and operation of School Office, University Administration and the UGC for granting me the UGC JRF fellowship.

ABSTRACT

Corporations require funds, usually raised through either equity or debt. These funds are utilized by a company to make more profit. Risk is the probability for uncontrolled loss of something of value, and is a part and parcel of every business. It is the difference between the expected and the actual, and is dependent on the internal and external factors of the business environment. If these factors are positive, companies make profit; else they suffer losses and are unable to meet their financial commitments, leading to 'financial distress'.

Financial distress could be resolved through liquidation or bankruptcy. To avoid liquidation or default, a company has two options. It could either file for bankruptcy or it can privately renegotiate/restructure its financial mix with creditors, a process which is called 'workout'. At the same time, lenders might also seek a reschedulement in order to minimize loss and reduce the number of non-performing assets. In 2001, Indian banks have formed a consortium and started the Corporate Debt Restructuring mechanism under the detailed guidelines given by the Reserve Bank of India. The numbers of cases under this mechanism have gradually increased over the years, as have the non-performing assets. These two issues may have a adverse impact on the Indian Economy.

The present study deals with the important factors which influence corporate financial distress, generally referred to as the Corporate Debt Restructuring mechanism in India. It also explores the effectiveness of this mechanism on corporate and banking performance. The study was carried out by administering questionnaires on factors related to corporate financial distress to understand the perception of CFOs/ financial managers of companies, AGM/GMs of banks and Chartered Accountants involved in the Corporate Debt Restructuring process.

The corporate performance of 74 companies has been analyzed from the financial statements through the Current ratio, Debt –Equity ratio, Operating Profit ratio, Interest Coverage ratio, Net Sales to Total Assets and Net Worth to Total Assets ratios. The Wilcoxon signed rank test was used to check for any significant difference in financials between the pre and post restructuring periods, and the Altman Z-score model (Multiple Discriminant Analysis) was used to predict the financial health of the selected firms.

The selected sample of 74 companies has further been grouped industry wise. Overall, three types of industries i.e. the infrastructure industry (22 companies), textile industry (10 companies) and the iron and steel industry (7 companies) have been considered for analysis. The study was extended to check for any significant differences in the performance of the selected industries by using the Wilcoxon signed rank test. The performance measures of Operating Margin and Interest Coverage ratio (Alderson and Betker, 2010) have been used.

Multiple Linear Regression Analysis has been used to test the impact of CDR loans on selected banks. Interest Income to Total Assets, Non-Interest Income to Total Assets, CDR Loans to Total Advances, Non-CDR Loans to Total Advances and Gross NPA to Total Advances are the dependent variables and Return on Assets is the independent variable.

The study found that prior to restructuring, financial factors; operational factors followed by managerial factors are the main reasons for financial distress. In the post restructuring period, there was a significant difference in the financials of the selected firms and the sample firms, with a sharp decline in their performance. Out of the 74 firms taken for the study, 11% of firms have been found to be in the “Safe Zone”, 12% in the “Grey Zone” and 51% of firms in the “Distressed Zone”. Overall, approximately 20% of firms have managed to come out from distress. A

significant difference was found between the performance of the selected industry firms and their industry peers, with the former having lower performance.

The study found that CDR loans and Gross NPAs have a significant and negative impact on the performance of banks (Return on Assets). This finding has led to the conclusion that the Corporate Debt Restructuring mechanism has not helped much in improving the performance of the firms.

Results from the study have led to the conclusion that responsibility and accountability have to be taken into consideration along with policy, administration and evaluation measures to increase the effectiveness of the CDR mechanism. It has also been deduced that the CDR mechanism is not very effective in the corporate domain as very few firms have been able to recuperate from financial distress. A negative impact on the performance of banks has also been found.

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AAIFR	Appellate Authority for Industrial and Financial Reconstruction
AA	Adjudicating Authority
AGM	Assistant General Manager
ANOVA	Analysis of Variance
BIFR	Board for Industrial and Financial Reconstruction
BOB	Bank of Baroda
BOI	Bank of India
CA	Charted Accountant
CAP	Corrective Action Plan
CDR	Corporate Debt Restructuring
CFO	Chief Financial Officer
COC	Committee of Creditors
CIRP	Corporate Insolvency Resolution Process
CRILC	Central Repository of Information on Large Credits
CDR	Corporate Debtor
CS	Company Secretary
DCA	Debt Creditor Agreement
DCCO	date of Commencement of Commercial Operations
DF	Degree of Freedom
DRT	Debt Recovery Tribunal
ED	Executive Directors
EFA	Exploratory Factor Analysis
EG	Empower of Group
FC	Financial Creditor
FM	Financial Manager
GM	General Manager
GNPA	Gross Non-Performing Assets
IBA	Indian Bank Association

IBC	Insolvency and Bankruptcy Code
ICA	Inter Creditor Agreement
ICICI	Industrial Credit and Investment Corporation of India
IBBI	Insolvency and Bankruptcy Board of India
IRP	Interim Resolution Professionals
IM	Inform action Memorandum
IDBI	Industrial Development Bank of India
JLF	Joint Lender Forum
LLP	Limited Liability Partnership
MC	Monitoring committee
MDA	Multiple Discriminant Analysis
MI	Monitoring Institution
MN	Millions
NCLT	National Company Law Tribunal
NNPA	Net Non-Performing Assets
NPA	Non-Performing Assets
PCA	Principal Component Analysis
PNB	Punjab National Bank
RP	Resolution Professionals
RBI	Reserve Bank of India
S4A	Scheme for Sustainable Structuring of Stressed Assets
SARFAESI	The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act.
SBI	State Bank of India
SDR	Strategic Debt Restructuring
SICA	Sick Industrial Companies Act
SMA	Special Mention Account
Vari Max	Variance Maximum
WRS Test	Wilcoxon Signed Rank Test

LIST OF SYMBOLS

Σ - Sigma

β - Beta.

σ - Sigma (Standard Deviation).

R - Correlation Coefficient.

R^2 - Coefficient of Determination.

χ^2 - Chi Square

% - Percentage

H – Hypothesis

P – Probability value of significance level

DF – Degree of freedom

SE – Standard Error

N – No.of observations

C – Constant

t – t statistic

α – Cronbach's Alph

CHAPTER-I

INTRODUCTION

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

A company secures funds for acquisition of assets and for day to day operations. A bulk of these funds come from the owner's equity, banks and term lending financial institutions. In the normal course of formalities, these banks and institutions must undertake due diligence related to the profitability, debt servicing capability, cash flow ability, and commercial feasibility etc. of the firms to whom they have advanced funds. Thereafter, loans are approved and repayment schedules are prepared. However, due to various reasons, avoidable or unavoidable, such estimates may turn awry sometimes. Debtors may find themselves incapable of meeting their financial obligations, becoming 'financially distressed'. In these situations, firms undergo difficult times, sometimes facing severe consequences like liquidation.

In an effort to forestall and prevent liquidation, which has a long term and lasting impact on both the financial and social standing of a company, borrowers seek to renegotiate and modify the terms of a loan with their lenders. In order to minimize losses and reduce non-performing assets, lenders too, on their part, might seek reschedulement. This leads to what is widely referred to as 'Debt Recast' ('Debt Workout'), also known as 'Corporate Debt Restructuring'.

1.2 History of Corporate Debt Restructuring in India

The concept of restructuring or rescheduling loans was started several decades ago in India. In the late 1970s, the economy was affected by natural disasters; due to which RBI gave guidelines on restructuring and renegotiation of companies. Gradually, the RBI modified

these into full-fledged guidelines based on the needs of companies, banks and the economic environment.

Prior to 2001, India's insolvency regime had been affected by the lack of a feasible mechanism for restructuring. Instead of promoting a comprehensive debt restructuring strategy after a meticulous analysis of cash flows and consolidated negotiations, the Indian way was to rehabilitate by providing some kind of superficial respite or concession. Two connected issues caused a lot of anxiety. Firstly, the number of non-performing assets (NPAs) was rising rapidly. Moreover, the liquidation laws of the country were considered to be weak. India's regime at the time was not helping matters. Companies were winding up in an average of 10 years. In 1985, the Sick Industries Act (SICA) was initiated. Board for Industrial and Financial Reconstruction (BIFR), a quasi-judicial body, was given the task of reviving sick companies. Due to some reasons, SICA ended up as a complete failure.

In 1991, liberalization led to the sudden opening up of the economy. Companies started expanding their activities, and the rate of interest was constantly high. Despite this, firms continued to accrue high gearing ratios. The boom in India was experienced at a time when demand around the world was diminishing, indicating the gradual value erosion of assets. By 2001, the NPAs in public sector banks accumulated to Rs.548 billion, while other financial institutions reached Rs.240 billion. This led to a lot of apprehension as the banking industry was unfamiliar to handling such severe financial stress. These precedents demanded a mechanism which could circumvent the limits, presenting well-timed and feasible solutions to debt-related issues of corporations. Hence, the present corporate debt restructuring mechanism was brought into picture.

1.3 Status of CDR Mechanism in India

Table 1.1 Year Wise Summary of CDR Cases

Year	Number of Cases Referred	Number Of Cases Approved	Number of Cases Rejected
Up to 2009	225	184	29
2009-10	31	31	3
2010-11	49	27	10
2011-12	87	50	16
2012-13	129	106	29
2013-14	101	78	24
2014-15	33	54	14
2015-16	0	0	0
2016-17	1	1	0
Total	**656**	**531**	**125**
Year wise summary of IBC			
	No.of cases Referred	**Approved/withdrawn/ Liquidated**	**CIRP at the end of the year**
2016-2017	546	438	108
2017-2018	964	460	504
2018 -2019	1802	1063	739
Total	**3312**	**1961**	**1351**

(**Source**: CDR Cell, Mumbai, India &IBBI)

From the Table 1.1 above, the number of cases from the inception of the CDR evolution in India is clearly evident. From the initiation of CDR in 2001, upto 2009, a total of 184 cases were approved out of the 225 referred. In 2012-13, it can be observed that 106 cases out of the 129 referred to the cell were approved, the highest after the cell was started. The CDR arranagements are now continued under IBC, therefore, the present tables also indicate the figures under IBC also.

Table 1.2 Year Wise Cases Approved-Restructured Amount (Rs.in crore)

Year	Amount
Upto2009	86400
2009-10	17763
2010-11	6615
2011-12	39601
2012-13	76615
2013-14	103448
2014-15	72562
2015-16	0
2017-2018 # IBC	9929
2018-2019 # IBC	166000

Source: CDR Cell, Mumbai, India & IBBI)

Table 1.2 shows the total restructured amount by the CDR cell. From the initiation of CDR in 2001 upto 2009, the total amount restructured by the CDR cell was Rs.86400 crore. In the year 2012-2013, the amount stood at 76615 crore rupees. In 2013-2014, an amount of 103448 crore rupees was restructured by the cell. When compared to 2001-2009, this is more than the sum of the restructured amounts of 9 years. It also shows that amount involved in the IBC which are Rs.9929 crore in the year 2018 and Rs.166000 crore in the year 2019.

Table 1.3 Overall status of Corporate Debt Restructuring Mechanism

(Rs. Crore)

Year	Total References Received		Cases Rejected / Closed		Cases under finalization of Restructuring packages		Total Cases Approved(including cases withdrawn/Exited)	
	No. of cases	Aggregate Debt	No. of cases	Aggregate Debt	No. of cases	Aggregate Debt	No. of cases	Aggregate Debt
Upto 2009	225	95815	29	5018	43	5280	184	86400
2012	491	266885	79	31842	50	23065	362	211978
2018	656	474351	125	70998	---	----	531	403353
2019 (IBC)	3312	-	-	-	1961	-	1351	175929

Since inception CDR cell had held 17 Standard Forum meetings, 41 standing Committee of CDR Core Group members meetings, 48 Core Group meetings, 293 Empowered Group meetings. CDR cell approved number of cases which were standard, sub-standard and doubtful category based viability parameter in CDR packages. Frauds, malfeasance and willful default account were ineligible under CDR mechanism. This system has handled 656 restructuring package applications amounting to Rs.474351 crore of which 125 cases amounting to Rs.70998 crore were rejected and 531 cases amounting to Rs.403353 crore were approved. It also shows that 3312 cases referred in IBC in the years of period and total involved amounts are Rs.175929 crore.

1.4 Research Methodology

Research is nothing but the process of search and discovery of knowledge. It is a controlled investigation on a specific topic, and is both scientific and systematic in nature. According to Goddard and Melville (2004), "Research is exploring that which does not exist and answering unanswered questions". It has also been described as an organized effort to acquire new and latest knowledge (Redmen & Mory, 2009).

Research methodology is the systematic and analytical approach to unravel and solve a research problem. Studies adopt various steps to explain specific research problems. In a nutshell, research adds original contributions to the existing body of literature, making new advancements and mapping out various steps in a scientific and systematic manner to solve problems and reach conclusions.

1.4.1 Significance of the Study

1. The International Monetary Fund (IMF) has found that among all companies in the Asia Pacific Region, Indian firms are leveraged the highest (IMF Report).
2. RBI figures show that the number of total non-performing loan portfolios of Indian lenders have grown to 9.3% as on 1st April, 2018 from a mere 2.3% in 2008.
3. Since the downturn of economy in 2008, the incidence of NPLs has been continuously on the rise.

Restructuring is a tool which aids the turnaround of corporates from a state of financial distress (caused by internal and external factors of the business environment) to stability. One of the fundamental purposes of setting up restructuring in India was for reinstating the financial health of firms and making them viable in the long run.

This study's aim is to ascertain the most important factors which influence financial distress and understand if adopting the Corporate Debt Restructuring mechanism in India has led

companies to turnaround from a state of financial distress or not. The impact of CDR loans on the performance and profitability of banks is also explored.

1.4.2 Research Problem

- Since the inception of the CDR in 2001, 100+ firms were registered at CDR cell, the maximum number since the process was introduced.
- Also, the number of non-performing loans in Indian banks increased to 9.3% of total loans as on 1st April, 2018 from 2.3% in 2008.
- Therefore, this study has been undertaken to understand if the purpose of the Corporate Debt Restructuring mechanism has been achieved or not.

1.4.3 Need for the Study

1. The number of cases of debt restructuring through the CDR cell were the highest ever in the fiscal year 2012, the maximum since the inception of the mechanism in 2001.
2. According to central bank data, non-performing loans in Indian banks went from 2.3% of the total in March, 2011 to 2.9 % in December, 2011. (Economic Times, June 4, 2012) and as on March, 2018 the NPAs stand at Rs. 8, 95,601 crore at the nationalized public sectors bank, which is a huge cause of concern.
3. One of the fundamental purposes of setting up the Corporate Debt Restructuring mechanism in India was to reestablish the financial health of corporates and to make them viable and sustainable in the long run.

This study's aim is to ascertain the most important factors which influence financial distress and understand if adopting the Corporate Debt Restructuring mechanism in India has led companies to turnaround from a state of financial distress or not. The influence of CDR loans on the performance of banks is also explored.

1.4.4 Research Questions

1. Is financial distress caused majorly due to financial factors?
2. Can the CDR mechanism turn around a company's performance?
3. Is Government intervention necessary in the CDR mechanism?
4. Do banking regulations require modification to enhance the usefulness of the CDR mechanism?

1.4.5 Research Objectives

i. To identify the reasons of financial distress in companies referred for Corporate Debt Restructuring.

ii. To compare the financials of select companies before and after the Corporate Debt Restructuring process to study the impact of CDR.

iii. To measure the financial health of selected firms after the Corporate Debt Restructuring process with the help of the Altman Z-Score.

iv. To compare the operating performance measures of selected industries before and after the Corporate Debt Restructuring process to study the impact of CDR.

v. To study the impact of the CDR mechanism on the banking industry.

vi. To identify measures for the greater effectiveness of norms, design and implementation of the Corporate Debt Restructuring process.

1.4.6 Research Hypotheses

H1: There is a significant difference of opinion among the selected groups about the Corporate Debt Restructuring plan formulation.

a. There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the borrower or not.

b. There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the banks or not.

c. There is a significant difference of opinion on whether the CDR process formulated with banks takes into consideration the point of view of the CFO/Board or not.

d. There is a significant difference of opinion on whether the CDR process is formulated by joint lender forums or not.

H2: There is significant difference in the financials of selected firms after the Corporate Debt Restructuring process.

a. There is a significant difference in the Current ratio of the companies after the debt restructuring process.

b. There is a significant difference in the Debt Equity ratio of the companies after the debt restructuring process.

c. There is a significant difference in the Net Sales to Total Assets ratio of the companies after the debt restructuring process.

d. There is a significant difference in the Net Worth to Total Assets ratio of the companies after the debt restructuring process.

e. There is a significant difference in the Operating Profit ratio of the companies after the debt restructuring process.

f. There is a significant difference in the Interest Coverage ratio of the companies after the debt restructuring process.

H3: Corporate Debt Restructuring does not improve the measures of operating performance of the selected industries; firms' profitability was lower than the industry peers.

a. Corporate debt restructuring does not improve the Operating Margin and Interest Coverage ratios of the firms in the infrastructure industry; profitability was lesser than industry peers.

b. Corporate debt restructuring does not improve the operating performance measures of firms in the textile industry; firms' profitability was lesser than industry peers.

c. Corporate debt restructuring does not improve the operating performance measures of firms in the iron and steel industry; firms' profitability was lesser than industry peers.

H4: There is a significant difference in the various opinions on the effectiveness of the Corporate Debt Restructuring mechanism.

a. There is a significant difference of opinion related to flaws of the CDR policy among groups.

b. There is a significant difference of opinion on the effectiveness of CDR policy in banks among groups.

c. There is a significant difference of opinion on the effectiveness of CDR policy in controlling corporate distress among groups.

H5: There is significant impact on banking financial performance due to corporate debt restructured loans.

1.4.7 Type of Study

The nature of this study is descriptive and analytical. It is descriptive as it includes surveys and fact finding enquiries. It also includes the description and analysis of the financial positions and non-performing assets of various companies using their financial statements.

1.4.8 Scope of Study

The purpose of the study is to analyze and evaluate the effectiveness of Corporate Debt Restructuring and to identify the factors which cause financial distress to companies which have participated in CDR mechanism in India. Financial statements from three years before the restructuring and three to five years after the restructuring process lying between the years 2010 to 2018 have been analyzed. Analysis was also carried out on five banks with high NPAs in order to study the impact of restructured loans and NPAs on their performance.

1.4.9 Sources of Data

The study has utilized both primary and secondary sources of data.

1.4.9.1 Primary Data

Primary data was collected by administering questionnaires to the Chief Financial Officers/ Financial Managers of various companies, AGM/ GMs from the banking sector and to professionals who have participated in the Corporate Debt Restructuring process. Discussions from experts have also been used.

1.4.9.2 Secondary Data

Secondary data was collected from the websites of the CDR cell, RBI, MCA, CMIE and the official websites of the various companies and banks considered for the study. Figure 1.3 shows the various sources from which data has been collected.

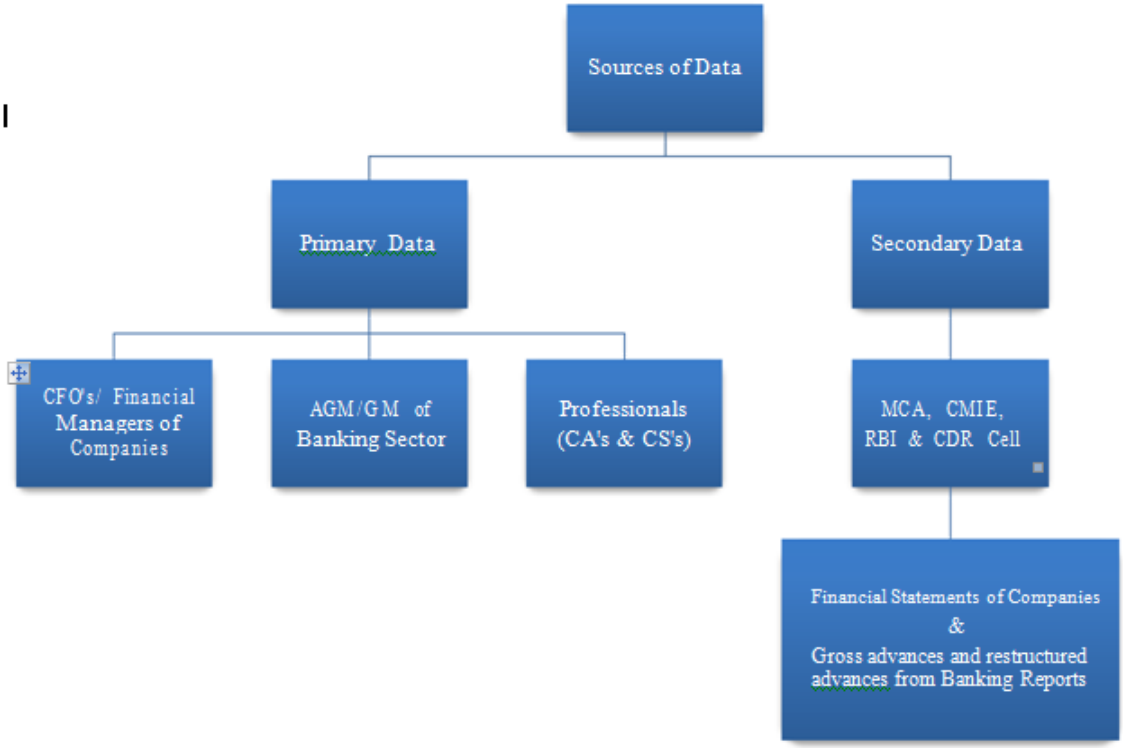

Figure 1.1: Sources of Data

1.4.10 Type of Sampling

Purposive and Snow ball sampling has been used for the collection of primary data from participants in the CDR cell and secondary data collection.

1.4.11 Sampling and Sample size

The present study includes companies from three major industries – Infrastructure, Textile and Iron & Steel. The remaining companies have been referred to as Other Companies. A total of 74 companies which have been approved and have gone through the Corporate Debt Restructuring mechanism in India have been studied.

Sample includes companies from different industries. Based on the criteria of the highest number of companies that went for restructuring, three industries- Infrastructure (22), Textile (10) and Iron & Steel (7) have been considered. The remaining companies have been grouped as Other Companies (35).

Sample Size for Collecting Data through Questionnaires

Out of the 250 questionnaires distributed, only 108 have been used for analysis.

Table 1.4 below displays the respondent groups and the sample size used in the study. Figure 1.4 and figure 1.5 illustrate the tools used for primary and secondary data analysis.

Table 1.4: Size of Respondents

Respondents	Number
CFO's/ Financial Managers of Corporates	32
AGM's/ GM's from Banking Industry	56
Professionals (CAs & CSs)	20
Total	**108**

1.4.12 Tools of Analysis

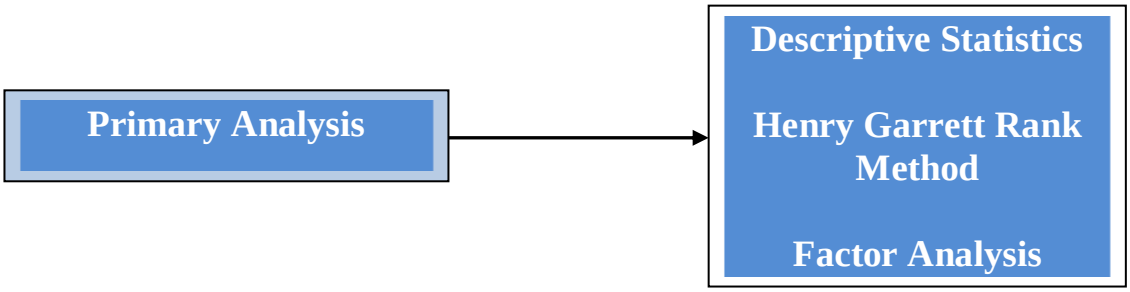

Figure 1.2: Tools of Analysis – Primary analysis

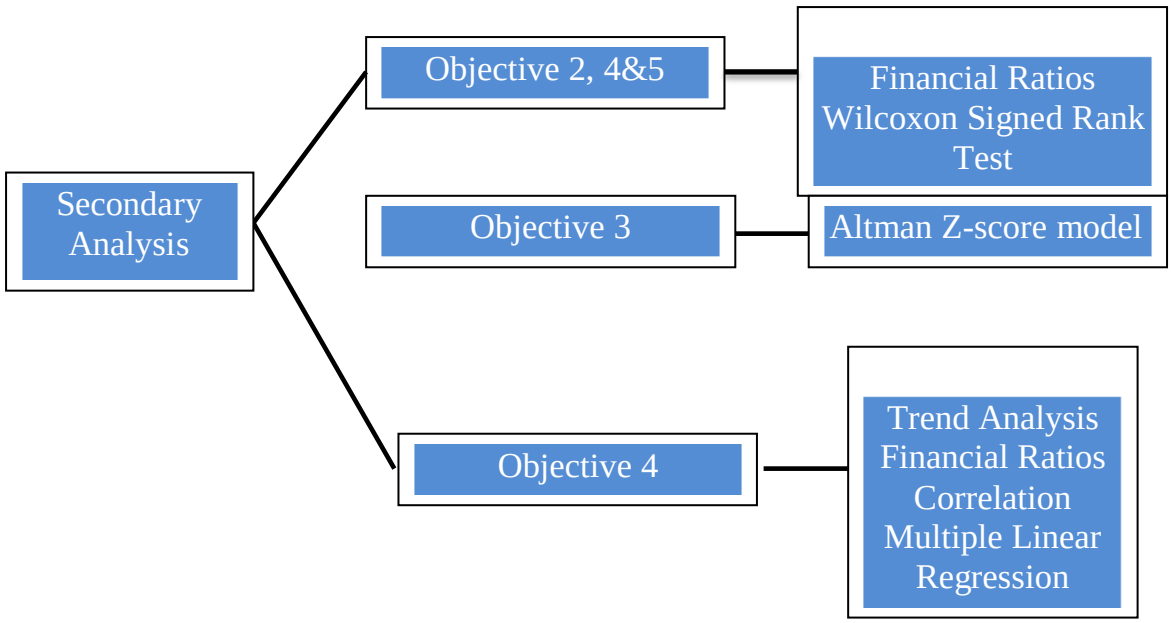

Figure 1.3: Tools of Analysis – Secondary analysis

1.5 Chapterization of the Thesis

The thesis has been presented in six chapters. The first chapter contains the introduction along with the research methodology, which includes the research gap, research questions and objectives, research hypotheses, significance of the study, sampling, tools of analysis used and the chapterization of the complete thesis.

Chapter Two is a comprehensive review of existing literature. This chapter presents the literature as follows: financial distress, performance of companies' post the restructuring period, variables that impact bank performance and various prediction models.

The third chapter gives an overview of Corporate Debt Restructuring. It includes financial distress, need for restructuring, types of restructuring and methods of debt restructuring. Laws related to insolvency have been explained. The genesis of debt restructuring in India, its objectives, different schemes and the current status are also covered.

The fourth chapter deals with the financials of selected companies before and after the restructuring process and measures their financial health after the CDR process using z-score. It also contains industry wise analysis.

The fifth chapter explains the trends in gross and net non-performing assets, restructured loans and the impact of these on the performance of the banking sector.

The sixth chapter contains Primary data analysis identifies the important reasons behind financial distress and the measures necessary for greater effectiveness in the norms, design and implementation of the restructuring process.

The seventh chapter gives an overview of Insolvency and Bankruptcy code 2016.It includes need, objectives, what makes IBC different from other mechanisms, eligibility and process of CIRP, Liquidation process and statistics.

The eighth chapter summarizes the findings of the study and presents suggestions and recommendations to the CDR cell along with scope for future research.

CHAPTER TWO

LITERATURE REVIEW

CHAPTER TWO

LITERATURE REVIEW

Businesses do not always result in profit. Every so often, firms suffer losses and are unable to meet their financial commitments. This state, referred to as financial distress, can lead to liquidation and bankruptcy. In order to avoid such severe consequences, a company can opt for renegotiation or restructuring. According to Bhagban et al, "Restructuring has become a continuous process for most corporates in order to sustain and expand their business or to make it more beneficial with better structure for its current needs." Most companies in India have used debt restructuring for coming out of financial distress.

Review of existing literature not only reveals good understanding of concepts in a selected area but aids in finding gaps and also provides basis and justification for the study.

This chapter covers the theoretical framework and previous studies on financial distress, corporate performance post debt restructuring period and its effect on the performance of the banks along with financial performance measures for bankruptcy prediction models. The first section deals with literature on financial distress and causes thereof; the second section contains literature on different restructuring methods and their impact with special emphasis on the influence of debt restructuring on corporations and banks and their financial performance. The third section deals with performance measures and bankruptcy prediction models.

2.1 FINANCIAL DISTRESS AND ITS REASONS

Corporate financial distress has become a common occurrence all over the world, even in developed countries like the US and UK. One of the main objectives of every business is profit maximization. However, due to various avoidable or unavoidable reasons, this may not

be possible all the time. In financial literature, financial distress has been addressed in different ways.

Lin (2009) defined it as **"**A firm unable to pay its financial obligations as it matures." This definition is based on the 'cash flow' or 'liquid assets' model.

Platt and Platt (2002) advocated that a firm could be considered as being financially (i) distressed if it had several years of negative net operating income (or) (ii) suspension of dividend payments. This is because financial distress pushes companies to reduced levels of profitability and cash shortages.

Doumpos (1998) described distress in terms of negative net asset value. In the accounting point of view, this is when a firm's total liabilities exceed total assets. A firm is financially distressed if its accumulated losses are more than 50 % of the company's net worth

Wruck (1990) explained financial distress to be the state of a firm in which its current obligations like trade credit and interest expenses are not satisfied by the operating cash-flows. In such situations, firms need to undertake corrective action.

Natarajan (1985) expounded the symptoms of corporate distress. He mentioned seven symptoms (i) excessive and continuous dependence upon external funds, (ii) negative working capital, (iii) irregularity in meeting debt service obligations, (iv) cumulative losses resulting in an erosion of capital, (v) under-utilization of installed capacity, (vii) stoppage of production for a long period and frequent interruptions in sales.

Altman (1983) differentiated financial distress based on two forms i.e. flow-based insolvency and stock-based insolvency. If the negative net-worth of a firm leads to the value of its debts being more than the value of its assets, it leads to stock-based insolvency. If a company's cash flows do not cover its contractually required payments sufficiently, it causes flow-based insolvency issues.

Carmichael (1972) referred to the financial difficulty that a company encountered as a situation where there was insufficiency of liquidity, equity, liquid capital and default of debt.

A firm might be in financial distress because of either or both of internal as well as external environmental factors.

Andualem (2015) studied manufacturing firms in Ethiopia. The role of debt coverage ratio was found to be vital in addressing distress. Liquidity, profitability and efficiency had a positive and substantial impact on the debt coverage ratio. It was suggested that a bank must analyze the liquidity, solvency and profitability in the loan evaluation process itself in order to minimize the debt burden through application of various techniques. Financial distress has a negative impact on the debt coverage ratio, leading firms to bankruptcy and liquidation.

Paul Halpern (2009) observed a sample of highly levered transaction firms and found that the composition of debt has a strong influence in firms avoiding financial distress (or) bankruptcy when changes are recommended in the governance.

Philip Jostarndt (2008) investigated a sample taken between 1996 -2004, consisting of 267 German companies which underwent financial distress He found that financial distress affects corporate proprietorship and control. Strong evidence suggested strengthening of internal monitoring efficiency. Financial distress causes a gradual shift in mechanisms of corporate control from internal to external control.

Hotchkiss (2005) explained that if a firm's debts are more, the likelihood of the company being in distress would also be more.

Lubomir Lizal (2002) explored the causes of financial distress and found them to be inappropriate allocation of assets, right structure of assets but bad financial structure with liquidity constraints and bad management.

Chan Hyun Sohn (2002) examined the characteristics that caused weakness in corporates in the Republic of Korea. The first cause was excessive and inefficient investments and highly leveraged and diversified businesses financed by debt. The second was economic conditions which influenced short term liquidity leading to problems.

Andrade (1998) studied 31 highly leveraged transactions of financially distressed companies. The estimated financial distress cost of these firms was 10 to 20 % of their value, whereas other firms who did not suffer from adverse economic shock had negligible financial distress costs. The prime factors for causing distress are usage of huge debt as finance, poor firms and industrial performance.

Chemmanur T (1994) suggested that it is important that companies have the ability to renegotiate debt terms informally with a few of its leaders. They found that highly leveraged transactions involving civic debt had higher probability of facing financial bankruptcy/distress.

Opler (1994) studied industry downturns and found a positive relation connecting the performance and the financial distress of a firm. Concentrated industries which engaged in research and development were discovered to suffer the most in economically distressed periods. During industry downturns, firms with more debt (or) leverage got less operating profit and less market share than their peers from the same industry. The sales of firms with high leverage declined by twenty-six percent more than those of firms with lesser leverage.

Shleifer and Vishy (1992) predicted that when a distressed firm's industry performs badly, its assets are relatively illiquid which makes the state of financial distress more costly. Buyers who value the assets of such firms would find it most difficult to purchase them.

Altman (1984) observed that unexpected decrease in sales is likely to have contributed to financial distress.

Rose et al (1982) found that macro-economic conditions are significant in deciding a company's success or failure.

Singh P. (1979) presented a banker's view on the role of the banking system in tackling industrial sickness. He suggested that poor management was the most dominant factor which led to industrial sickness.

Other major factors leading to financial distress include: short term funds being used for long term purposes, application of funds for unauthorized purposes, delay in commencement of operations due to delay in clearance, competition in the market, lack of technology up-gradation, slowdown in the economy, interest rates, changes in policies of the government, investment diverted into other projects and inaccessibility of working capital.

2.2 RESTRUCTURING AND DEBT RESTRUCTUNING IMPACT

Srinivas Rao (2015) studied the corporate debt restructuring framework and the trends in restructuring with a case study of Vardhaman Poly-Tex Company, a part of the Oswal Textile Group. He discovered that restructuring is a necessity for individual companies when they face problems because of economic upturns and downturns. The ethics and integrity of members and professionals involved in the CDR process decides its rate of success.

Naohisa Goto (2012) found that firms having more unsecured debt restructure it successfully out of court. When the restructuring process is carried out once a year, a negative net worth was reported by distresses firms. Firms having negative net worth have been found to be more likely of receiving debt for equity swaps or altogether forgiveness of debt amount. It was also found that banks tend to resolve financial distress in the interest of shareholders and creditors.

Kotaro Inoue (2010) examined Japanese firms which had out of court debt restructuring from 1990 and studied their performance. He found that in comparison to restructuring under

chapter 11 in the US, "out-of-court restructuring of troubled firms in Japan was less effective in improving profitability. It was also discovered that restructurings associated with new outside management and new capital injections were more likely to lead to genuine improvement in financial performance. These results are based on the Operating Margin and Operating Income /Assets ratios, found to be significantly lower than the industry median with no improvement in the post-debt reflection period. After restructuring, modest improvement was observed in the ability to make interest payments on debt. Not only did firms have smaller sized assets, but their profitability also declined when compared to other industry peers. In over five years after the restructuring process, profitability was significantly lower than the peers."

Carapeto (2005) suggested that information asymmetry leads to extensive bargaining and numerous rounds. In cases when an agreement has to be reached, it results in reorganization plans.

Kahl(2002) In spite of being highly leveraged, many companies continue to invest and exhibit poor performance even after debt restructuring. Kahl described financial distress as a dynamic process. He emphasized on offering incentives to creditors for learning about the recovery prospects of financially distressed firms. The liquidation decision might be postponed by creditors to understand a distressed firm's feasibility in a better manner and make an informed final decision on whether to liquidate or not.

Denis et al. (2000) found that restructuring is connected with positive abnormal returns when a company is in distress.

Padilla (2000) suggested that the debt restructuring process triggered operational actions which in turn increase the 'focus' of a company. This allows creditors to impose their views on a company's future endeavors, leading to a shift in the control of residual claims and

rights from the shareholders to creditors. This increases the worth of the firm, thereby reducing future distress.

Alderson and Betker (1999) compared the performance of companies with benchmark portfolios. Firms that underwent restructuring neither over-performed nor underperformed. These firms showed poor accounting practices with the operating margins below the industry median.

Edith Hotchkiss (1995) found that in the US, when new management from outside took over a firm; the financial position of a firm was good especially after introducing a fresh capital in the post restructuring period.

Hotchkiss (1995) revealed that creditor intervention in financially distressed firms does create value.

James (1995) explained that in the first two years post debt restructuring, many firms raise their investment expenditure only slightly. Based on the results of a sample of 102 debt restructuring cases, it was found that banks agree to make a concession only in the case when public debt holders also agree to reorganize their claims. Generally, when public creditors were found to be holding a smaller fraction of the debt, banks had higher probability of waiving the principal and accepting equity.

Jensen (1991) suggested that if the informal mechanism is cost-efficient, it helps to avoid bankruptcy since private restructuring can be used as an alternative tool for it.

Gertnerand Scharfstein (1991) focused on multiple creditors and the conflicts which arise due to them. In cases where restructuring out of court is successful, the payment of holdouts is done on the original contract. Bankruptcy is avoided as it is expensive. In the case of multiple classes of creditors, inefficient liquidation versus reorganization decisions needs to be taken.

Robertt Gertner (1991) formulated a framework for financially distressed firms having unpaid bank and public debt. In cases, when they are unable to procure fresh capital in the workout process, the only feasible way for the firm is to restructure its public debt.

Gilson (1990) investigated how financially distressed companies restructured debt by studying a sample of 169 firms. Half of the companies in the sample restructured their debt using the USA bankruptcy code (Chapter 11). Gilson observed that financial distress could be resolved through private renegotiation when firms have more intangible assets and more debt owed to banks. Private renegotiation was found to be less expensive than the bankruptcy for stockholders. Also, restructuring debt out of court was beneficial to creditors and returns on stock were also high.

Brown (1989) found that "a private workout proves to be successful when the information shared between the management and creditors is symmetric".

Jensen (1989) elucidated that firms involved in distress-motivated restructuring signify signs of improvement in performance for investors.

Gilson (1989) propounded that in order to avoid default or remedy it, debt recasting can be used to replace an existing debt contract with a new one. 51% of firms listed in the NYSE defaulting or restricting debt ended up distressed. The remaining 49% did not restructure or default debt. The data shows that 80 companies (41%) used private work out to resolve distress.

Foster (1986) explained that a business with a serious liquidity problem is unable to resolve it without large scale restructuring alterations.

Michael Jensen (1986) explained that companies used debt financing to improve their performance and debt payment was paid from free cash flows. Managers used free cash flows to increase the size of the firm.

Haugen and Senbet (1978) Neo-classical paradigms of financial distress suggest that default leads to transfer of sales which are less expensive and gives control to the firm's lenders to restructure their claims in order to maximize the company's value. Economic theory also recommends that in a condition of distress, monitoring may be more effective when carried out by private owners. This is because present ownership has the highest level of responsibility and therefore, better incentives to obey fiduciary duties.

2.3 FINANCIAL PERFORMANCE MEASURES AND PREDICTION MODELS OF BANKRUPTCY

Sanesh (2016) applied the Altman Z-score model to the NIFTY 50 companies, other than banks and financial companies. The study tries to predict the probability of default in companies due to financial distress with the help of Altman Z-score.

Vikas (2014) tried to find the financial strength of the logistics sector in the India scenario using the Z score model. He concluded that health of the sector was good as the Z-score increased to 3.01 from 2.54, indicating the improvement in performance over the years (2006 to 2010).

Mizan and Hossain (2014) studied five companies from the cement industry in Bangladesh and analyzed their financial solvency with the help of the Altman Z-score model. Their study showed that two out of the five companies were financially sound, one was in the grey zone and two had to concentrate on improving their financial health as they were sick.

Ray Mc Namara (2011) studied about accounting variables and suggested that macroeconomic variables played a vital role in determining a company's ability to predict financial distress. He used principal component analysis to reduce a set of economic factors and arrive at the conclusion that financial distress can be explained by employing economic

variables like Interest rates, Gross Domestic Product (GDP) and change in corporate profits before tax as they have a significant influence on a company's performance.

Ramarathnam (2010) investigated five firms in the Indian steel industry in the years 2006 to 2010 and applied the Altman Z score to inspect their financial health. The study found that the analyzed companies were financially sound during the given period.

Azman and Muthalib (2004) studied Malaysian firms and tried to understand whether capital structure and profitability were impacted by corporate debt restructuring. They used the T-test and Wilcoxon test and found a considerable improvement in the profitability of the firms.

Edward Bowman (1999) explained how accounting performance is calculated to know a firm's performance through 'return on investment' and 'return on equity'. In the event of restructuring, change in results can be seen by comparing the accounting performance post-restructuring with the performance in the period prior to restructuring. These changes could be recognized only over longer periods.

Bowman et al. (1999) classified the measures for corporate restructuring performance into two. The first one is based on market performance with abnormal movements in the prices of stocks after the announcement of restructuring. The second measure is based on how the accounting performance of a firm brings about changes in the financial measures of its performance, i.e., in 'Return on Equity' and 'Return on Investment'. Comparing pre-restructuring performance with post-restructuring performance, it was observed that such changes take place over many years.

Altman (1968) found a positive relation between efficiency and a company's Debt Service Coverage ratio. A company with higher efficiency had more ability of debt service coverage.

Altman (1968) defined the Z-score model with five predictive factors which are based on financial ratios to predict bankruptcy, considered to be a reliable tool.

2.4 RELATIONSHIP BETWEEN RESTRUCTURING AND BANKS

Prashant (2016) evaluated the effect of NPAs on banking sector. Data related to SBIs and its associates were used to evaluate the relation between the gross non-performing assets and net profit. Except SBI, all the banks selected for the study showed negative correlation between GNPA and net profit.

An **RBI working paper (2016) "Assets quality and monetary transmission in India"** assessed the impact of the asset quality of banks using the determinants of NIM (Net Interest Margin). This study revealed that the GNPA ratio and stressed assets ratio (NPA plus restructured assets) have a positive effect on the NIM of scheduled commercial banks.

Jayakkodi (2016) explained that the high level of NPAs which has an impact on a bank's profitability and net worth is because of an increase in number of credit defaulters. This study compared the performance of banks in the public and private sector, concluding that performance of the former was better than the latter whereas NPAs were found to be more in public industry banks. The impact of NPAs on profitability measures and Return on Assets was also studied. The problem of NPAs was found to be not because of small borrowers but with large borrowers. It was also observed that low recovery and high provision on NPAs lead to bank losses.

Mallick (2015) "used the lenders' analysis approach to observe the CDR mechanism and its effectiveness in evaluating the interactive effect of market power on bank stability. He found that the implementation of the program led to a substantial increase in the stability of banks, though this increase was limited to a certain threshold level of market power. Past the threshold, the impact subsided".

Linder (2014) mentioned that there was an increasing trend in restructuring and amount of NPA's in the Indian banks. The share of substandard and doubtful assets of corporate restructured accounts has been increasing over the years.

Damijan (2014) studied Slovenian firms and the extent of financial leverage they used. He reported that the firms had huge unsustainable debt, threatening firm's performance and survival, and effecting employment, investment, productivity and exports. Damijan opined that comprehensive bank restoration carried out in a timely manner would aid in the economic recovery of such companies.

Zahoor Ahmed (2013) studied various reasons for NPAs: improper processing of loan proposals, poor monitoring, and willful defaulters and so on, and so on, finding them to be a major problem for the banking Industry.

Jaynal (2011) concluded that the high level of NPAs were impacting the earning capacity and profitability of banks. The reduction of NPAs was a huge challenge for the Indian economic scenario.

Inoue (2008) found a positive effect on the market value of financially distressed firms only when they were monitored by bank supervisors.

Bruner (2008) studied bank relationships in debt restructuring activities by using a couple of banks as proxy and the absence of widespread involvement of banks in debt restructuring of the respective borrower companies. He found that the probability of recovery is negatively related to the total number of banks in a distressed situation.

The RBI working committee (1999) documented write off, compromise and one time settlement as options to be considered for the recovery of NPAs. It recommended a compromise model for the recovery of NPAs.

Byong Ho Kang (1998) suggested that banks must play an important role in corporates by lowering excessive debt and triggering restructuring based on core competence in corporate work outs. Restructuring ownership as well as corporate governance are also very important for the success of restructuring. Government should also make new legislation and regulations which aid corporate restructuring for the successful turnaround of the companies.

Andrade and Kaplan (1998) explained that the incapability to fulfill current obligations to third parties was a result of financial distress, leading to an increase in non-performing loans with commercial banks.

Christopher James (1996) examined the determinants of effective private restructuring of debt in the relation between structure of public debt exchange offers and bank debt forgiveness. The success of restructuring was found to be significantly related to bank participation. Exchange offers depended on bank concessions. They suggested that the overall structure of a firm's public and private negotiations significantly affected its ability and capital structure in the situation of financial distress. Private lenders play an important role in out of court debt restructuring of firms.

Fundenberg and Tirole (1995) discovered that moving future earning to (future) current period in order to (decrease) increase profitability during lean (fat) years, bank managers charge less (more) on loan loss permissions to the net income.

Sheard P (1994) discussed the key role that major banks play in the reorganization of distressed firms through private workout plans, simultaneously negotiating with the distressed firms and other lending banks.

Rajan R G (1992) explained how banks realize more benefits through multiple banking than single bank account financing.

Gertner & Scartstein (1991) found that bank participation has a vital role in restructuring for resolving information and hold out problems which hinder public debt exchange offers.

Jiang (2011) examined firm-bank relationships in Taiwan during times of financial distress and their influence on successful private debt restructuring. The study found that stronger relationships have a greater probability of success in debt restructuring through private negotiation. Credit rating was one of the factors for successful restructuring .Duration analysis of the length of time was used to analyze data. As Taiwan is mostly dependent on banking, results showed that firm-bank relationships played a significant role in private debt restructuring in financially distressed firms.

A report on financial stability concluded that corporate financial distress depended on high or low debt servicing capability. In stressed scenarios, this would impact the assets quality of lender banks. Out of total bank credit, most part comes from scheduled commercial banks.

2.5 Summary

This chapter has reviewed the literature on financial distress and its reasons, financial performance measures and prediction models to assess financial distress, impact of restructuring on corporate performance and relationship between corporate restructuring and banks relationship advocated by various authors. Studies explained that a firm might be in financial distress because of either or both of internal as well as external environmental factors. They mentioned solvency, liquidity and profitability ratios are most important indicators to assess the financial health of a company. Assessment of corporate position and its failure has been a topic of much interest and relevant in the current scenario.

CHAPTER THREE

THEORETICAL FRAMEWORK

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3.1 Financial Distress

Every business needs funds. These funds are raised through either equity or debt and are invested in the business to make profits through operations. The following reasons require financing through funds:

3.1.1 Reasons to financing funds

1. **To start a business**

   Before starting any business and its operations, there are a few expenses to be incurred. These are called preliminary expenses and include statutory fee, legal expenses, company registration and market and acceptability surveys about the business. A company incurs these expenses in its incorporation stage. To meet them, promoters borrow money from friends, family and others. The company later is made responsible for paying back this borrowed money.

2. **To have sufficient working capital**

   Working capital measures financial strength of a company in the short term. Working capital is used for day to day operations. If working capital is insufficient, operations are happened and may even get halted leading to cash flow problems in business and resulting in losses. Therefore, in order to ensure adequate enough working capital, funds are raised from available financial resources.

3. **To ensure that returns are higher than the cost of borrowing**

This is one of the most important reasons that companies borrow money. They use borrowed money to generate profits higher than the cost of borrowing. Many borrow to capture market opportunities and be successful in the competitive market.

4. **To reduce personal risk**

It's considered better to borrow money and invest into business in order to reap benefits rather than investing one's personal savings. Also, interest on borrowings is tax deductible as per Tax Laws in most countries.

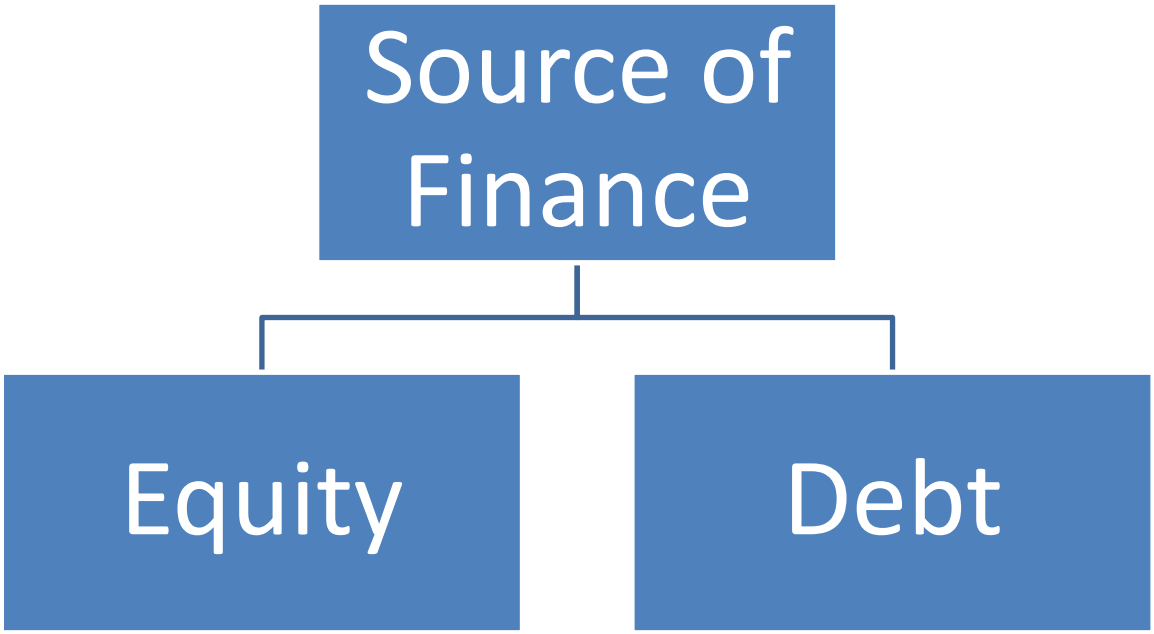

Figure 3.1: Source of Finance

The Debt – Equity ratio measures the amount of debt and equity and their proportion in the capital structure. It is the amount of debt used in comparison to equity. If this ratio is too high, it leads to problems in business. The ideal debt – equity ratio differs from industry to industry.

3.1.2 Advantages of Debt:

1. It can be used as a strategic tool for the growth and expansion of business.
2. Debt is cheaper in comparison to equity.
3. Debt is cheaper and less than the business opportunity cost. When the right opportunity presents itself, debt is often considered to be the better strategic choice. Whenever the returns are higher, debt is worth the risk.
4. When interest is paid on debt, it reduces tax burden.

3.1.3 Implications of Excessive Debt

1. Capital sources

If the company wants to start or expand, it requires capital which is used to invest in long term business needs like plant and machinery, building etc. Capital is raised through equity or debt, each having its pros and cons. In case of debt, fixed cost of capital has to be paid whether the company makes adequate profit or not.

2. Bankruptcy

One of the dangerous consequences of excessive debt is bankruptcy. Bankruptcy leads to liquidation, where creditors sell company assets to recover the lent money as the company is unable to repay immediately or in the near future.

3. Limited flexibility

Too much debt makes meeting short term and long term obligations very difficult. It also makes a company's financials unattractive to lenders and creditors. This decreases a company's prospects if it wants new finance from lenders and suppliers on credit.

4. Lesser profits available to shareholders

In most cases, a company with more debt will be less profitable because it would have to pay monthly principal and interest. Company revenues are utilized to pay debt-service obligations, resulting in lesser profits for the owners of the company or the company for its operations.

5. Reduces Ownership

A firm with high debt-equity ratio disseminates the ownership of shareholders owners in business.

6. Violation of covenants

As per loan agreements, every company should maintain adequate financial ratio levels. More debt may imply violation of covenants formed between the company and the lenders.

Financial Distress

Edward Altman (1999) "Financial distress is a situation where cash flow is insufficient to cover current obligations. These obligations can include unpaid debt to suppliers and employees, actual or potential damages from litigation and missed principal or interest payments under borrowing agreements."

"A firm is in financial distress at a given point in time when the liquid assets of the firm are not sufficient enough to meet the current requirements of its contracts."

3.1.4 Reasons for Financial Distress

There are many studies which have explored the causes of financial distress. They can be:

1. **Financial Factors**
    a. Excessive borrowings
    b. Inaccessibility to finance for starting a project
    c. Inaccessibility to working capital
    d. Funds which are for short term purposes, used for long term
    e. Investments are diverted into other projects
    f. Net worth is lesser than investments in subsidiaries and associates
    g. Application of funds for unauthorized purposes
2. **Operational Factors**
    a. Delay in commencement of operations
    b. Higher cost of production
3. **Marketing Factors**
    a. Less than expected sales
    b. Lack of market research
    c. Tough competition in the market
    d. Lack of critical tie ups
4. **Managerial Factors**
    a. Lack of effective collection machinery
    b. Choice of wrong projects

c. Lack of focus on implementation of projects

d. Unviable business strategy

e. Lack of adequate control

f. Lack of timely diversification

5. **Technological Factors**

a. Lack of planning for technology up-gradation

6. **Political / Economic Factors**

a. Changes in policies of government

b. Slowdown in economy

c. Interest rate changes

d. Fluctuation of rupee value

e. Delay in obtaining permissions (legal, regulatory and technical)

(Altman,1984)(Natarajan,1985)(Vishy,1992)(Andrade,1998)(Lizal,2002)(Hotchkiss,2005)(Acharya,2007)(Halpern,2008)(Malik,2013)

As already stated, financial distress leads to liquidation or bankruptcy. To avoid these and also a default, a company has two options. It can file for bankruptcy; or it can try and renegotiate with its creditors privately (a workout). If debt is restructured through private re-negotiation, legal costs are less because decisions can be taken quickly.

One of the advantages of private renegotiation is that both stockholders and lenders benefit from out of the court restructuring because renegotiation costs much less when compared to bankruptcy. The cost associated with financial distress is known as “costs of financial

distress." It is further sub-divided into direct costs and indirect costs. Altman (1984) and Warner (1977) attempted to measure them through their studies. Direct costs include transaction costs like legal expenses and banking services while other costs like manager's time which would be spent in dealing with bankruptcy or in debt restructuring come under indirect costs.

The efficient resolution of financial distress depends on whether a company should continue functioning or liquidate. If a company's existence seems to be viable in the future, it should continue, else liquidate. Once the decision to continue is taken, a viable firm should try and come out of financial distress as quickly as possible.

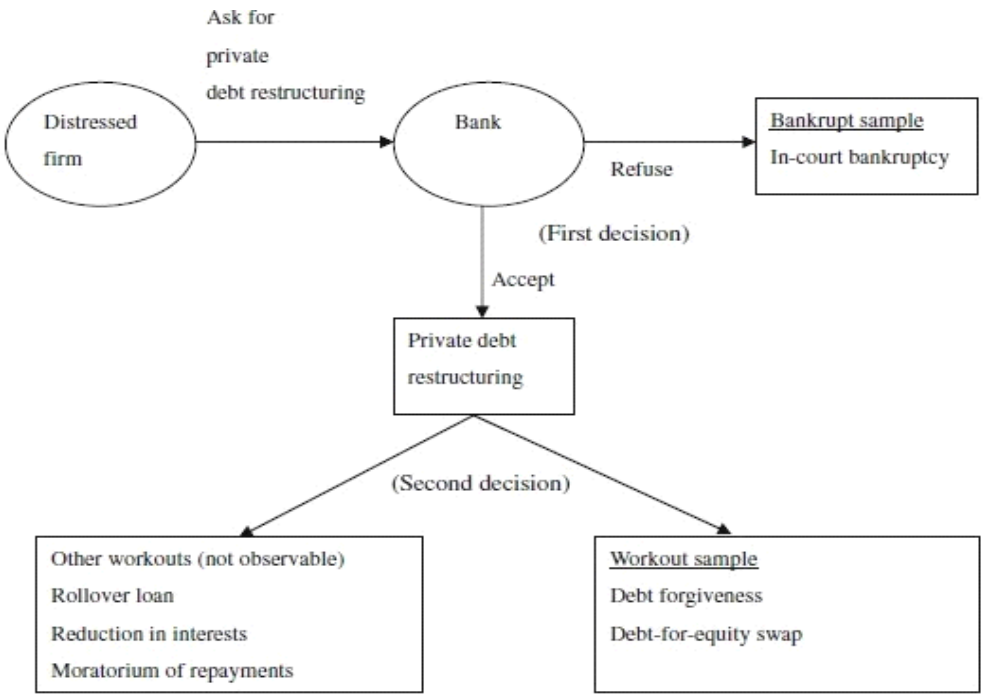

Fig. 1 Flow of banks' decisions

Source: Goto, N., & Uchida, K. (2012). How do banks resolve firms' financial distress? Evidence from Japan. Review of Quantitative Finance and Accounting, 38(4), 455-478.

Figure 3.2: Flow of bank's decision

Liquidation entails the firm to sell its assets and distribute dues in order of established priority to all the creditors. When all other strategies are exhausted, this is the last resort. An alternative course of action is restructuring/renegotiation.

3.2 Restructuring

Restructuring is a tool meant for companies in financial distress which has arisen due to various factors in the internal and external environment.

3.2.1 Need for Restructuring

The following are the usual factors which necessitate for restructuring

1. To utilize idle assets of a company
2. To focus on core strength of the organization by proper allocation of managerial and infrastructural capabilities
3. To expand or divert economies of scale in order to capture local and global markets
4. To revive sick units to healthy conditions by making profits
5. To improve and upgrade technology and R&D in specific business areas
6. To maintain a proper capital structure combination of debt and equity in order to decrease the servicing cost, also increasing the ROCE.
7. Adopting changes in technology to compete with the market and improve corporate performance
8. To overcome slow growth in individual industries
9. To bring changes in the existing management

3.2.2 Types of Restructuring

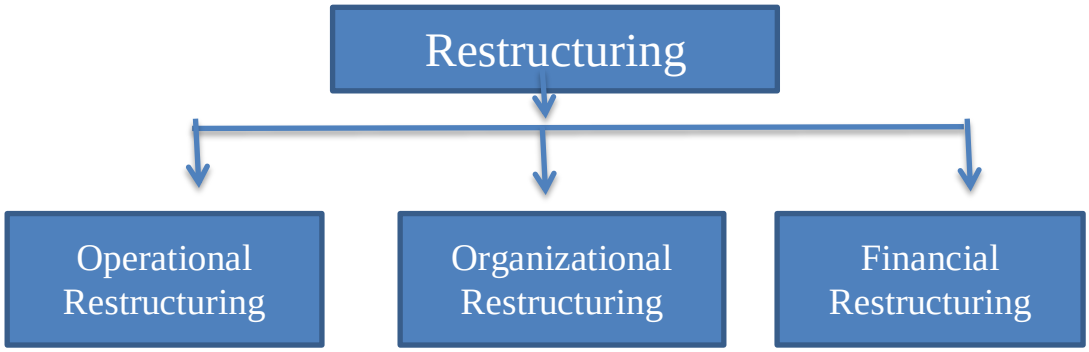

Figure 3.3: Types of Restructuring

Operational Restructuring

Operational restructuring involves changes in the business operations in an organization.

5. **Marketing Restructuring:** This includes changes in the increment of sales by Changing price policies

B. Product Restructuring: Product restructuring comprises making changes in the product line.

1. **Technological Restructuring:** This involves upgrading technology according to changes in the field.

Organizational Restructuring: It is the process of making changes in the organization's internal structure by revamping departments, ownership etc. The objective here is to make the organization more profitable.

Financial Restructuring

"Financial restructuring is the process of reshuffling or reorganizing the financial structure, which consists of equity and debt"

It is necessary in order to avoid untimely liquidation of assets. It is an agreement between creditors and debtors through a third with certain terms and conditions which replace old terms and conditions. These changes ensure continuation of company operations by minimizing losses to lenders.

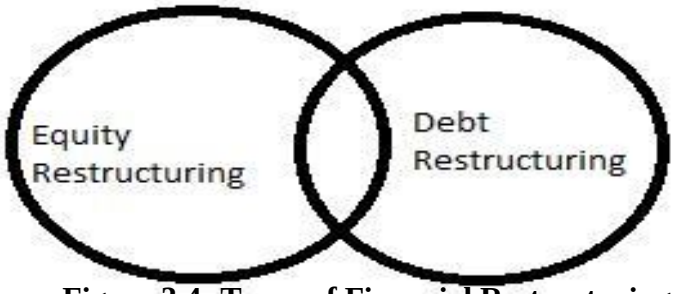

Figure 3.4: Types of Financial Restructuring

Equity Restructuring: Equity restructuring is where the equity capital is rearranged and the shareholder's capital and reserves are reshuffled in the balance sheet. Restructuring of equity share capital and preference capital is complex that includes the role of law and is highly regulated.

Debt Restructuring: Debt restructuring is where complete debt capital of a company is rearranged. The balance sheet items that contain debt obligations are reshuffled. The financial manager duty is to look for certain options where he/she can lower the cost of capital and also increase the efficiency of the firm, hence there is a possibility of constant reviewing and recycling of the debt structure to maximize the benefit. The components of debt restructuring are (i) secured long term borrowings (ii) unsecured long term borrowings, (iii)secured working capital borrowings and (iv)short term borrowings.

3.3 Different Mechanisms/ Laws dealing with Corporate Insolvency

3.3.1 Companies Act, 1956 (Section 391 to 396)

Area 391-396 of the Companies Act considers development of bargain or course of action, encouraging going into such plan between the organization and the lenders or individuals. At the time of making of such scheme of arrangement, affected creditors are divided into suitable classes and plan can be passed by the High Court with the assent of lenders at a rate of 75%.

3.3.2 Sick Industrial Companies Act (Special Provisions), 1985 (SICA Act)

Before the liberalization and globalization of the Indian economy, most companies were sick because of the internal and external factors of the business environment. They suffered from loss of production, employment and their corporate sickness was a concern to both state and central governments. In order to utilize idle assets, protect employment and to safeguard the financial institutions assets, a need to rehabilitate sick companies was felt.

In the year 1985, the 'Board for Industrial and Financial Reconstruction' (BIFR) and 'Appellate Authority for Industrial and Financial Reconstruction' (AAIFR) came into existence with the passing of Sick Industrial Companies Act (SICA) for restructuring of sick firms. It could be applied only to sick companies in some sectors, while companies in trading, services and other similar activities were kept away, this gap was later filled with changes made through the Industrial Companies (Special Provisions) Amendment Act, 1991. The main objectives of SICA was to assess feasibility of firms to revive them if possible, protect employment and stop the drain of public and private resources.

SICA was not successful as addressing the problem. BIFR makes rehabilitation plan whereas liquidation was ordered by high court. Since the experience with SICA was not satisfactory, its provisions were merged with the Companies Act, 1956 as a new Companies Act, 2002.

3.3.3. The Recovery of Debts due to Banks and Financial Institutions Act, 1993

The Banks and Financial Institutions Act, 1993 was passed to guarantee expedient recovery of obligations. The act offers setting up a different arrangement of tribunals which are called Debt Recovery Tribunals (DRT).

The prerequisites of this act were not applied to those whose debt is under 10 lakh rupees because of any bank or or consortium of banks or financial institution. The Government of India has set up 33 debt recuperation tribunals and 5 debt recovery appellate tribunals everywhere throughout the nation to help bank or financial institutions to recover bad debts rapidly and proficiently.

3.3.4 "Securities and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002" (SARFAESI)

Securitization is exchange of non-tradable assets for cash. A bank's main functions are accepting deposits and lending money. The loans provided to the firms are recorded as assets in the financial statements. These banks hold these assets till the repayment of loan, which usually takes a long time. This does not mean that the funds of banks are blocked in form of loans because securitization is a way of unblocking such blocked assets.

Importance of Securitization

"In case borrower fails to repay a loan, his/her account is categorized as a non-performing asset (NPA)". NPAs are economic cost to the country, because funds blocked in the form of NPAs adversely affect the financial strength of lending banks. Increased NPAs becomes a

problem for banks to repay deposits. Hence, some course of action is necessary against defaulting borrowers. Promoters of borrowing companies try to approach BIFR and dilute securities available to banks. The debt recovery tribunal does not help much and their over burdens because of the increase in volume of cases. These issues have led to the revaluation of SARFAESI Act, 2002.

Securitization act targets empowering and engaging secured creditors to claim their securities and manage them without the intervention of the court or to approve any securitization and reconstruction of the organization for obtaining money related resources of any bank or financial institution.

The SARFAESI Act 2002 has enabled banks and financial institutions with various powers. The bank can issue notices to defaulters to pay up due amount and give them time of 60 days. If the borrower does not repay Within the stipulated period, the bank has a right to take control over ownership of assets and appoint a person to deal with secured assets. Through the securitization process, a bank can sell the loans.

3.4 Corporate Debt Restructuring Mechanism in India

Most of the times, firms face financial difficulty because of the factors which are not in their control. In these situations to support firms and security of money loaned by banks, there is a need for new system i.e. ‘corporate debt restructuring’. It refers to the restructuring of firms debt and generally may involve changes in repayment period, amount of installments or interest rate and amount repayable etc.

3.4.1 Genesis of CDR in India

One of the significant and unavoidable facets of any business is risk. which is inevitable. Continuing in the business depends on profit or loss, which are in turn dependent on internal

and external aspects of the business environment. If these aspects influence the business in positive ways, it turns into profit; else, if the effect is negative turn, it turns into losses.

Times when companies face difficulties in meeting financial obligations are called as corporate financial distress. In a situation of financial distress, a company should try to look for the source of the problem and then reorganize/rebuild the financial structure of the business accordingly.

The CDR mechanism is a significant policy for corporations to come out from the condition of financial distress and prevent liquidation. It protects not only just companies but also all other stakeholders a company, especially banks and financial institutions (lenders) by securing their money from being lost in partial repayments in the event of liquidation of company.

Restructuring mechanism to revive companies in India based on various studies from UK, Thailand, Korea, Malaysia etc., The RBI released detailed guidelines about CDR on 23 May, 2001 for banks and financial institutions. CDR is a "voluntary, non-statutory mechanism for restructuring advances of multiple/consortium lenders".

3.4.2 Objectives of CDR

1. To make sure timely and transparent mechanism for restructuring of corporate debts if viable entities are facing problems, for the benefit of all concerned.
2. To prevent liquidation/bankruptcy of viable corporates affected by certain internal and external factors.
3. To lessen the losses of lenders and other stakeholders through an orderly and coordinated restructuring program.

3.4.3 Eligibility Criteria

1. CDR is a non-statutory framework dependent on Debt-Creditor Agreement (DCA) and Inter Creditor Agreement (ICA) based on accepting principles and standards with super majority of 75% leasers (by worth) and 60% of creditors in number.
2. CDR covers only various bank accounts/ledgers and syndication/consortium accounts.
3. CDR cases must have an outstanding aggregate exposure of a hundred million and more.
4. CDR encompasses all classes of assets which come under RBI's 'prudential asset classification standards'.
5. The cases in excess of 25 crore which are pending with BIFR and DRT are eligible to be registered with CDR.

3.4.4 Structure of the CDR

The CDR mechanism structure has 3 tiers in order

1. CDR Standing forum

All banks and financial institutions participate in this forum which is self –empowered general body. It comprises of chief executives of all Indian financial organizations and scheduled banks barring regional rural banks, cooperative banks and non-banking financial firms.

1. The Standing Forum prepares policies and guidelines to be followed by an empowered group and CDR cell for debt restructuring.

2. It aims at smooth functioning of the CDR process.
3. It acts like a bridge between creditors and borrowers.
4. Makes special provisions for some cases which are complicated.
5. It meets at least twice in a year.

CDR Core Group

The group is a part of the Standing Forum. It assists in holding and covering meetings and also in take decisions related to policy matters. The core group comprises of CEOs from BOB, ICICI, BOI, SBI, PNB, IDBI, IBA and officials who represents forum. It is responsible for making guidelines for the functioning of the empowered group.

2. CDR Empowered Group (EG)

The CDR empowered group is the second tier of the CDR mechanism which deals with individual cases of CDR restructuring and comprises of representatives of the level of executive directors from IDBI, ICICI, SBI as standing members and ED level representatives of financial institutions. The board consisting of all institutions and banks and decides the restructuring package of respective cases which are referred to the CDR system.

1. It facilitates conducting of meetings and voting preparation for the members of concerned lenders only.
2. It considers the primary flash report of all cases which are presented by the CDR cell.
3. It decides the package of restructuring of each case.

Empowered group studies the feasibility of rehabilitation within a period 90 days or at best within 180 days as specified by the group. The decision of EG is considered to be final. If it is found that a viable and possible company has been approved by the EG, the restructuring

process starts. If the results of restructuring are not satisfactory, the creditors can take necessary steps for instantaneous recovery of due amount and liquidation.

3. CDR Cell

In the CDR mechanism in India, the CDR Cell is the 3rd tier. It supports all the functions of the CDR Standing Forum and the CDR Empowered Group. Firstly, the CDR Cell scrutinizes reorganization proposals received from borrowers and prepares the detailed restructuring plan which is then evaluated and selected by the EG.

3.4.5 Functioning of CDR Mechanism

The following steps are part of the restructuring process of companies referred for CDR:

Step 1 The Proposal [Time 30 Days]

Firstly, the lead bank or the majority of the stakeholders should submit initial restructuring to the CDR Cell. The nominated proposal is mandatory for the process. The minimum eligibility considered for execution of inter – creditor agreement is 75 per cent of secured creditors by value or 60 per cent of creditors by numbers.

Step 2. Preliminary Scrutiny [Time 30 Days]

It scrutinizes the proposal submitted by creditors.

Step 3. Detailed Review [Time 90-180 Days]

Before submitting a report to EG, the CDR Cell checks the feasibility or viability of a company by considering the following factors such as Debt Service Coverage Ratio, Return on Capital Employed, Loan Life Ratio, Cost of capital, Breakeven Point, and Extent of Sacrifice.

Step 4. The Restructuring Mode [Varies from Case to Case]

The EG approves the restructured plan of the firm. Then, the CDR cell prepares a detailed rehabilitation plan with the assistance of experts and lead institutions.

Monitoring Mechanism

The general success of the CDR mechanism depends on the monitoring of each case for which rebuilding has been actualized by the approval of the CDR EG. Debt Restructuring has a monitoring system as follows:

Monitoring Institution (MI)

It regulates the implementation of the restructuring package in each case, furnishes an update report to the CDR cell every month.

Monitoring Committee (MC)

The EG establishes a MC during the approval of restructuring package. It comprises of representatives from referral banks and CDR lenders with huge outstanding debt and at least one lender with small proportion of outstanding debt.

The MC collects reports on the implementation of the package at an interval of every two to three months in order to revive the process and resolve any existing issues. It provides feedback on the performance of the company vice-versa the CDR projections to lenders. The MC also submits its view and recommendations on various issues related to the restructuring package to the CDR EG/CDR cell. It plays a key role in the restructuring of packages and

resolution of various issues. The monitoring of progress observes the growth to decide the continuation of the sum of the approved package.

3.4.6 Different Schemes under Corporate Debt Restructuring

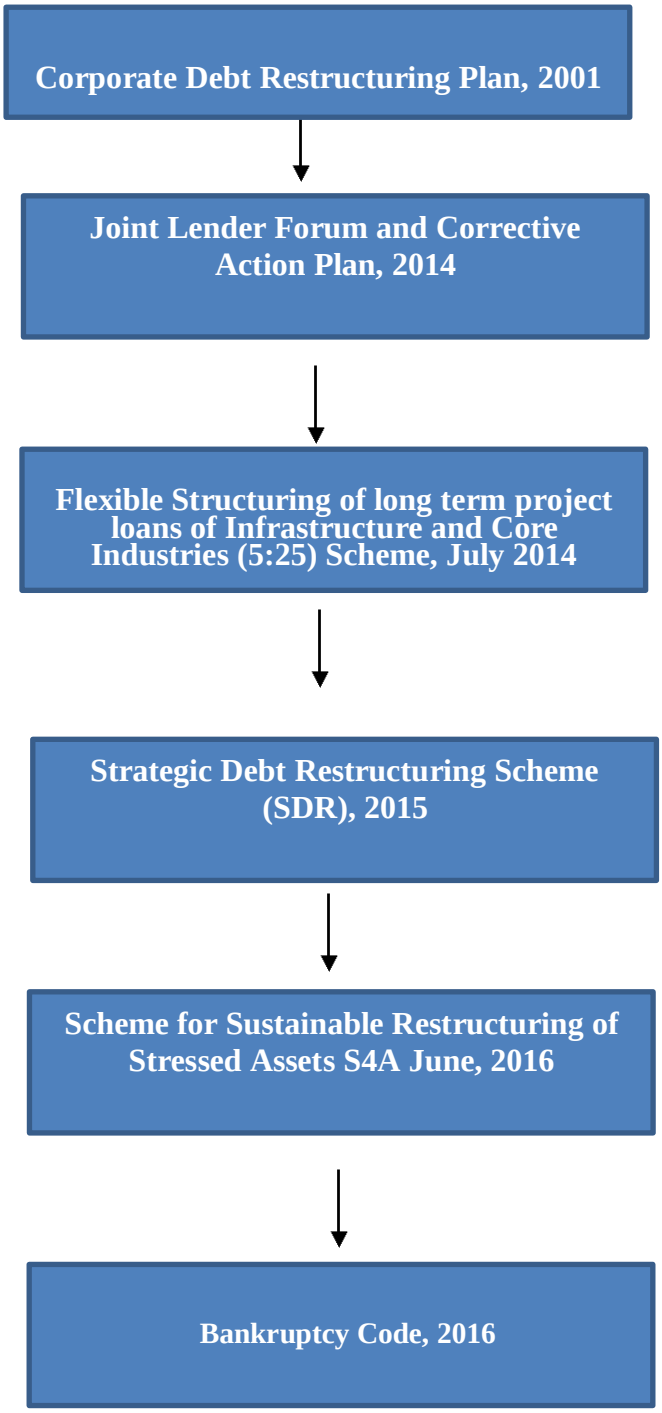

Figure 3.5: Different schemes under CDR

3.4.6.1Joint Lender Forum (JLF) and Corrective Action Plan

With the Indian economy slowing down, many firms are financially distressed, leading to rise in the number of NPA's of banking industry. Therefore, the need is to recognize financial distress early and take necessary steps to resolve it. This plan is known as the "Corrective Action Plan" to recognize early financial distress.

Step 1:

Prior to, loan becoming Non-Performing Asset, Consortium should identify level of stress in account by creating a new subset category namely "Special Mention Account". 'The Special Mention Account" (SMA) are SMA – 0 Non financial signals of incipient stress; SMA – 1 principal or interest payment overdue between 31-60days and SMA-2 principal or interest payment overdue between 61-90days.

RBI has established the Central Repository of Information on Large Credits (CRILC) for collecting, storing and disseminating credit data to lenders. Banks must furnish data of credit details on entire borrowings of firms if unpaid loan is Rs.5 crore and above. They should identify the warning signs of weakness in a borrower account early and form a joint lender forum to formulate corrective action plans.

Step:-2

Formulation of Joint Lender Form

After submitting the reports to (CRILC) as SMA-2, lenders form a committee which is called as a 'Joint lender Forum' and plan for the early recognition of a stressed account. JLF is formed mandatorily for distressed firms, engaged in any activity with aggregate fund based and non – fund based exposure of Rs. 10 crore and above.

Corrective Action Plan

JLF considers the following options to deal with a stressed account:

1. Rectification
2. Restructuring
3. Recovery

Rectification: - In this method, they get a commitment from the borrowers that will not involve any misfortune (or) sacrifice with respect to the existing creditors, they would get other investors since they may not be in a situation add more funds. These measures are taken without changing any terms or conditions of the loan.

Restructuring: When the borrower is not a deliberate defaulter, promoters extend their personal guarantee with supporting copies of their net worth for legal entities. The lender may sign the Inter Creditor Agreement (ICA) and the loan requires the borrower's signature on a Debtor Creditor Agreement (DCA), both useful for the restructuring process.

Recovery: The due recovery process may be employed if the first two options mentioned above are considered to be not possible. The JLF can decide the best process among all available alternatives to recover the maximum amount possible.

3.4.6.2 Flexible structuring of long term Project Loans to Infrastructure and Core Industries (5:25) scheme, 2014

Banks are allowed to flexibly restructure the prevailing project loans given to infrastructure and core industries projects with the choice to intermittently refinance the same as per the rules given below:

1. Infrastructure and core industries which have a collective exposure of all institutional lenders exceeding Rs.500 crores are eligible to give term loans to projects.
2. Without it being treated as 'restructuring provided', banks may fix a new credit amortization planned for the current project loans once during the existence time of the project after the date of commencing of commercial operations(DCCO), in view of the reconsideration of the cash flows of the project.

3.4.6.3 Strategic Debt Restructuring Scheme (SDR) (2015)

Envisaged as a part of restructuring of stressed assets, the Joint Lender Forum (JLF) and Corrective Action Plan (CAP) consider change of management. Generally it is considered that the shareholders should bear the loss first, followed by debt holders. Based on this principle, the RBI introduced strategic debt restructuring for recovering banks loans by taking control of the companies listed as distressed. There is a change in the management of companies because of this. SDR scheme has been initiated to recover distressed loans and assist loaning institutions by a change of management in companies which are unsuccessful in achieving the milestones under debt restructuring. SDR is subsequent to CDR or any other prior restructuring schemes undertaken by the corporate.

Eligibility:

1. Conversion of outstanding debt into equity can be done by forming a group of lending institutions called the Joint Lender Forum (JLF).
2. Banks and financial institutions may be included in the JLF.
3. The scheme is not applicable to a single lender.

Possibilities when a loan is restructured

1. To compensate for their sacrifices, transfer of ownership to the lenders.

2. New share capital should be brought by promoters into the company.

3. Promoters holding should be transferred as a security transfer till the turnaround of the company.

Conditions:

1. During the initial restructuring, if a company fails to realize the conditions specified in the restructuring package, then the JLF must incorporate the option of conversion of the part or entire of the loan including the owed amount into equity.
2. SDR should be done with a special resolution because it results in dilution of control for existing shareholders.
3. It leads to lenders acquiring majority (which is 51%) ownership.
4. If a firm fails to realize the specified terms of the restructuring package, the decision of invoking the SDR is essential within one month of the appraisal of the account throughout the restructuring period.
5. It approves conversion of debt to equity within 90 days.
6. The JLF will get ninety days more to convert the loan into shares.

3.4.6.5 Bankruptcy Code 2016

The code focuses on early detection of failure and guaranteeing maximum asset value estimation of bankrupt firms. According to segment 3(11) of the code, debt implies "a liability or obligation with respect to a claim which is expected from any individual and incorporates both financial as well as operational debt".

Insolvency and Bankruptcy Code Act, 2018

The Insolvency & Bankruptcy Code Act, 2016 consolidated the antiquated insolvency laws, proposed an amalgamated legislation and revolutionized the insolvency system in India. Two years later, some significant modifications have been made to the code in 2018. The aim of this regulation is to reinforce the Corporate Insolvency Resolution Process (CIRP).

The Objective of IBC

1. To facilitate time bound insolvency resolution, both process and liquidation.
2. To improve business and quick recovery of amounts due.
3. To resolve insolvency in lesser time, with lesser losses during recovery.

Process of Resolution

The following are the steps in the process

1. Application to National Company Law Tribunal (NCLT). The date of admission of the application is called the insolvency commencement date.

2. NCLT acceptance or rejection notice will be given to applicant within 7 days.

3. The insolvency process will be finished within 180 days and may have an extra time of 90 days.

4. NCLT will appoint interim resolution professionals within 14 days after receiving application.

5. The committee of creditors comprising all financial creditors take decisions by vote of not less than 75% financial creditors' approval.

7. If 75% creditors approve, they implement the resolution plan; else, it goes into liquidation.

6. Professionals prepare a resolution plan to submit to the NCLT.

On 23 November, 2017 existing promoters having a non-performing account of more than one year along with their relatives and associates as well as prospective resolution applicants who did not comply with the provisions of section 29A were debarred from submitting resolution plans. However, the restrictions on prospective resolution applicants through this section were based more on ideology and less on the ground realities of our nation.

The goal of this code is maximization of the value of assets. Maximum value comes when the buyer feels the necessity. The promoters of the company who have spent their lives in a company can go to any extent to save their companies. A person who is already established would not be ready to offer that price since they have realized the consequences of bad management and debarring them has defeated the purpose of law. Now, the insolvency law committee has recommended allowing the promoters of micro, small and medium enterprises as well but ground realities demand that all promoters are allowed.

Summary

The present chapter has explained the theoretical frame work of Financial Distress and Corporate Restructuring. The reasons for financing funds by firms are to start business, to have working capital, to reduce personal risk and to earn more return. Financing of funds is through Equity and Debt. Debt is like a double-edged sword. One way it is beneficial, if used efficiently and other way is very risky, if it is not used efficiently. Having high debt, sometimes may lead to financial distress of a firm. Restructuring is the one way to prevent liquidation and revive the firm. Restructuring could be three forms i.e. Operational restructuring, Organizational restructuring

and financial restructuring. Financial restructuring is the most used type of restructuring which are Equity restructuring and Debt restructuring. Restructuring through private workout may reduce the cost than the formal bankruptcy cost and firms choose the same. Other way, there is an adverse impact on banking financial performance due to firms' financial distress. RBI has initiated different types of mechanisms/schemes to reduce the Non-Performing assets of banks and revive the distressed firms. Some of schemes are Debt Recovery Tribunal, SARFAESI Act, Corporate Debt Restructuring, Strategic Debt Restructuring and Insolvency and Bankruptcy code. The next chapter describes the effectiveness of CDR mechanism on corporate and banking performance of selected banks in India.

CHAPTER IV

Effectiveness of Corporate Debt Restructuring Mechanism on Corporate Distressed Firms

CHAPTER IV

4.1 Introduction

Effectiveness means the ability to be successful and produce intended results. The present chapter analyzes the effectiveness of corporate debt restructuring on financial performance of distressed firms. To measure the effectiveness the following parameters has been considered: financial ratios i.e. Current ratio, Debt-Equity ratio, Net Sales to Total Assets ratio, Net Worth to Total Assets ratio, Operating Profit ratio and Interest Coverage ratio. The present study has considered 74 companies which were approved by CDR Cell. To know the effectiveness of CDR, financials of each company are analyzed three years prior to and five years after restructuring using the financial ratios.

After calculating ratios, the statistical tool Wilcoxon Signed Rank Test has been utilized to compare the performance of companies before and after restructuring. Later, Altman Z-score model has been calculated which predicts the distress and financial position of a company. It is used to know any change in the performance zone of selected sample.

Further, the study has categorized sample into respective industries i.e. Infrastructure industry, Textile industry and Iron and steel industry. The study analyzed the effectiveness on industry- specific basis. Operating profit margin ratio and Interest coverage ratios are used to calculate financials, followed by Wilcoxon Signed Rank Test to compare the performance of companies before and after restructuring.

4.2 Tools/Techniques for analysis

Ratio Analysis

Ratio analysis indicates the quantitative relationship between two accounting figures, expressed mathematically. It assists the analyst to make qualitative judgment about the firm's financial performance and position.

Current Ratio

Current ratio is one of the important liquidity ratio which helps in establishing the association between total current assets and current liabilities, providing a view of the short-term financial position of the company.

$$\text{CURRENT RATIO} = \frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITIES}}$$

It is a measure to assess whether company has enough funds to pay short term obligations. Normally current ratio of 2:1 is considered to ideal ratio. High ratio indicates that firm has enough fund to repay the current liabilities. If the firm has less than 1 current ratio, it indicates that firm has problem to payback short term dues. So management should concern the situation.

Debt to Equity Ratio

Debt- Equity ratio is calculated to measure long-term financial position of a firm. It is a measure of relative claim of creditors and owners against the firm's assts. It explains proportion of owner's funds and outsider funds. Generally, Debt-equity ratio of 2:1 is considered as an appropriate ratio.

$$\text{DEBT TO EQUITY RATIO} = \frac{\text{DEBT}}{\text{EQUITY}}$$

High debt-equity ratio indicates that firm is more dependent on external borrowings than owner's funds which are at higher risk. Low debt-equity shows that firm has more contribution from owner's funds which are less risk and higher safety.

Net Sales to Total Assets

Assets turnover ratio is one of the types of activity or turnover ratios. It evaluates the efficiency with which the firm utilizes its assets to carry out its activities. This ratio indicates that how efficiently firm utilizing assets to make sales. It measures how much percentage of net sales are generated by using company's assets.

$$\text{NET SALES TO TOTAL ASSETS RATIO} = \frac{\text{NET SALES}}{\text{TOTAL ASSETS}}$$

Higher ratio is always more favorable, showing that the firm is using its assets more efficiently. A low ratio means that the firm is not using its assets efficiently so management should consider this situation.

Net Worth to Total Assets Ratio

Net Worth to Total Assets ratio is also known as Proprietary ratio or Equity ratio. It shows the relationship between proprietors' fund and total assets. The purpose of this ratio is to measure how much proportion of owners funds invested in total assets of a firm. It is an indicator for creditors which shows financial strength of the firm.

$$\text{NET WORTH TO TOTAL ASSETS} = \frac{\text{NET WORTH}}{\text{TOTAL ASSETS}}$$

High ratio indicates that creditors have adequate safety and vice-versa. If there is a lower ratio

Creditors may not be willing to extend credit to the firm.

Operating Profit Ratio

Operating Profit ratio is also called the Operating Profit Margin ratio. It establishes the relationship between operating profit and Net sales. It is expressed in percentage. It measures percentage of operating income in the total revenue. The operating income is considered after deducting the variables or operating expenses from revenues of the firm. It also explains that what is the total amount is left to pay non – operating expenses of a firm.

$$\text{OPERATING PROFIT RATIO} = \frac{\text{OPERATING PROFIT}}{\text{REVENUE FROM OPERATIONS (NET SALES)}}$$

Interest Coverage Ratio

The interest coverage ratio is used to determine how well a firm is able to pay the interest in a timely manner on borrowings amount. This ratio is commonly used by lenders, creditors and investors to determine the riskiness of lending capital to a company. Creditors use this ratio to identify if a company is able to pay an additional debt along with the outstanding debt. If a firm is unable to pay interest on the current outstanding debt, it is clear that it won't be able pay the principal amount.

$$\text{INTEREST COVERAGE RATIO} = \frac{\text{EARNINGS BEFORE INTEREST AND TAXES}}{\text{INTEREST EXPENSES}}$$

Wilcoxon Signed Rank test (In the next pages used as WRS test)

This test is a non-parametric statistical Hypotheses test used to compare two related samples to assess whether the ranks of their population means differ. When data is not normally distributed, it can be used as alternative to paired t-test. It is a non-parametric test that can be used to determine whether two dependent samples were selected from a population having the same distribution.

Assumptions

1. Data should be paired and select from the same population.

2. The selected sample must be on ordinal scale.

3. Pair should be selected randomly

When assumptions of t test are not satisfied, Wilcoxon signed rank test can be used.

4.3 Effectiveness of CDR on Corporate Performance

Table 4.1: Current Ratio

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	NA	1.16	0.96	1.48	2.50	1.96	1.91	2.66	1.75	2.07	1.53
2	C&C Construction Limited	Infrastructure		0.49	0.55	0.56	0.65	1.29	1.28	1.71	1.70	1.5	0.56
3	Consolidated Construction Consortium Limited	Infrastructure	NA	NA	2.38	2.24	1.60	1.97	1.84	1.91	1.86	1.89	2.08
4	Era Infra Engineering Limited	Infrastructure	NA	NA	1.19	1.83	2.89	3.33	2.41	2.55	2.31	2.65	1.97
5	Gammon India Limited	Infrastructure	NA	0.13	0.63	1.07	1.10	1.04	1.19	1.06	1.32	1.15	0.73
6	Gtl Infrastructure Limited	Infrastructure	0.09	0.15	0.16	0.19	0.03	0.28	0.40	0.72	2.40	0.95	0.13
7	Hindustan Construction Limited	Infrastructure	0.56	0.23	1.31	1.44	1.58	1.09	1.24	1.83	1.89	1.51	1.02
8	Ivrcl Limited	Infrastructure	NA	NA	0.33	0.48	0.58	0.61	0.59	0.73	0.96	0.72	0.46
9	Lanco Infratech Limited	Infrastructure	NA	0.26	0.35	0.27	0.30	0.31	0.29	0.36	0.93	0.47	0.30
10	Shriram Epc Limited	Infrastructure	NA	NA	1.00	0.85	0.93	0.83	1.57	1.96	1.84	1.55	0.93
11	Unity Infrastructure Limited	Infrastructure	NA	NA	NA	0.77	1.55	2.14	1.50	2.24	1.72	1.90	1.16
12	Diamond Power Infrastructure Ltd	Infrastructure	NA	NA	NA	4.70	3.58	7.07	2.82	2.80	3.20	3.97	4.14
13	Il&Fs Engineering & Construction	Infrastructure	0.49	0.78	0.93	0.84	0.71	1.39	1.34	1.47	1.53	1.43	0.75
14	Gkc Projects Limited	Infrastructure	NA	NA	1.51	1.23	1.34	1.30	1.62	1.06	1.15	1.28	1.36
15	Tantiya Consrtuction Limited	Infrastructure	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0
16	Gangotri Enterprises Limited	Infrastructure	NA	NA	NA	NA	1.63	1.69	1.43	1.61	NA	1.57	1.63
17	Vishwa Infrastructure Private Limited	Infrastructure	NA	NA	NA	0.96	1.18	1.23	1.28	1.32	1.59	1.35	1.07
18	Ritwhik Projects Limited	Infrastructure	NA	2.32	2.60	2.55	3.63	3.96	2.28	2.38	NA	2.88	2.78
19	Indu Projects Limited	Infrastructure	0.37	0.40	0.58	0.89	1.14	0.90	0.99	1.28	NA	1.06	0.67
20	Aster Private Limited	Infrastructure	NA	NA	NA	1.25	0.16	0.14	1.41	1.30	1.43	1.07	0.70
21	Amr India Limited	Infrastructure	NA	NA	1.38	1.50	1.51	NA	1.49	NA	NA	1.49	1.46
22	Soma Enterprises Limited	Infrastructure	NA	NA	NA	1.57	2.02	NA	1.79	NA	NA	1.79	1.80
23	Hotel Leela Ventures Limited	Other Companies	0.24	0.35	0.34	0.07	0.08	0.14	0.27	0.30	0.33	0.26	0.21
24	Suzlon Energy Limited	Other Companies	NA	0.73	0.67	0.37	0.35	0.52	0.71	0.92	1.17	0.83	0.53
25	Wockhardt Limited	Other Companies	0.70	1.13	0.75	0.43	0.52	1.37	1.78	1.59	NA	1.58	0.71
26	Abg Shipyard Limited	Other Companies	NA	1.01	1.04	0.79	0.77	0.90	0.78	0.89	0.86	0.86	0.90
27	Adunik Metaliks Limited	Other Companies	NA	NA	NA	0.52	0.84	1.07	0.80	0.86	0.92	0.91	0.68
28	Orchid Pharma Limited	Other Companies	NA	NA	0.76	1.23	1.77	0.40	0.90	0.84	1.50	0.91	1.25
29	Ind Swift Laboratories	Other Companies	NA	NA	NA	NA	1.60	1.65	4.97	3.03	3.00	3.16	1.60
30	3i Infotech Limited	Other Companies	NA	NA	NA	0.54	0.48	0.32	0.39	0.11	0.19	0.25	0.51
31	India Cements Limited	Other Companies	NA	1.56	0.92	0.72	0.68	0.40	0.89	1.14	1.29	0.93	0.97
32	Ksk Energy Ventures Limited	Other Companies	NA	0.11	0.33	0.23	0.09	0.06	0.15	0.17	0.02	0.10	0.19
33	Moser Bear Limited	Other Companies	0.17	0.34	0.52	0.68	0.93	0.87	1.25	2.00	1.97	1.52	0.53
34	Ankit Metal And Power Limited	Other Companies	NA	NA	0.99	1.52	2.37	1.53	1.74	1.00	1.00	1.32	1.63

35	Dharani Sugars And Chemicals Limited	Other Companies	NA	NA	NA	1.03	1.26	1.27	1.11	1.32	1.57	1.32	1.14
36	Gujarat Nre Coke Limited	Other Companies	NA	NA	0.27	0.74	2.40	3.05	1.60	1.31	1.50	1.86	1.14
37	Inattentive Industries Limited	Other Companies	NA	NA	0.71	1.06	0.94	1.18	1.01	0.85	0.82	0.96	0.90
38	Jai Balaji Industries Ltd	Other Companies	0.62	0.75	0.88	0.90	1.08	0.85	1.21	1.54	1.72	1.33	0.85
39	Modern India Limited	Other Companies	NA	NA	0.41	0.51	0.51	0.56	1.03	1.21	1.15	0.99	0.47
40	Oudh Sugar Mills Limited	Other Companies	1.40	1.13	1.49	1.55	1.96	2.04	1.59	1.09	1.83	1.64	1.51
41	Plethico Pharmaceuticals Limited	Other Companies	NA	NA	NA	0.87	0.97	1.00	9.46	9.19	8.72	7.09	0.92
42	Psl Limited	Other Companies	NA	0.07	0.62	2.62	2.86	3.46	1.96	1.46	2.27	2.29	1.54
43	Tulsyan Nec Limited	Other Companies	NA	NA	NA	2.77	1.34	1.30	0.99	1.08	1.34	1.17	2.05
44	Uttam Sugar Mills Limited	Other Companies	1.47	0.99	0.91	1.40	1.61	1.90	0.87	0.75	NA	1.17	1.27
45	Venus Remedies Limited	Other Companies	2.00	2.50	2.29	2.06	2.04	2.05	5.63	5.17	3.78	4.16	2.18
46	Panacea Biotic Limited	Other Companies	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00	0
47	Monnet Ispat Limited	Other Companies	NA	NA	NA	0.12	0.34	0.64	0.94	1.49	2.34	1.35	0.23
48	Shiv Vani Oil And Gas Energy Ltd	Other Companies	NA	NA	NA	NA	1.64	1.67	0.79	0.76	1.52	1.19	1.64
49	Base Corporation Limited	Other Companies	NA	NA	NA	NA	1.30	0.81	1.24	1.22	1.21	1.12	1.30
50	Electrotherm India Limited	Other Companies	NA	NA	0.55	1.93	2.26	2.80	2.77	2.00	2.69	2.56	1.58
51	Bharathi Shipyard Limited	Other Companies	NA	NA	0.33	0.61	1.49	3.60	2.27	1.89	1.55	2.33	0.81
52	Essar Oil Limited	Other Companies	0.67	0.68	0.57	0.42	0.75	0.39	0.08	0.13	0.14	0.19	0.62
53	Tecpro Systems Limited	Other Companies	NA	NA	NA	NA	1.27	1.66	1.37	1.05	1.08	1.29	1.27
54	Educomp Solutions Limited	Other Companies	NA	NA	1.32	3.45	5.12	2.49	1.11	1.81	4.94	2.59	3.30
55	Sakthi Sugars Limited	Other Companies	NA	NA	0.21	0.29	0.33	0.22	0.33	0.17	0.16	0.22	0.28
56	Ginni Filaments Limited	Textile	1.60	1.89	1.90	1.85	2.05	1.09	0.90	NA	NA	1.00	1.86
57	Gtn Industries Limited	Textile	NA	1.82	1.59	1.71	1.95	1.76	1.77	NA	NA	1.77	1.77
58	Rajveer Industries Limited	Textile	NA	NA	0.85	1.18	1.44	0.62	0.87	0.94	1.30	0.93	1.16
59	Spentex Industries Limited	Textile	0.28	0.24	0.32	0.51	0.47	0.48	0.48	0.48	0.56	0.50	0.36
60	Abhishek Corporation Limited	Textile	0.05	0.06	0.11	0.10	0.11	0.16	1.44	8.20	2.63	3.11	0.09
61	Ksl & Industries Limited	Textile	2.30	2.00	2.09	2.59	3.37	3.78	3.37	13.03	9.93	7.53	2.47
62	Nithin Spinners Limited	Textile	1.41	1.30	1.59	1.35	1.74	2.06	1.01	3.92	NA	2.33	1.48
63	Shri Lakshmi Cotsyn Limited	Textile	NA	0.92	3.78	4.45	6.22	3.96	7.48	7.67	8.35	6.87	3.84
64	Prathibha Syntex Limited	Textile	1.13	1.14	1.14	1.13	1.25	1.00	1.33	1.26	NA	1.20	1.16
65	Rana Poly Cot Limited	Textile	NA	NA	NA	0.44	0.75	1.01	1.13	1.14	1.04	1.08	0.60
66	Suryajyothi Spinning Mills Limited	Textile	NA	NA	1.09	1.30	1.78	1.71	1.41	1.70	1.39	1.55	1.39
67	Bombay Rayon Fashion Limited	Textile	NA	1.17	1.24	1.35	1.37	1.06	1.03	1.04	NA	1.04	1.28
68	Bhushan Steel Limited	Iron And Steel	NA	NA	NA	0.31	1.61	1.52	0.90	1.11	0.84	1.09	0.96
69	Electro Steel Casting Limited	Iron And Steel	NA	NA	NA	0.18	0.26	0.44	0.29	0.13	0.15	0.25	0.22
70	Msp Steel And Power Limited	Iron And Steel	NA	NA	NA	1.81	2.42	2.35	1.41	1.23	1.12	1.53	2.12
71	Visa Steel Limited	Iron And Steel	0.20	0.22	0.18	0.20	0.29	0.25	0.38	0.49	0.50	0.41	0.22
72	Jindal Steel Limited	Iron And Steel	0.20	0.27	0.72	0.86	1.01	0.54	0.55	0.89	NA	0.66	0.61
73	Zion Steel Limited	Iron And Steel	NA	NA	NA	NA	10.04	23.61	8.03	0.77	0.74	8.29	10.04
74	Essar Steel India Limited	Iron And Steel	NA	NA	NA	0.18	0.23	0.61	0.62	0.45	0.39	0.52	0.21

Table 4.2: Debt Equity Ratio

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	-	1.35	1.16	1.00	0.93	0.61	0.51	0.28	0.83	0.56	1.11
2	C&C Construction Limited	Infrastructure	-	7.17	9.46	8.96	3.65	3.19	1.88	1.42	1.34	1.96	7.31
3	Consolidated Construction Consortium Limited	Infrastructure	-	-	-38.08	11.05	5.59	2.68	1.25	0.92	0.62	1.37	-7.15
4	Era Infra Engineering Limited	Infrastructure	-	-	-3.70	-14.02	7.55	4.17	2.13	1.85	1.55	2.43	-3.39
5	Gammon India Limied	Infrastructure	-	4.88	2.04	4.83	4.65	2.06	1.34	1.12	0.76	1.32	4.10
6	Gtl Infrastructure Limited	Infrastructure		10.82	4.98	2.97	2.52	2.96	2.52	2.81	2.65	2.73	4.26
7	Hindustan Construction Limited	Infrastructure	1.48	2.58	3.30	3.60	3.93	2.63	2.11	1.66	2.31	2.18	2.98
8	Ivrcl Limited	Infrastructure	-	-	9.25	8.66	3.78	2.45	1.16	1.09	0.98	1.42	7.23
9	Lanco Infratech Limited	Infrastructure	-	5.03	3.86	3.25	2.12	1.14	0.94	1.05	0.86	1.00	3.56
10	Shriram Epc Limited	Infrastructure	-	-	0.53	4.30	34.23	16.38	6.38	3.53	2.45	7.18	13.02
11	Unity Infrastructure Limited	Infrastructure	-	-	-	-2.62	34.73	4.20	1.75	1.19	0.99	2.03	16.05
12	Diamond Power Infrastructure Limited	Infrastructure	-	-	-	2.45	4.34	2.23	1.36	1.63	1.15	1.59	3.39
13	Il&Fs Engineering & Construction	Infrastructure	13.51	15.04	6.52	5.95	3.10	3.36	10.22	1.43	1.62	4.16	8.82
14	Gkc Projects Limited	Infrastructure	-	-	2.44	6.45	4.92	0.61	0.49	0.28	0.29	0.42	4.60
15	Tantiya Consrtuction Limited	Infrastructure	-	-	-	0.06	0.10	0.66	1.05	1.38	1.08	1.04	0.08
16	Gangotri Enterprises Limited	Infrastructure	-	-	-	-	1.16	0.97	0.19	0.28	-	0.48	1.16
17	Vishwa Infrastructure Private Limited	Infrastructure	-	-	-	4.98	1.41	0.85	0.43	0.24	0.14	0.41	3.19
18	Ritwhik Projects Limited	Infrastructure	-	1.43	1.74	2.09	1.80	1.66	0.97	0.62	-	1.08	1.76
19	Indu Projects Limited	Infrastructure	8.77	5.70	3.98	3.30	1.81	0.36	-	1.12	-	0.74	4.71
20	Aster Private Limited	Infrastructure	-	-	-	3.11	7.27	5.97	1.48	1.07	0.62	2.28	5.19
21	Amr India Limited	Infrastructure	-	-	1.00	34.17	50.08	-	46.39	-	-	46.39	28.42
22	Soma Enterprises Limited	Infrastructure	-	-	-	5.49	6.29	-	0.52	-	-	0.52	5.89
23	Hotel Leela Ventures Limited	Other Companies	-15.91	-24.33	-18.87	17.23	5.84	4.15	3.95	3.48	3.49	3.77	-7.21
24	Suzlon Energy Limited	Other Companies	-	5.88	9.05	65.90	2.95	2.70	1.14	0.96	1.36	1.54	20.94
25	Wockhardt Limited	Other Companies	1.08	1.24	0.61	0.15	0.15	3.62	2.69	0.79	-	2.37	0.65
26	Abg Shipyard Limited	Other Companies	-	-3.05	8.66	3.67	2.12	2.29	1.72	2.69	2.03	2.18	2.85
27	Adunik Metaliks Limited	Other Companies	-	-	-	-2.21	-16.14	7.20	2.13	1.79	1.60	3.18	-9.17
28	Orchid Pharma Limited	Other Companies	-	-	-10.45	17.60	7.15	4.97	1.43	0.96	1.63	2.25	4.77
29	Ind Swift Laboratories	Other Companies	-	-	-	-	5.06	5.42	4.98	3.43	2.42	4.06	5.06
30	3i Infotech Limited	Other Companies	-	-	-	1.96	2.24	-5.67	3.76	1.90	1.89	0.47	2.10
31	India Cements Limited	Other Companies	-	1.44	1.69	5.27	5.44	4.25	2.91	2.24	2.03	2.86	3.46
32	Ksk Energy Ventures Limited	Other Companies	-	0.22	0.22	0.15	0.06	0.31	0.30	0.28	0.28	0.29	0.16
33	Moser Bear Limited	Other Companies	-0.26	-0.80	-1.82	-11.89	4.76	1.45	1.40	1.29	1.39	1.38	-2.00
34	Ankit Metal And Power Limited	Other Companies	-	-	-3.61	-118.44	3.89	1.47	1.54	2.29	2.16	1.86	-39.39
35	Dharani Sugars And Chemicals Limited	Other Companies	-	-	-	2.92	58.09	31.03	5.22	3.80	3.91	10.99	30.51

36	Gujarat Nre Coke Limited	Other Companies	-	-	6.04	2.34	2.79	2.26	1.03	0.91	0.87	1.27	3.72
37	Inattentive Industries Limited	Other Companies	-	-	-3.18	-6.26	16.06	0.76	0.67	1.06	3.66	1.53	2.20
38	Jai Balaji Industries Ltd	Other Companies	-2.74	-3.59	-14.80	10.69	4.42	2.36	1.66	1.76	4.29	2.52	-1.21
39	Modern India Limited	Other Companies	-	-	0.20	0.24	0.65	0.19	0.77	1.07	0.72	0.69	0.36
40	Oudh Sugar Mills Limited	Other Companies	-14.85	-12.84	856.64	17.12	35.92	14.35	12.43	5.03	7.49	9.82	176.40
41	Plethico Pharmaceuticals Limited	Other Companies	-	-	-	0.49	0.64	0.44	0.83	0.87	1.07	0.80	0.56
42	Psl Limited	Other Companies	-	-1.64	-2.43	-36.55	17.30	11.30	2.81	1.84	2.32	4.57	-5.83
43	Tulsyan Nec Limited	Other Companies	-	-	-	81.41	8.39	6.24	3.76	3.95	3.51	4.37	44.90
44	Uttam Sugar Mills Limited	Other Companies	5.04	32.49	542.51	7.11	4.74	5.20	3.15	1.77	-	3.38	118.38
45	Venus Remedies Limited	Other Companies	0.61	0.69	0.61	0.53	0.57	0.61	0.83	0.92	1.02	0.85	0.60
46	Panacea Biotic Limited	Other Companies	-	-	-	2.03	1.85	1.76	1.48	1.61	0.92	1.45	1.94
47	Monnet Ispat Limited	Other Companies	-	-	-	-6.55	9.58	3.29	2.24	1.97	1.62	2.28	1.52
48	Shiv Vani Oil And Gas Energy Ltd.	Other Companies	-	-	-	-	95.12	6.60	2.21	1.81	2.16	3.19	95.12
49	Base Corporation Limited	Other Companies	-	-	-	-	12.84	3.62	0.66	0.65	0.49	1.36	12.84
50	Electrotherm India Limited	Other Companies	-	-	-1.66	-2.46	-3.02	-5.42	-12.47	393.70	3.31	94.78	-2.38
51	Bharathi Shipyard Limited	Other Companies	-	-	-0.06	-0.60	-26.92	7.78	3.93	3.11	2.71	4.38	-9.19
52	Essar Oil Limited	Other Companies	7.96	3.95	2.22	2.80	2.78	2.13	3.67	3.37	2.75	2.98	3.94
53	Tecpro Systems Limited	Other Companies	-	-	-	-	-5.40	16.40	2.67	1.72	1.06	5.46	-5.40
54	Educomp Solutions Limited	Other Companies	-	-	15.21	4.83	1.15	0.48	0.19	0.31	0.48	0.36	7.06
55	Sakthi Sugars Limited	Other Companies	-	-	6.15	94.01	47.08	12.68	14.65	6.82	3.80	9.49	49.08
56	Ginni Filaments Limited	Textile	1.28	1.64	1.95	2.29	3.51	5.00	3.10	-	-	4.05	2.13
57	Gtn Industries Limited	Textile	-	5.56	3.78	4.63	5.24	7.56	4.24	-	-	5.90	4.80
58	Rajveer Industries Limited	Textile	-	-	13.49	6.60	6.66	2.98	2.05	2.79	3.24	2.77	8.92
59	Spentex Industries Limited	Textile	-1.26	-1.60	-2.90	-6.03	-7.50	10.87	-98.83	32.59	5.64	-12.43	-3.86
60	Abhishek Corporation Limited	Textile	-0.09	-0.12	-0.16	-0.27	-0.69	-1.31	37.63	3.54	2.48	10.58	-0.27
61	Ksl & Industries Limited	Textile	-2.16	-2.93	-4.26	315.43	12.04	2.71	2.19	1.86	1.71	2.12	63.62
62	Nithin Spinners Limited	Textile	1.94	1.45	2.08	1.10	1.78	3.88	4.05	3.02	-	3.65	1.67
63	Shri Lakshmi Cotsyn Limited	Textile	-	-1.99	-2.39	-2.67	-9.91	9.35	3.30	2.89	2.70	4.56	-4.24
64	Prathibha Syntex Limited	Textile	2.06	3.46	5.54	7.76	6.60	2.63	1.74	1.96	-	2.11	5.08
65	Rana Poly Cot Limited	Textile	-	-	-	-0.59	-2.74	1.48	1.81	2.23	2.35	1.97	-1.66
66	Suryajyothi Spinning Mills Limited	Textile	-	-	4.46	3.28	3.47	3.03	2.21	2.31	3.63	2.79	3.74
67	Bombay Rayon Fashion Limited	Textile	-	7.68	15.37	14.82	15.02	9.32	8.08	6.58	-	7.99	13.22
68	Bhushan Steel Limited	Iron And Steel	-	-	-	41.55	8.96	4.89	3.48	2.97	2.55	3.47	25.26
69	Electro Steel Casting Limited	Iron And Steel	-	-	-	-13.41	11.49	8.69	5.56	3.28	2.73	5.07	-0.96
70	Msp Steel And Power Limited	Iron And Steel	-	-	-	2.50	2.04	1.88	1.37	1.28	2.14	1.67	2.27
71	Visa Steel Limited	Iron And Steel	-4.38	-6.48	22.59	6.33	4.25	5.13	3.30	3.63	3.19	3.81	4.46
72	Jindal Steel Limited	Iron And Steel	1.11	1.04	2.09	1.74	1.58	1.24	0.92	1.03	-	1.06	1.51
73	Zion Steel Limited	Iron And Steel	-	-	-	-	1.56	1.95	2.29	0.25	0.34	1.21	1.56
74	Essar Steel India Limited	Iron And Steel	-	-	-	312.63	287.01	198.64	202.69	177.84	159.13	184.57	299.82

Table 4.3: Net Sales to Total Assets Ratio

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	-	0.45	0.62	0.13	0.19	0.31	0.55	0.76	1.44	0.77	0.35
2	C&C Construction Limited	Infrastructure	-	0.81	0.69	0.81	0.87	0.61	0.72	0.86	0.94	0.78	0.79
3	Consolidated Construction Consortium Limited	Infrastructure	-	-	0.48	0.33	0.51	0.69	1.34	1.66	2.04	1.43	0.44
4	Era Infra Engineering Limited	Infrastructure	-	-	0.26	0.20	0.23	0.35	0.77	0.85	0.87	0.71	0.23
5	Gammon India Limied	Infrastructure	-	0.20	0.86	0.52	0.62	1.06	1.17	1.40	1.50	1.28	0.55
6	Gtl Infrastructure Limited	Infrastructure	0.14	0.11	0.10	0.09	0.12	0.08	0.06	0.05	0.04	0.05	0.11
7	Hindustan Construction Limited	Infrastructure	0.63	0.65	0.69	0.70	0.67	0.85	0.86	0.90	1.00	0.90	0.67
8	Ivrcl Limited	Infrastructure	-	-	0.51	0.56	0.58	0.86	0.80	1.30	1.44	1.10	0.55
9	Lanco Infratech Limited	Infrastructure	-	0.26	0.31	0.16	0.27	0.61	1.23	0.83	1.00	0.92	0.25
10	Shriram Epc Limited	Infrastructure	-	-	0.21	0.23	0.25	0.27	0.94	0.60	0.78	0.65	0.23
11	Unity Infrastructure Limited	Infrastructure	-	-	-	0.15	0.08	0.26	0.82	1.12	1.33	0.88	0.11
12	Diamond Power Infrastructure Limited	Infrastructure	-	-	-	0.50	0.74	0.89	1.21	1.17	1.34	1.15	0.62
13	Il&Fs Engineering & Construction	Infrastructure	1.00	0.93	1.12	1.80	1.21	0.82	0.73	1.03	0.86	0.86	1.21
14	Gkc Projects Limited	Infrastructure	-	-	0.59	0.82	0.53	0.69	1.19	1.05	0.01	0.73	0.65
15	Tantiya Consrtuction Limited	Infrastructure	-	-	-	0.05	0.09	0.12	0.16	0.19	0.20	0.17	0.07
16	Gangotri Enterprises Limited	Infrastructure	-	-	-	-	0.47	0.83	1.30	2.01	-	1.38	0.47
17	Vishwa Infrastructure Private Limited	Infrastructure	-	-	-	0.44	0.49	0.59	0.59	0.71	0.98	0.72	0.46
18	Ritwhik Projects Limited	Infrastructure	-	1.12	0.57	0.50	0.41	0.46	0.64	1.01	-	0.70	0.65
19	Indu Projects Limited	Infrastructure	0.18	0.21	0.14	0.22	0.29	0.68	0.71	1.20	-	0.86	0.21
20	Aster Private Limited	Infrastructure	-	-	-	0.45	0.60	1.14	1.34	1.04	1.61	1.28	0.52
21	Amr India Limited	Infrastructure	-	-	0.53	0.63	0.63	-	0.66	-	-	0.66	0.60
22	Soma Enterprises Limited	Infrastructure	-	-	-	0.53	0.43	-	0.33	-	-	0.33	0.48
23	Hotel Leela Ventures Limited	Other Companies	0.19	0.16	0.16	0.22	0.18	0.13	0.11	0.12	0.14	0.12	0.18
24	Suzlon Energy Limited	Other Companies	-	1.34	0.99	0.25	0.27	0.17	0.57	0.33	0.27	0.33	0.71
25	Wockhardt Limited	Other Companies	0.92	0.91	0.85	1.27	1.92	0.73	0.60	0.67	-	0.67	1.18
26	Abg Shipyard Limited	Other Companies	-	0.01	0.05	0.26	0.44	0.51	0.62	0.45	0.54	0.53	0.19
27	Adunik Metaliks Limited	Other Companies	-	-	-	0.55	0.24	0.27	0.79	0.87	1.06	0.75	0.39
28	Orchid Pharma Limited	Other Companies	-	-	0.34	0.30	0.48	0.65	0.60	0.75	0.47	0.62	0.38
29	Ind Swift Laboratories	Other Companies	-	-	-	-	0.49	0.43	0.38	0.55	0.63	0.50	0.49
30	3i Infotech Limited	Other Companies	-	-	-	0.22	0.30	0.23	0.11	0.12	0.18	0.16	0.26
31	India Cements Limited	Other Companies	-	0.65	0.64	0.49	0.41	0.39	0.42	0.48	0.50	0.45	0.55
32	Ksk Energy Ventures Limited	Other Companies	-	0.01	0.01	0.01	0.02	0.01	0.02	0.03	0.05	0.03	0.01
33	Moser Bear Limited	Other Companies	-0.26	-2.25	1.32	0.62	0.69	0.98	0.61	0.53	0.54	0.67	0.03
34	Ankit Metal And Power Limited	Other Companies	-	-	0.03	0.81	0.76	1.19	0.94	0.90	1.15	1.05	0.53
35	Dharani Sugars And Chemicals Limited	Other Companies	-	-	-	0.74	0.64	0.63	0.91	0.96	1.06	0.89	0.69

36	Gujarat Nre Coke Limited	Other Companies	-	-	0.17	0.20	0.10	0.24	0.49	0.45	0.55	0.43	0.16
37	Inattentive Industries Limited	Other Companies	-	-	0.45	0.39	0.44	0.75	0.89	1.62	1.19	1.11	0.43
38	Jai Balaji Industries Ltd	Other Companies	0.92	0.59	0.59	0.78	0.56	1.24	0.84	0.76	0.78	0.90	0.69
39	Modern India Limited	Other Companies	-	-	1.15	1.41	0.72	2.54	5.22	3.10	1.65	3.13	1.09
40	Oudh Sugar Mills Limited	Other Companies	1.22	1.56	1.11	0.95	1.04	0.98	0.55	0.69	0.39	0.66	1.18
41	Plethico Pharmaceuticals Limited	Other Companies	-	-	-	0.66	0.53	0.43	0.35	0.37	0.38	0.38	0.60
42	Psl Limited	Other Companies	-	0.01	0.05	0.04	0.05	0.60	0.65	0.99	0.93	0.79	0.04
43	Tulsyan Nec Limited	Other Companies	-	-	-	0.52	0.95	1.39	1.86	1.75	2.14	1.79	0.74
44	Uttam Sugar Mills Limited	Other Companies	1.44	1.51	1.31	1.20	0.79	0.54	0.61	0.52	-	0.56	1.25
45	Venus Remedies Limited	Other Companies	0.51	0.60	0.60	0.73	0.75	0.90	0.95	0.96	1.12	0.98	0.64
46	Panacea Biotic Limited	Other Companies	-	-	-	1.44	2.54	1.81	1.06	2.98	2.55	2.10	1.99
47	Monnet Ispat Limited	Other Companies	-	-	-	0.25	0.26	0.40	0.25	0.24	0.31	0.30	0.25
48	Shiv Vani Oil And Gas Energy Limited	Other Companies	-	-	-	-	0.04	0.06	0.33	0.45	0.40	0.31	0.04
49	Base Corporation Limited	Other Companies	-	-	-	-	0.09	0.87	0.82	0.87	0.94	0.88	0.09
50	Electrotherm India Limited	Other Companies	-	-	2.51	1.06	0.89	0.26	0.37	0.84	0.73	0.55	1.49
51	Bharathi Shipyard Limited	Other Companies	-	-	-0.02	-0.09	0.04	0.10	0.29	0.39	0.43	0.30	-0.02
52	Essar Oil Limited	Other Companies	2.99	2.69	2.48	2.80	0.04	0.44	0.10	0.18	0.10	0.21	2.20
53	Tecpro Systems Limited	Other Companies	-	-	-	-	0.07	0.23	0.91	1.23	1.43	0.95	0.07
54	Educomp Solutions Limited	Other Companies	-	-	0.10	0.07	0.08	0.25	0.50	0.48	0.46	0.42	0.08
55	Sakthi Sugars Limited	Other Companies	-	-	1.33	1.00	1.02	0.92	1.11	0.93	1.93	1.22	1.12
56	Ginni Filaments Limited	Textile	2.01	1.91	1.99	1.93	1.64	0.88	0.67	-	-	0.77	1.90
57	Gtn Industries Limited	Textile	-	1.80	1.79	2.56	2.55	1.89	1.71	-	-	1.80	2.18
58	Rajveer Industries Limited	Textile	-	-	1.02	0.90	0.50	1.29	1.63	1.57	1.21	1.42	0.81
59	Spentex Industries Limited	Textile	11.39	6.72	4.02	3.55	3.33	2.00	1.28	1.16	1.15	1.40	5.80
60	Abhishek Corporation Limited	Textile	-0.03	-0.02	-0.04	-0.14	-0.60	0.91	0.18	0.11	0.07	0.32	-0.17
61	Ksl & Industries Limited	Textile	0.13	0.29	0.99	0.81	0.85	0.90	0.81	0.60	0.51	0.70	0.62
62	Nithin Spinners Limited	Textile	1.24	1.57	1.20	1.77	1.59	0.77	0.70	0.57	-	0.68	1.48
63	Shri Lakshmi Cotsyn Limited	Textile	-	0.18	0.21	0.28	0.26	0.57	0.72	0.73	0.89	0.73	0.23
64	Prathibha Syntex Limited	Textile	2.31	1.00	0.99	1.00	0.88	0.97	0.85	0.73	-	0.85	1.24
65	Rana Poly Cot Limited	Textile	-	-	-	0.47	0.69	0.66	0.73	0.73	0.78	0.72	0.58
66	Suryajyothi Spinning Mills Limited	Textile	-	-	1.26	1.31	1.24	1.08	1.14	1.09	0.82	1.03	1.27
67	Bombay Rayon Fashion Limited	Textile	-	0.42	0.47	0.42	0.37	0.41	0.40	0.41	-	0.41	0.42
68	Bhushan Steel Limited	Iron And Steel	-	-	-	0.30	0.25	0.23	0.24	0.30	0.36	0.28	0.28
69	Electro Steel Casting Limited	Iron And Steel	-	-	-	0.36	0.34	0.49	0.17	0.02	0.01	0.17	0.35
70	Msp Steel And Power Limited	Iron And Steel	-	-	-	0.55	0.56	0.63	0.72	0.58	0.57	0.63	0.56
71	Visa Steel Limited	Iron And Steel	0.64	0.20	0.32	0.38	0.19	0.95	0.87	0.79	0.89	0.88	0.35
72	Jindal Steel Limited	Iron And Steel	0.30	0.27	0.35	0.41	0.47	0.49	0.74	0.70	-	0.64	0.36
73	Zion Steel Limited	Iron And Steel	-	-	-	-	0.01	0.18	0.12	0.29	-	0.20	0.01
74	Essar Steel India Limited	Iron And Steel	-	-	-	0.33	0.22	0.22	0.23	0.31	0.38	0.28	0.28

Table 4.4: Net Worth to Total Assets

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	-	0.43	0.46	0.50	0.52	0.62	0.66	0.78	0.55	0.65	0.48
2	C&C Construction Limited	Infrastructure	-	0.12	0.10	0.10	0.21	0.24	0.35	0.41	0.43	0.36	0.13
3	Consolidated Construction Consortium Limited	Infrastructure	-	-	-0.03	0.08	0.15	0.27	0.44	0.52	0.62	0.46	0.07
4	Era Infra Engineering Limited	Infrastructure	-	-	-0.37	-0.08	0.12	0.19	0.32	0.35	0.39	0.31	-0.11
5	Gammon India Limied	Infrastructure	-	0.17	0.33	0.17	0.18	0.33	0.43	0.47	0.57	0.45	0.21
6	Gtl Infrastructure Limited	Infrastructure	-0.03	0.08	0.17	0.25	0.28	0.25	0.28	0.26	0.27	0.27	0.15
7	Hindustan Construction Limited	Infrastructure	0.40	0.28	0.23	0.22	0.20	0.28	0.32	0.38	0.30	0.32	0.27
8	Ivrcl Limited	Infrastructure	-	-	0.10	0.10	0.21	0.29	0.46	0.48	0.50	0.43	0.14
9	Lanco Infratech Limited	Infrastructure	-	0.17	0.21	0.24	0.32	0.47	0.51	0.49	0.54	0.50	0.23
10	Shriram Epc Limited	Infrastructure	-	-	0.65	0.19	0.03	0.06	0.14	0.22	0.29	0.18	0.29
11	Unity Infrastructure Limited	Infrastructure	-	-	-	-0.62	0.03	0.19	0.36	0.46	0.50	0.38	-0.29
12	Diamond Power Infrastructure Limited	Infrastructure	-	-	-	0.29	0.19	0.31	0.42	0.38	0.47	0.39	0.24
13	Il&Fs Engineering & Construction	Infrastructure	0.07	0.06	0.13	0.14	0.24	0.23	0.09	0.41	0.38	0.28	0.13
14	Gkc Projects Limited	Infrastructure	-	-	0.16	0.06	0.09	0.45	0.58	0.23	0.00	0.32	0.10
15	Tantiya Consrtuction Limited	Infrastructure	-	-	-	0.18	0.54	0.36	1.02	1.16	1.65	1.05	0.36
16	Gangotri Enterprises Limited	Infrastructure	-	-	-	-	0.26	0.30	0.44	0.38	-	0.37	0.26
17	Vishwa Infrastructure Private Limited	Infrastructure	-	-	-	0.05	0.17	0.24	0.30	0.32	0.42	0.32	0.11
18	Ritwhik Projects Limited	Infrastructure	-	0.25	0.24	0.20	0.23	0.29	0.32	0.39	-	0.33	0.23
19	Indu Projects Limited	Infrastructure	0.03	0.06	0.10	0.13	0.24	0.30	-	0.47	-	0.39	0.11
20	Aster Private Limited	Infrastructure	-	-	-	0.21	0.07	0.10	0.10	0.09	0.14	0.11	0.14
21	Amr India Limited	Infrastructure	-	-	0.29	0.02	0.02	-	0.02	-	-	0.02	0.11
22	Soma Enterprises Limited	Infrastructure	-	-	-	0.22	0.24	-	0.28	-	-	0.28	0.23
23	Hotel Leela Ventures Limited	Other Companies	-0.07	-0.04	-0.06	0.05	0.15	0.19	0.20	0.22	0.22	0.21	0.01
24	Suzlon Energy Limited	Other Companies	-	0.15	0.10	0.01	0.25	0.27	0.47	0.51	0.42	0.42	0.13
25	Wockhardt Limited	Other Companies	0.61	0.57	0.62	0.87	0.87	0.22	0.27	0.56	-	0.35	0.71
26	Abg Shipyard Limited	Other Companies	-	-0.49	0.10	0.21	0.32	0.30	0.37	0.27	0.33	0.32	0.04
27	Adunik Metaliks Limited	Other Companies	-	-	-	-0.83	-0.07	0.12	0.32	0.36	0.38	0.30	-0.45
28	Orchid Pharma Limited	Other Companies	-	-	-0.12	0.06	0.12	0.17	0.41	0.51	0.38	0.37	0.02
29	Ind Swift Laboratories	Other Companies	-	-	-	-	0.17	0.16	0.17	0.23	0.29	0.21	0.17
30	3i Infotech Limited	Other Companies	-	-	-	0.42	0.38	-0.21	0.21	0.34	0.35	0.17	0.40
31	India Cements Limited	Other Companies	-	0.41	0.37	0.16	0.16	0.19	0.26	0.31	0.33	0.27	0.27
32	Ksk Energy Ventures Limited	Other Companies	-	0.82	0.82	0.87	0.94	0.76	0.77	0.78	0.78	0.77	0.86
33	Moser Bear Limited	Other Companies	1.36	5.11	-1.23	-0.09	0.17	0.41	0.42	0.44	0.42	0.42	1.06
34	Ankit Metal And Power Limited	Other Companies	-	-	-0.38	-0.01	0.20	0.40	0.39	0.44	0.46	0.42	-0.06
35	Dharani Sugars And Chemicals Limited	Other Companies	-	-	-	0.25	0.02	0.03	0.16	0.21	0.20	0.15	0.14
36	Gujarat Nre Coke Limited	Other Companies	-	-	0.15	0.32	0.26	0.31	0.49	0.52	0.54	0.46	0.24
37	Inattentive Industries Limited	Other Companies	-	-	-0.46	-0.19	0.06	0.57	0.60	0.49	0.21	0.47	-0.20

38	Jai Balaji Industries Ltd	Other Companies	-0.61	-0.41	-0.07	0.09	0.18	0.30	0.38	0.36	0.19	0.31	-0.16
39	Modern India Limited	Other Companies	-	-	0.84	0.80	0.61	0.84	0.56	0.48	0.58	0.62	0.75
40	Oudh Sugar Mills Limited	Other Companies	-0.07	-0.08	0.00	0.06	0.03	0.07	0.07	0.17	0.12	0.11	-0.01
41	Plethico Pharmaceuticals Limited	Other Companies	-	-	-	0.67	0.61	0.69	0.55	0.54	0.48	0.56	0.64
42	Psl Limited	Other Companies	-	-1.57	-0.70	-0.03	0.05	0.08	0.26	0.35	0.30	0.25	-0.56
43	Tulsyan Nec Limited	Other Companies	-	-	-	0.01	0.11	0.14	0.21	0.20	0.22	0.19	0.06
44	Uttam Sugar Mills Limited	Other Companies	0.17	0.03	0.00	0.12	0.17	0.16	0.24	0.36	-	0.25	0.10
45	Venus Remedies Limited	Other Companies	0.62	0.66	0.62	0.65	0.64	0.62	0.55	0.52	0.49	0.55	0.64
46	Panacea Biotic Limited	Other Companies	-	-	-	1.27	2.12	1.44	1.18	2.81	2.96	2.10	1.69
47	Monnet Ispat Limited	Other Companies	-	-	-	-0.18	0.09	0.23	0.31	0.34	0.38	0.31	-0.04
48	Shiv Vani Oil And Gas Energy Limited	Other Companies	-	-	-	-	0.01	0.13	0.31	0.36	0.32	0.28	0.01
49	Base Corporation Limited	Other Companies	-	-	-	-	0.04	0.06	0.29	0.30	0.27	0.23	0.04
50	Electrotherm India Limited	Other Companies	-	-	-1.51	-0.69	-0.49	-0.23	-0.09	0.00	0.23	-0.02	-0.90
51	Bharathi Shipyard Limited	Other Companies	-	-	1.07	2.49	-0.04	0.11	0.20	0.24	0.27	0.21	1.17
52	Essar Oil Limited	Other Companies	0.11	0.20	0.31	0.26	0.26	1.00	1.00	1.00	1.00	1.00	0.23
53	Tecpro Systems Limited	Other Companies	-	-	-	-	-0.23	0.06	0.27	0.37	0.49	0.30	-0.23
54	Educomp Solutions Limited	Other Companies	-	-	0.06	0.17	0.47	0.68	0.84	0.77	0.67	0.74	0.23
55	Sakthi Sugars Limited	Other Companies	-	-	0.14	0.01	0.02	0.07	0.06	0.13	0.21	0.12	0.06
56	Ginni Filaments Limited	Textile	0.44	0.38	0.34	0.30	0.22	0.17	0.24	-	-	0.21	0.34
57	Gtn Industries Limited	Textile	-	0.18	0.21	0.18	0.16	0.12	0.19	-	-	0.15	0.18
58	Rajveer Industries Limited	Textile	-	-	0.07	0.13	0.13	0.25	0.33	0.26	0.24	0.27	0.11
59	Spentex Industries Limited	Textile	-3.88	-1.66	-0.53	-0.20	-0.15	0.07	-0.01	0.03	0.13	0.06	-1.29
60	Abhishek Corporation Limited	Textile	1.10	1.14	1.19	1.37	3.27	-3.19	0.03	0.22	0.29	-0.67	1.61
61	Ksl & Industries Limited	Textile	-0.86	-0.54	-0.31	0.00	0.08	0.27	0.31	0.35	0.37	0.33	-0.33
62	Nithin Spinners Limited	Textile	0.34	0.42	0.32	0.48	0.36	0.21	0.20	0.25	-	0.22	0.38
63	Shri Lakshmi Cotsyn Limited	Textile	-	-1.01	-0.72	-0.60	-0.11	0.10	0.23	0.26	0.27	0.21	-0.61
64	Prathibha Syntex Limited	Textile	0.38	0.12	0.09	0.07	0.08	0.16	0.25	0.33	-	0.25	0.15
65	Rana Poly Cot Limited	Textile	-	-	-	-0.53	-0.12	0.16	0.15	0.15	0.15	0.15	-0.32
66	Suryajyothi Spinning Mills Limited	Textile	-	-	0.18	0.23	0.22	0.25	0.31	0.30	0.22	0.27	0.21
67	Bombay Rayon Fashion Limited	Textile	-	0.03	0.02	0.02	0.02	0.02	0.03	0.03	-	0.03	0.02
68	Bhushan Steel Limited	Iron And Steel	-	-	-	0.02	0.10	0.17	0.22	0.25	0.28	0.23	0.06
69	Electro Steel Casting Limited	Iron And Steel	-	-	-	-0.08	0.10	0.29	0.49	0.23	0.27	0.32	0.01
70	Msp Steel And Power Limited	Iron And Steel	-	-	-	0.29	0.34	0.35	0.42	0.44	0.32	0.38	0.31
71	Visa Steel Limited	Iron And Steel	-0.30	-0.18	0.04	0.14	0.19	0.16	0.23	0.22	0.24	0.21	-0.02
72	Jindal Steel Limited	Iron And Steel	0.47	0.49	0.32	0.37	0.39	0.45	0.52	0.49	-	0.49	0.41
73	Zion Steel Limited	Iron And Steel	-	-	-	-	0.38	0.33	0.28	0.36	0.48	0.36	0.38
74	Essar Steel India Limited	Iron And Steel	-	-	-	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00

Table 4.5: Operating Profit Ratio

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	0.00%	7.49%	6.38%	-41.98%	-32.20%	-2.22%	10.88%	19.72%	18.37%	11.69	-15.08
2	C&C Construction Limited	Infrastructure	0.00%	20.46%	15.50%	2.11%	10.12%	1.74%	12.38%	18.78%	23.71%	14.15	12.05
3	Consolidated Construction Consortium Limited	Infrastructure	0.00%	0.00%	-0.99%	-10.70%	-2.89%	-22.83%	1.06%	5.41%	7.83%	-2.13	-4.86
4	Era Infra Engineering Limited	Infrastructure	0.00%	0.00%	-17.89%	-30.92%	10.25%	11.27%	19.10%	19.00%	18.74%	17.03	-12.85
5	Gammon India Limied	Infrastructure	0.00%	-15.00%	15.24%	-2.99%	-7.70%	1.64%	8.38%	4.02%	9.02%	5.76	-2.61
6	Gtl Infrastructure Limited	Infrastructure	34.17%	32.85%	41.43%	49.26%	53.49%	57.30%	64.89%	51.81%	53.63%	56.91	42.24
7	Hindustan Construction Limited	Infrastructure	17.96%	19.29%	18.91%	15.58%	9.50%	10.79%	13.22%	12.62%	13.23%	12.47	16.25
8	Ivrcl Limited	Infrastructure	0.00%	0.00%	-18.48%	-16.84%	-0.94%	3.71%	7.24%	8.11%	9.11%	7.04	-12.09
9	Lanco Infratech Limited	Infrastructure	0.00%	6.47%	16.20%	-4.23%	-14.18%	13.84%	7.54%	12.46%	14.72%	12.14	1.07
10	Shriram Epc Limited	Infrastructure	0.00%	0.00%	2.82%	5.17%	-12.25%	-51.93%	15.31%	16.09%	14.88%	-1.41	-1.42
11	Unity Infrastructure Limited	Infrastructure	0.00%	0.00%	0.00%		-86.42%	-10.04%	12.32%	13.65%	13.90%	7.46	-43.21
12	Diamond Power Infrastructure Limited	Infrastructure	0.00%	0.00%	0.00%	-57.83%	-5.73%	3.73%	9.81%	10.30%	11.09%	8.73	-31.78
13	Il&Fs Engineering & Construction	Infrastructure	10.04%	1.13%	8.34%	3.25%	3.32%	-24.74%	-18.21%	13.20%	16.62%	-3.28	5.22
14	Gkc Projects Limited	Infrastructure	0.00%	0.00%	8.01%	9.02%	2.48%	0.95%	9.23%	11.87%	13.47%	8.88	6.50
15	Tantiya Consrtuction Limited	Infrastructure	0.00%	0.00%	0.00%	116.60%	131.78%	142.07%	122.59%	120.49%	121.10%	126.56	124.19
16	Gangotri Enterprises Limited	Infrastructure	0.00%	0.00%	0.00%	0.00%	13.16%	4.29%	10.67%	10.13%	0.00%	8.36	13.16
17	Vishwa Infrastructure Private Limited	Infrastructure	0.00%	0.00%	0.00%	-15.78%	-5.02%	-2.17%	8.46%	11.04%	13.93%	7.82	-10.40
18	Ritwhik Projects Limited	Infrastructure	0.00%	9.50%	15.59%	15.25%	26.09%	8.00%	13.48%	206.34%	0.00%	75.94	16.61
19	Indu Projects Limited	Infrastructure	-20.09%	42.29%	-110.83%	-24.19%	-58.39%	14.65%	13.68%	11.68%	0.00%	13.34	-34.24
20	Aster Private Limited	Infrastructure	0.00%	0.00%	0.00%	-41.00%	0.48%	2.04%	6.30%	5.54%	4.44%	4.58	-20.26
21	Amr India Limited	Infrastructure	0.00%	0.00%	3.90%	4.61%	1.39%	0.00%	-5.90%	0.00%	0.00%	-5.90	3.30
22	Soma Enterprises Limited	Infrastructure	0.00%	0.00%	0.00%	2.42%	13.12%	0.00%	2.55%	0.00%	0.00%	2.55	7.77
23	Hotel Leela Ventures Limited	Other Companies	25.20%	23.17%	19.04%	20.21%	17.23%	3.26%	27.99%	31.25%	35.73%	24.56	20.97
24	Suzlon Energy Limited	Other Companies	0.00%	19.85%	14.38%	-16.78%	-11.22%	-72.55%	8.29%	5.96%	-5.58%	-15.97	1.56
25	Wockhardt Limited	Other Companies	6.30%	5.78%	0.39%	1.41%	23.92%	23.57%	23.59%	22.42%	0.00%	23.19	7.56
26	Abg Shipyard Limited	Other Companies	0.00%		-74.33%	27.36%	29.96%	27.92%	26.99%	27.99%	28.18%	27.77	-4.25
27	Adunik Metaliks Limited	Other Companies	0.00%	0.00%	0.00%	-18.72%	-17.90%	-46.86%	13.79%	15.07%	14.42%	-0.89	-18.31
28	Orchid Pharma Limited	Other Companies	0.00%	0.00%	12.19%	19.79%	18.42%	6.81%	20.50%	20.95%	-8.86%	9.85	16.80
29	Ind Swift Laboratories	Other Companies	0.00%	0.00%	0.00%	0.00%	15.56%	16.98%	13.75%	6.21%	6.50%	10.86	15.56
30	3i Infotech Limited	Other Companies	0.00%	0.00%	0.00%	42.95%	18.68%	17.70%	15.26%	21.50%	20.31%	18.69	30.81
31	India Cements Limited	Other Companies	0.00%	33.05%	17.30%	12.24%	11.77%	4.68%	17.06%	26.07%	24.30%	18.03	18.59
32	Ksk Energy Ventures Limited	Other Companies	0.00%	43.17%	23.59%	62.49%	76.12%	66.29%	68.11%	80.41%	83.92%	74.68	51.34
33	Moser Bear Limited	Other Companies	-9.18%	-11.96%	-9.76%	0.97%	-0.17%	11.97%	6.95%	19.38%	14.21%	13.12	-6.02
34	Ankit Metal And Power Limited	Other Companies	0.00%	0.00%		-16.98%	-1.46%	4.42%	14.77%	9.50%	8.93%	9.41	-6.15
35	Dharani Sugars And Chemicals Limited	Other Companies	0.00%	0.00%	0.00%	14.19%	11.43%	-2.92%	9.39%	16.00%	13.60%	9.02	12.81
36	Gujarat Nre Coke Limited	Other Companies	0.00%	0.00%	-45.27%	-122.08%	-37.19%	-76.42%	21.99%	22.08%	15.98%	-4.09	-68.18

37	Inattentive Industries Limited	Other Companies	0.00%	0.00%	4.92%	-3.32%	-106.86%	24.11%	24.54%	23.23%	26.63%	24.63	-35.08
38	Jai Balaji Industries Ltd	Other Companies	-5.50%	-12.54%	-1.39%	1.56%	-4.86%	1.52%	15.24%	13.28%	10.40%	10.11	-4.55
39	Modern India Limited	Other Companies	0.00%	0.00%	-9.31%	-8.46%	-15.57%	-0.30%	1.10%	0.09%	-0.66%	0.06	-11.11
40	Oudh Sugar Mills Limited	Other Companies	11.95%	3.18%	7.48%	15.60%	10.78%	8.67%	4.61%	24.01%	22.51%	14.95	9.80
41	Plethico Pharmaceuticals Limited	Other Companies	0.00%	0.00%	0.00%	5.19%	-1.67%	9.64%	29.26%	29.24%	20.56%	22.18	1.76
42	Psl Limited	Other Companies	0.00%	-2260.07%	-1200.47%	-60.14%	-30.05%	-3.09%	18.42%	15.19%	11.04%	10.39	-887.68
43	Tulsyan Nec Limited	Other Companies	0.00%	0.00%	0.00%	6.98%	8.71%	3.33%	4.57%	5.43%	6.07%	4.85	7.84
44	Uttam Sugar Mills Limited	Other Companies	19.90%	10.00%	-1.93%	5.41%	17.08%	8.94%	10.87%	7.92%	0.00%	9.24	10.09
45	Venus Remedies Limited	Other Companies	19.99%	19.76%	19.24%	25.32%	25.68%	25.53%	24.32%	24.30%	25.73%	24.97	22.00
46	Panacea Biotic Limited	Other Companies	0.00%	0.00%	0.00%	12.94%	17.39%	9.94%	-18.33%	-14.11%	-13.40%	-8.98	15.16
47	Monnet Ispat Limited	Other Companies	0.00%	0.00%	0.00%	-6.23%	-18.20%	3.66%	16.86%	24.30%	25.02%	17.46	-12.21
48	Shiv Vani Oil And Gas Energy Limited	Other Companies	0.00%	0.00%	0.00%	0.00%	-70.87%	-81.76%	42.21%	36.29%	33.51%	7.56	-70.87
49	Base Corporation Limited	Other Companies	0.00%	0.00%	0.00%	0.00%	-31.48%	-7.56%	10.37%	9.60%	0.00%	4.14	-31.48
50	Electrotherm India Limited	Other Companies	0.00%	0.00%	4.86%	-3.55%	-16.01%	-34.05%	-1.88%	-7.70%	14.16%	-7.37	-4.90
51	Bharathi Shipyard Limited	Other Companies	0.00%	0.00%	-202.43%	-303.87%	-101.09%	-10.61%	34.26%	29.54%	27.05%	20.06	-202.46
52	Essar Oil Limited	Other Companies	2.87%	5.31%	2.86%	6.09%	-8.89%	-4.31%	4.48%	28.23%	23.88%	13.07	1.65
53	Tecpro Systems Limited	Other Companies	0.00%	0.00%	0.00%	0.00%	-124.32%	-6.61%	13.62%	15.55%	16.68%	9.81	-124.32
54	Educomp Solutions Limited	Other Companies	0.00%	0.00%	-35.30%	-27.63%	-36.85%	7.78%	33.75%	49.18%	56.48%	36.80	-33.26
55	Sakthi Sugars Limited	Other Companies	0.00%	0.00%	13.55%	4.99%	13.31%	2.10%	7.01%	11.64%	6.28%	6.76	10.62
56	Ginni Filaments Limited	Textile	10.19%	9.04%	10.38%	13.63%	12.57%	6.93%	6.37%	0.00%	0.00%	6.65	11.17
57	Gtn Industries Limited	Textile	0.00%	6.79%	7.82%	3.22%	5.77%	4.73%	4.11%	0.00%	0.00%	4.42	5.90
58	Rajveer Industries Limited	Textile	0.00%	0.00%	5.82%	9.72%	13.49%	-3.82%	13.80%	12.00%	19.05%	10.26	9.67
59	Spentex Industries Limited	Textile	-6.11%	-0.23%	1.22%	6.48%	9.34%	13.80%	8.46%	2.08%	6.56%	7.73	2.14
60	Abhishek Corporation Limited	Textile	11.66%	-113.58%	-95.07%	-59.72%	-37.26%	-66.87%	-70.24%	-1.20%	66.02%	-18.07	-58.80
61	Ksl & Industries Limited	Textile	-9.23%	0.65%	-21.53%	9.15%	3.95%	6.92%	14.27%	15.18%	18.99%	13.84	-3.40
62	Nithin Spinners Limited	Textile	14.26%	17.87%	16.09%	19.23%	19.55%	10.54%	9.93%	16.51%	0.00%	12.33	17.40
63	Shri Lakshmi Cotsyn Limited	Textile	0.00%	-9.50%	3.50%	-42.57%	-27.41%	4.04%	17.62%	14.33%	12.09%	12.02	-18.99
64	Prathibha Syntex Limited	Textile	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00
65	Rana Poly Cot Limited	Textile	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00
66	Suryajyothi Spinning Mills Limited	Textile	0.00%	0.00%	5.43%	9.57%	7.77%	5.81%	9.39%	14.99%	9.49%	9.92	7.59
67	Bombay Rayon Fashion Limited	Textile	0.00%	13.10%	16.11%	11.44%	2.25%	8.05%	13.42%	13.05%	0.00%	11.51	10.72
68	Bhushan Steel Limited	Iron And Steel	0.00%	0.00%	0.00%	21.32%	17.67%	20.42%	27.84%	30.85%	30.22%	27.33	19.49
69	Electro Steel Casting Limited	Iron And Steel	0.00%	0.00%	0.00%	2.03%	4.22%	0.71%	-10.35%	-52.22%	-75.84%	-34.43	3.13
70	Msp Steel And Power Limited	Iron And Steel	0.00%	0.00%	0.00%	8.85%	-1.21%	0.52%	13.33%	17.47%	16.68%	12.00	3.82
71	Visa Steel Limited	Iron And Steel	1.17%	0.58%	-0.22%	3.72%	-8.81%	5.86%	16.21%	17.25%	8.85%	12.04	-0.71
72	Jindal Steel Limited	Iron And Steel	20.64%	19.23%	27.67%	25.84%	26.34%	34.78%	34.36%	42.77%	0.00%	37.30	23.94
73	Zion Steel Limited	Iron And Steel	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00
74	Essar Steel India Limited	Iron And Steel	0.00%	0.00%	0.00%	24.28%	33.11%	31.32%	37.78%	18.66%	3.13%	22.72	28.69

Table 4.6: Interest Coverage Ratio

S.NO	COMPANY NAME	SECTOR	AFTER RECONSTRUCTING PERIOD					RESTRUCTURED YEAR	BEFORE RRESTRUCTURING PERIOD			AVARAGE OF BEFORE RECONSTRUCTING PERIOD	AVARAGE OF AFTER RECONSTRUCTING PERIOD
			+5	+4	+3	+2	+1	0	-1	-2	-3		
1	A2z Infra Engineering Limited	Infrastructure	-	0.40	0.52	-0.78	-1.17	-0.14	1.42	2.93	3.29	1.88	-0.26
2	C&C Construction Limited	Infrastructure	-	1.29	0.98	0.13	0.75	0.11	0.80	1.86	2.04	1.20	0.79
3	Consolidated Construction Consortium Limited	Infrastructure	-	-	-0.04	-0.32	-0.15	-1.84	0.18	1.35	2.78	0.62	-0.17
4	Era Infra Engineering Limited	Infrastructure	-	-	-0.24	-0.50	0.26	0.43	1.62	1.86	2.25	1.54	-0.16
5	Gammon India Limied	Infrastructure	-	-0.22	0.89	-0.20	-0.63	0.19	1.28	0.96	2.15	1.14	-0.04
6	Gtl Infrastructure Limited	Infrastructure	0.51	0.50	0.63	0.80	0.69	1.10	1.20	1.12	1.76	1.29	0.63
7	Hindustan Construction Limited	Infrastructure	0.98	1.15	1.20	1.04	0.69	0.79	1.64	1.91	1.80	1.54	1.01
8	Ivrcl Limited	Infrastructure	-	-	-0.54	-0.60	-0.04	0.27	0.78	0.99	1.96	1.00	-0.40
9	Lanco Infratech Limited	Infrastructure	-	0.10	0.47	-0.08	-0.51	1.09	1.28	2.14	4.38	2.22	0.00
10	Shriram Epc Limited	Infrastructure	-	-	0.06	0.10	-0.35	-1.35	0.64	1.13	1.55	0.49	-0.06
11	Unity Infrastructure Limited	Infrastructure	-	-	-	-2.45	-0.64	-0.28	1.03	1.83	2.26	1.21	-1.55
12	Diamond Power Infrastructure Ltd	Infrastructure	-	-	-	-3.56	-0.65	0.71	2.35	2.56	3.98	2.40	-2.10
13	Il&Fs Engineering & Construction	Infrastructure	0.56	0.07	0.73	0.32	0.32	-1.50	-1.29	3.24	5.29	1.44	0.40
14	Gkc Projects Limited	Infrastructure	-	-	0.56	0.76	0.16	0.09	1.35	2.25	3.30	1.75	0.49
15	Tantiya Consrtuction Limited	Infrastructure	-	-	-	11.70	2.88	2.39	0.94	0.72	0.79	1.21	7.29
16	Gangotri Enterprises Limited	Infrastructure	-	-	-	-	1.01	0.43	2.01	4.86	-	2.43	1.01
17	Vishwa Infrastructure Private Ltd	Infrastructure	-	-	-	-0.99	-0.38	-0.18	0.83	1.61	3.75	1.50	-0.68
18	Ritwhik Projects Limited	Infrastructure	-	1.55	1.22	1.07	1.40	0.64	1.37	36.94	-	12.99	1.31
19	Indu Projects Limited	Infrastructure	-9.93	22.13	-4.85	-0.65	-2.36	1.29	1.86	1.98	-	1.71	0.87
20	Aster Private Limited	Infrastructure	-	-	-	-1.43	0.04	0.18	1.20	1.24	1.45	1.02	-0.69
21	Amr India Limited	Infrastructure	-	-	0.27	0.26	0.07	-	-0.26	-	-	-0.26	0.20
22	Soma Enterprises Limited	Infrastructure	-	-	-	0.11	0.45	-	0.73	-	-	0.73	0.28
23	Hotel Leela Ventures Limited	Other Companies	1.95	1.74	0.73	0.29	0.28	0.06	2.32	3.95	5.00	2.83	1.00
24	Suzlon Energy Limited	Other Companies	-	1.97	4.58	-0.43	-0.35	-1.62	1.06	0.80	-0.27	-0.01	1.44
25	Wockhardt Limited	Other Companies	0.86	1.61	0.39	0.75	3.84	1.90	1.41	7.53	-	3.61	1.49
26	Abg Shipyard Limited	Other Companies	-	-2.12	-0.36	0.72	1.57	2.02	2.54	2.03	2.70	2.32	-0.05
27	Adunik Metaliks Limited	Other Companies	-	-	-	-0.41	-0.42	-1.12	1.10	1.10	0.89	0.49	-0.41
28	Orchid Pharma Limited	Other Companies	-	-	0.28	0.59	0.60	0.25	1.99	3.01	-0.45	1.20	0.49
29	Ind Swift Laboratories	Other Companies	-	-	-	-	1.19	1.02	0.76	0.50	0.50	0.70	1.19
30	3i Infotech Limited	Other Companies	-	-	-	1.37	0.39	0.36	0.17	0.28	0.51	0.33	0.88
31	India Cements Limited	Other Companies	-	4.98	1.79	1.07	0.74	0.15	0.84	1.72	1.70	1.10	2.14
32	Ksk Energy Ventures Limited	Other Companies	-	0.06	0.05	0.72	1.61	2.08	9.05	2.96	1.48	3.89	0.61
33	Moser Bear Limited	Other Companies	-0.24	-0.33	-0.45	0.06	-0.01	1.04	0.68	2.13	1.51	1.34	-0.19

34	Ankit Metal And Power Limited	Other Companies	-	-	-15.61	-1.21	-0.15	0.57	2.47	2.51	2.80	2.09	-5.66
35	Dharani Sugars And Chemicals Limited	Other Companies	-	-	-	0.99	0.62	-0.16	0.75	1.72	1.71	1.01	0.81
36	Gujarat Nre Coke Limited	Other Companies	-	-	-0.58	-3.30	-0.44	-2.15	1.43	1.45	1.58	0.58	-1.44
37	Inattentive Industries Limited	Other Companies	-	-	0.12	-0.08	-4.02	2.52	2.76	2.36	2.12	2.44	-1.33
38	Jai Balaji Industries Ltd	Other Companies	-2.09	-0.37	-0.05	0.09	-0.43	0.14	2.11	1.68	1.32	1.31	-0.57
39	Modern India Limited	Other Companies	-	-	-5.70	-1.77	-4.00	-0.21	1.90	0.08	-0.18	0.40	-3.82
40	Oudh Sugar Mills Limited	Other Companies	1.29	0.34	0.65	1.75	0.95	0.68	0.26	1.60	1.09	0.91	1.00
41	Plethico Pharmaceuticals Limited	Other Companies	-	-	-	0.44	-0.16	0.51	3.72	4.33	5.32	3.47	0.14
42	Psl Limited	Other Companies	-	-500.90	-3,458.7	-1.84	-2.80	-0.23	1.69	1.98	1.89	1.33	-991.06
43	Tulsyan Nec Limited	Other Companies	-	-	-	0.32	0.83	0.55	0.77	1.16	1.37	0.96	0.58
44	Uttam Sugar Mills Limited	Other Companies	3.20	1.61	-0.19	0.48	1.59	0.79	0.81	0.64	-	0.75	1.33
45	Venus Remedies Limited	Other Companies	2.24	2.17	2.14	4.55	4.85	4.87	5.65	7.62	11.50	7.41	3.19
46	Panacea Biotic Limited	Other Companies	-	-	-	0.68	0.98	0.72	-0.62	-0.80	-0.93	-0.41	0.83
47	Monnet Ispat Limited	Other Companies	-	-	-	-0.08	-0.38	0.19	1.60	3.99	5.47	2.81	-0.23
48	Shiv Vani Oil And Gas Energy Ld	Other Companies	-	-	-	-	-0.26	-0.54	1.70	1.70	1.83	1.17	-0.26
49	Base Corporation Limited	Other Companies	-	-	-	-	-0.49	-0.71	1.40	1.39	-	0.70	-0.49
50	Electrotherm India Limited	Other Companies	-	-	24.08	-4.88	-45.96	-118.88	-0.20	-0.36	1.69	-29.44	-8.92
51	Bharathi Shipyard Limited	Other Companies	-	-	-0.37	-0.40	-0.37	-0.12	0.98	1.75	2.01	1.16	-0.38
52	Essar Oil Limited	Other Companies	1.21	2.05	0.90	2.13	-8.25	-2.69	0.83	3.39	1.91	0.86	-0.39
53	Tecpro Systems Limited	Other Companies	-	-	-	-	-0.47	-0.12	1.18	2.00	2.67	1.43	-0.47
54	Educomp Solutions Limited	Other Companies	-	-	-0.29	-0.24	-0.75	0.41	4.03	7.61	12.41	6.12	-0.43
55	Sakthi Sugars Limited	Other Companies	-	-	0.94	0.52	0.86	0.08	0.60	1.06	0.71	0.61	0.77
56	Ginni Filaments Limited	Textile	2.81	1.94	1.96	3.14	2.12	0.82	0.90	-	-	0.86	2.39
57	Gtn Industries Limited	Textile	-	1.06	1.19	0.61	1.35	0.93	0.92	-	-	0.93	1.05
58	Rajveer Industries Limited	Textile	-	-	0.48	0.78	0.65	-0.32	1.56	1.24	2.42	1.22	0.63
59	Spentex Industries Limited	Textile	-3.22	-0.02	0.14	0.91	1.37	1.83	0.93	0.21	0.77	0.93	-0.16
60	Abhishek Corporation Limited	Textile	0.02	-0.10	-0.16	-0.25	-0.23	-0.27	-1.80	-0.02	1.24	-0.22	-0.15
61	Ksl & Industries Limited	Textile	-0.08	0.02	-2.72	0.94	0.17	0.87	2.18	2.17	2.81	2.01	-0.34
62	Nithin Spinners Limited	Textile	5.99	4.15	4.39	5.38	3.19	2.08	1.09	2.32	-	1.83	4.62
63	Shri Lakshmi Cotsyn Limited	Textile	-	-10.82	4.89	-1.44	-1.02	0.20	1.86	2.16	2.27	1.62	-2.10
64	Prathibha Syntex Limited	Textile	-	-	-	-	-	-	-	-	-	0.00	0.00
65	Rana Poly Cot Limited	Textile	-	-	-	-	-	-	-	-	-	0.00	0.00
66	Suryajyothi Spinning Mills Ltd	Textile	-	-	0.62	0.88	0.95	0.73	1.12	2.49	1.75	1.52	0.82
67	Bombay Rayon Fashion Limited	Textile	-	0.76	1.13	0.73	0.12	0.95	1.75	2.38	-	1.69	0.69
68	Bhushan Steel Limited	Iron And Steel	-	-	-	0.54	0.46	0.87	1.62	2.57	2.87	1.98	0.50
69	Electro Steel Casting Limited	Iron And Steel	-	-	-	0.05	0.21	0.03	-0.30	-0.63	-0.57	-0.37	0.13
70	Msp Steel And Power Limited	Iron And Steel	-	-	-	0.60	-0.09	0.05	1.46	1.78	1.98	1.32	0.26
71	Visa Steel Limited	Iron And Steel	0.45	0.02	-0.01	0.26	-0.36	0.42	2.08	2.20	1.64	1.59	0.07
72	Jindal Steel Limited	Iron And Steel	1.25	0.92	1.81	3.47	4.80	7.71	9.85	9.45	-	9.00	2.45
73	Zion Steel Limited	Iron And Steel	-	-	-	-	-	-	-	-	-	0.00	0.00
74	Essar Steel India Limited	Iron And Steel	-	-	-	0.91	0.92	1.01	0.99	0.86	0.22	0.77	0.92

IMPACT OF CORPORATE DEBT RESTRUCTURING ON FINANCIALS OF THE SELECT COMPANIES

The main purpose of CDR Mechanism was to turnaround the assisted companies from sickness to health. The present study, therefore, has compared the key financials in terms of liquidity, solvency, interest- servicing capacity etc. Descriptive statistics have been calculated and Wilcoxon Signed Rank Test is used to test hypotheses.

The next few pages present the various financial ratios to examine the whether there was any positive impact of CDR on the financial ratios of the select companies.

Research Objective II: To compare the financials of select companies before and after the Corporate Debt Restructuring process to study the impact of CDR.

H2: There is significant difference in the financials of select firms after the Corporate Debt Restructuring process.

CURRENT RATIO

To know effectiveness of CDR cell the following parameters are considered. Current ratio is calculated for 3 years before and 5 years after restructuring which explains there is whether any impact on short-term liquidity position of sample firms. Descriptive statistics have been calculated and Wilcoxon Signed Rank Test is used to test hypothesis

H2a: There is a significant difference in the Current ratio of the companies after the debt restructuring process.

Table 4.7: Current Ratio

Current Ratio of Sample Firms Before and After Corporate Debt Restructuring									
Year	-3	-2	-1	0	1	2	3	4	5
No.of Companies	59	68	72	70	72	66	50	33	20
Mean	1.85	1.82	1.63	1.75	1.54	1.54	1.18	0.99	0.8
Median	1.43	1.23	1.24	1.14	1.28	0.9	0.86	0.75	0.59

Table 4.8: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Current Ratio before Restructuring	74	1.6941	1.62152	.00	8.29
Current Ratio After Restructuring	74	1.2673	1.32415	.00	10.04

Table 4.9: Rank

		N	Mean Rank	Sum of Ranks
Currentafter – Currentbefore	Negative Ranks	48[a]	39.36	1889.50
	Positive Ranks	23[b]	28.98	666.50
	Ties	3[c]		
	Total	74		

a. Currentafter < Currentbefore

b. Currentafter > Currentbefore

c. Currentafter = Currentbefore

Table 4.10: Test Statistics[a]

	Current ratio after – Current Rario before
Z	-3.504[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Rank Test

b. Based on positive ranks.

The Current atio has been used to find changes in the short term ability of the firms to repay short term liabilities. The change between the pre and post restructuring period are compared using the WRS test to find whether the CDR plan has improved the short term ability of firms. The test P-value is less than 0.05, so H1 is supported. The mean of the sample firms' current ratio shows a sharp decline in the years post-restructuring in comparison to the pre-restructuring period. Hence, it can be concluded that there is no improvement in the current ratio after restructuring through the CDR mechanism.

DEBT-EQUITY RATIO

Debt – Equity ratio is calculated for 3 years before and 5 years after restructuring which explains whether there is any impact on long-term solvency position of sample firms. Descriptive statistics have been calculated and Wilcoxon Signed Rank Test is testing hypothesis that

H2b: There is a significant difference in the Debt Equity ratio of the companies after the debt restructuring process.

Table 4.11: Debt-Equity Ratio

	Debt Equity Ratio of sample firms Before and After Corporate Debt Restructuring								
Year	-3	-2	-1	0	1	2	3	4	5
No. of Companies	61	70	73	71	74	68	51	34	21
Mean	4.65	10.53	4.9	6.98	11.43	14.02	28.75	1.92	0.39
Median	1.89	1.77	1.97	2.83	3.83	3.04	2	1.43	1.08

Table 4.12: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Debtequitybefore	74	6.9316	24.20836	-12.43	184.57
Debtequityafter	74	14.1986	44.39363	-39.39	299.82

Table 4.13: Ranks

		N	Mean Rank	Sum of Ranks
Debtequityafter – Debtequitybefore	Negative Ranks	26[a]	38.40	998.50
	Positive Ranks	48[b]	37.01	1776.50
	Ties	0[c]		
	Total	74		

a. Debtequityafter < Debtequitybefore

b. Debtequityafter > Debtequitybefore

c. Debtequityafter = Debtequitybefore

Table 4.14: Test Statistics[a]

	Debt – equity after – Debt equity before
Z	-2.096[b]
Asymp. Sig. (2-tailed)	.036

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

The Debt to Equity ratio has been used to find the percentage of company financing that has been raised from creditors and investors. The change between the pre and post restructuring period are compared using the WSR test to check whether the CDR plan has reduced the burden of firms. According to the results, the test P-value is less than 0.05, so H1 is supported. The mean of the sample firms' debt-equity ratio is observed to be increasing year to year up to 3+ years of post-restructuring and has decreased after 4+ and 5+ years. This might have happened due to selling off of some unviable assets and paying part of the debt obligation by the companies.

NET SALES TO TOTAL ASSETS

Net Sales to Total Assets ratio is calculated for 3 years before and 5 years after restructuring which explains whether there is any impact in sales by using existing assets of sample firms. Descriptive statistics have been calculated and WRS test is to test hypothesis

H2c: There is a significant difference in the Net Sales to Total Assets ratio of the companies after the debt restructuring process.

Table 4.15: Net Sales to Total Assets

Net sales & total Assets Ratio of sample firms Before and After Corporate Debt Restructuring									
Year	-3	-2	-1	0	+1	+2	+3	+4	+5
No. of Companies	60	70	74	72	74	68	50	33	20
Mean	0.83	0.81	0.77	0.68	0.59	0.68	0.77	0.81	1.09
Median	0.8	0.74	0.71	0.62	0.48	0.5	0.59	0.59	0.78

Table 4.16: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Net sales & total assets before	74	.7697	.50268	.03	3.13
Net sales & total assets after	74	.6553	.79733	-.17	5.80

Table 4.17: Ranks

		N	Mean Rank	Sum of Ranks
Net salestototalassetsafter – Netsalestototalassetsbefore	Negative Ranks	50[a]	36.92	1846.00
	Positive Ranks	22[b]	35.55	782.00
	Ties	2[c]		
	Total	74		

a. Netsalestototalassetsafter < Netsalestototalassetsbefore

b. Netsalestototalassetsafter > Netsalestototalassetsbefore

c. Netsalestototalassetsafter = Netsalestototalassetsbefore

Table 4.18: Test Statistics[a]

	Net sales & total assets before and after
Z	-2.986[b]
Asymp. Sig. (2-tailed)	.003

a. Wilcoxon Signed Rank Test

b. Based on positive ranks.

The Net Sales to Total Assets ratio has been used to find how effective the sales have been using existing assets. The change between the pre and post restructuring period are compared using the WRS test to check whether the CDR plan has improved sales. According to the test results, the P-value is less than 0.05, so H1 is supported. The mean of the sample firms' Net Sales to Total Assets ratio is seen to be on an increasing trend after restructuring but this improvement is less than the pre-restructuring years. It concludes that there is some improvement in the Net Sales or Revenue after restructuring through the CDR mechanism.

NET WORTH TO TOTAL ASSETS

Net Worth to Total Assets ratio is calculated for 3 years before and 5 years after restructuring which explains that whether any change in the owners' contribution of sample firms. Descriptive statistics have been calculated and WRS Test is to test hypothesis

H2d: There is a significant difference in the Net Worth to Total Assets ratio of the companies after the debt restructuring process

Table 4.19: Net Worth to Total Assets Ratio

Net worth to Total Assets Ratio of sample firms Before and After Corporate Debt Restructuring									
Year	-3	-2	-1	0	1	2	3	4	5
No. of Companies	61	70	73	72	74	68	50	33	20
Mean	0.42	0.4	0.34	0.23	0.25	0.19	0.09	0.19	0.01
Median	0.33	0.36	0.31	0.24	0.17	0.13	0.1	0.15	0.14

Table 4.20: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Networthtototalassetsbefore	74	.3386	.30694	-.67	2.10
Networthtototalassetsafter	74	.1655	.44707	-1.29	1.69

Table 4.21: Ranks

		N	Mean Rank	Sum of Ranks
Networthtototalassetsafter – Networthtototalassetsbefore	Negative Ranks	56[a]	38.74	2169.50
	Positive Ranks	16[b]	28.66	458.50
	Ties	2[c]		
	Total	74		

a. Net worth to total assets after < Net worth to total assets before

b. Net worth to total assets after > Net worth to total assets before

c. Net worth to total assets after = Net worth to total assets before

Table 4.22: Test Statistics[a]

	Networthtototalassetsafter – Networthtototalassetsbefore
Z	-4.801[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Rank Test

b. Based on positive ranks.

The Net Worth to Total Assets ratio has been used to understand the share of owners in the existing assets. The change between the pre and post restructuring period are compared using the WRS test to check whether the CDR plan has increased Net Worth. The results show the test P-

value is less than 0.05, so H1 is supported. The mean of sample firms' Net Worth to Total Assets ratio is on a decreasing trend after restructuring. Also, the mean of the post-restructuring period is less than pre-restructuring years. It can be concluded that there is not much improvement in the share of owner's net worth after restructuring through the CDR mechanism. The reason is most of the reserve and surplus has been utilized to survive, and share prices have also declined.

OPERATING PROFIT RATIO

Operating Profit ratio is calculated for 3 years before and 5 years after restructuring which explains whether there is any impact on operating efficiency of sample firms. Descriptive statistics have been calculated and WRS Test is to test hypothesis

H2e: There is a significant difference in the Operating Profit ratio of the companies after the debt restructuring process.

Table 4.23: Operating Profit Ratio

Operating Profit of sample firms Before and After Corporate Debt Restructuring									
Year	-3	-2	-1	0	1	2	3	4	5
No.of Companies	58	67	71	69	71	66	49	32	19
Mean	14.28	18.48	14.26	2.54	-2.54	-3.55	-19.99	-28.12	2.11
Median	14.57	14.66	13.42	4.29	2.48	4.61	5.43	8.27	10.19

Table 4.24: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Operatingproftbefore	74	13.1781	21.27068	-34.43	126.56
Operatingprofitafter	74	-15.4674	109.56836	-887.68	124.19

Table 4.25: Ranks

		N	Mean Rank	Sum of Ranks
Operatingprofitafter – Operatingproftbefore	Negative Ranks	50[a]	41.08	2054.00
	Positive Ranks	21[b]	23.90	502.00
	Ties	3[c]		
	Total	74		

a. Operatingprofitafter < Operatingproftbefore
b. Operatingprofitafter > Operatingproftbefore
c. Operatingprofitafter = Operatingproftbefore

Table 4.26: Test Statistics[a]

	Operatingprofitafter – Operatingproftbefore
Z	-4.446[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Rank Test
b. Based on positive ranks.

One important ratio is the Operating profit to Sales which measures the operating efficiency of firms. It has been used to find the operating efficiency before and after the restructuring period. The change between the pre and post restructuring period are compared using the WRS test to check whether the CDR plan has improved the Operating Profit. According to the results of the test, P-value is less than 0.05, so H1 is supported. The mean of the sample firms' Operating Profit displays a sharp declining and negative trend after the restructuring period. The sales/operations revenue shows some improvement in the post restructuring period but the operating profit is negative because of possible operating expenses. It can be concluded that there is some improvement in the operating efficiency after restructuring through the CDR mechanism.

INTEREST COVERAGE RATIO

Interest coverage ratio ratio is calculated for 3 years before and 5 years after restructuring which explains there is whether any change in ability to pay interest expenses of sample firms. Descriptive statistics have been calculated and WRS Test is to test hypothesis

H2e: There is a significant difference in the Interest Coverage ratio of the companies after the debt restructuring process.

Table 4.27: Interest Coverage Ratio

	Interest Coverage Ratio of sample firms Before and After Corporate Debt Restructuring								
Year	-3	-2	-1	0	1	2	3	4	5
No.of Companies	58	67	71	69	71	66	49	32	19
Mean	2.31	2.64	1.5	-1.23	-0.45	0.38	-7	-14.44	0.4
Median	1.86	1.84	1.2	0.32	0.14	0.3	0.47	0.63	0.86

Table 4.28: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Interestcoverageratiobefore	74	1.2595	4.14838	-29.44	12.99
Interestcoverageratioafter	74	-13.2197	115.24458	-991.06	7.29

Table 4.29: Ranks

		N	Mean Rank	Sum of Ranks
Interestcoverageratioafter – Interestcoverageratiobefores	Negative Ranks	54[a]	39.86	2152.50
	Positive Ranks	17[b]	23.74	403.50
	Ties	3[c]		
	Total	74		

a. Interestcoverageratioafter < Interestcoverageratiobefore

b. Interestcoverageratioafter > Interestcoverageratiobefore

c. Interestcoverageratioafter = Interestcoverageratiobefore

Table 4.30: Test Statistics[a]

	Interestcoverageratioafter – Interestcoverageratiobefore
Z	-5.011[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Rank Test

b. Based on positive ranks.

The Interest Coverage ratio which measures the ability of firms to meet interest expenses on current outstanding debt in a timely manner. It has been used to find the ability to meet interest expenses before and after the restructuring period. The change between the pre and post restructuring period are compared using the WRS to check whether the CDR plan has improved the number of times the interest is earned. According to the results of the test, P-value is less than 0.05, so H1 is supported. The mean of sample firms' Interest Coverage ratio displays a sharp declining trend and is negative after the restructuring period. The sales or operational revenue has shown some improvement in the post restructuring period but the operating profit is negative because of possible additional operating expenses, while the interest coverage ratio is negative in the post restructuring period. There is not much improvement in the Interest Coverage ratio even after restructuring.

4.4 RESULTS

Table 4.31: Results (Wilcoxon Signed Rank Test)

	Asymp. Sig.	**Results**
Current ratio	0.000	Supported
Debt Equity ratio	0.036	Supported
Net sales to total Assets ratio	0.003	Supported
Networth to Total Assets ratio	0.000	Supported
Operating Profit ratio	0.000	Supported
Interest coverage ratio	0.000	Supported

Table 4.31 shows that the study has tested six hypotheses with the help of the "Wilcoxon Signed Rank" test to check whether a significant difference of pre and post CDR. Current ratio, Debt to Equity ratio, Net Sales to Total Assets Ratio, Net Worth to Total Assets Ratio, Operating Profit Ratio And Interest Coverage Ratio. The results show all the hypotheses are significant at 1% and 5% level of significance. There are differences in the selected parameters before and after the restructuring of firms through CDR. Means and medians of pre and post restructuring period show a sharp decline in the performance of firms and not much improvement is seen in the performance of the sample firms after undergoing the restructuring process.

4.5 FINANCIAL HEALTH OF SELECT FIRMS AFTER CDR PROCESS

As already known and stated, CDR by default should improve the financial health of the firms assisted under the scheme. However, there is a belief that this primary objective is hardly achieved. The next few paragraphs examine whether such desired impact has actually taken place.

RESEARCH OBJECTIVE III: To measure the financial health of selected firms after the Corporate Debt Restructuring process with the help of the Altman Z-Score.

To measure overall financial position of a sample Altman Z-score is most used discriminant statistical method. The study has calculated Z-score to study any impact on overall performance of distressed firm in the post restructuring period. Later descriptive statistics have been calculated.

Altman Z-score

The Z-score measure is used to predict the bankruptcy of firms. It was published by Edward Altman in 1968. It measures bankruptcy within the next two years and status of distress of a company. They use financial statements like Profit & Loss account and Balance sheet information to measure financial strength of firms. Altman used this technique in the

manufacturing firms. It is discriminant analysis statistical method to analyze the probability of a firm going bankrupt within two years.

$$Z = 1.2x1 + 1.4X2 + 3.3X3 + 0.6X4 + 1X5$$

Where

X1= Net Working Capital to Total Assets

X2=Retained Earnings to Total Assets

X3=PBIT to Total Assets

X4= Capital Fund to Total Liabilities

X5= Net Sales to Total Assets

"If the Z value is greater than 2.99, then the firm is said to be in the "**Safe Zone**" and has a negligible probability of filing for bankruptcy."

"If the Z value is between 1.8 and 2.99, the firm is said to be in the "**Grey Zone**" and has a moderate chance of getting bankrupt."

"If the Z value is less than 1.8, then the firm is said to be in the "**Distressed Zone**" and has a very high probability of reaching the stage of bankruptcy".

Table.4.32: Altman Z-Scores

Financial Performance of CDR Companies using Altman Z-Score				
Sl.No	**Comapany Name**	**Sector**	**Z Score**	**Financial Performance**
1	A2Z INFRA ENGINEERING LIMITED	INFRASTRUCTURE	1.35	Distress Zone
2	C&C CONSTRUCTION LIMITED	INFRASTRUCTURE	0.88	Distress Zone
3	CONSOLIDATED CONSTRUCTUTION CONSORTIUM LIMITED	INFRASTRUCTURE	0.81	Distress Zone
4	ERA INFRA ENGINEERING LIMITED	INFRASTRUCTURE	-0.26	Distress Zone
5	GTL INFRSSTRUCTURE LIMITED	INFRASTRUCTURE	-0.14	Distress Zone
6	GAMMON INDIA LIMITED	INFRASTRUCTURE	-0.38	Distress Zone
7	HINDUSTAN CONSTRUCTION LIMITED	INFRASTRUCTURE	1.41	Distress Zone
8	IVRCL LIMITED	INFRASTRUCTURE	-0.66	Distress Zone
9	LANCO INFRATECH LIMITED	INFRASTRUCTURE	-1.16	Distress Zone
10	SHRIRAM EPC LIMITED	INFRASTRUCTURE	-1.23	Distress Zone
11	UNITY INFRASTRUCTURE LIMITED	INFRASTRUCTURE	-2.41	Distress Zone
12	DIAMOND POWER INFRASTRUCTURE LIMITED	INFRASTRUCTURE	0.18	Distress Zone
13	IL&FS ENGINEERING & CONSTRUCTIONS	INFRASTRUCTURE	0.64	Distress Zone
14	GKC PROJECTS LIMITED	INFRASTRUCTURE	1.26	Distress Zone
15	TANTIYA CONSTRUCTIONS LIMITED	INFRASTRUCTURE	0.25	Distress Zone

16	GANGOTRI ENTREPRISES LIMITED	INFRASTRUCTURE	1.31	Distress Zone
17	VISHWA INFRASTRUCTURE PVT.LIMITED	INFRASTRUCTURE	0.18	Distress Zone
18	RITHWHIK PROJECTS LIMITED	INFRASTRUCTURE	2.43	Grey Zone
19	INDU PROJECTS LIMITED	INFRASTRUCTURE	-0.53	Distress Zone
20	ASTER PVT LIMITED	INFRASTRUCTURE	0.05	Distress Zone
21	AMR INDIA LIMITED	INFRASTRUCTURE	0.97	Distress Zone
22	SOMA ENTERPRISES LIMITED	INFRASTRUCTURE	1.66	Distress Zone
23	HOTEL LEELA VENTURES	OTHER COMPANIES	0.4	Distress Zone
24	SUZLON ENERGY	OTHER COMPANIES	2.42	Grey Zone
25	WOCKHARDT LIMITED	OTHER COMPANIES	3.32	Safe Zone
26	ABG SHIPYARD LIMITED	OTHER COMPANIES	-1.76	Distress Zone
27	ADUNIK METALIKS LIMITED	OTHER COMPANIES	-1.51	Distress Zone
28	ORCHID PHARMA LIMITED	OTHER COMPANIES	0.15	Distress Zone
29	IND SWIFT LABORATORIES LIMITED	OTHER COMPANIES	1.55	Distress Zone
30	3I INFOTECH	OTHER COMPANIES	-0.76	Distress Zone
31	INDIA CEMENT LIMITED	OTHER COMPANIES	4.15	Safe Zone
32	KSK ENERGY VENTURES LIMITED	OTHER COMPANIES	0.88	Distress Zone
33	MOSER BEAR	OTHER COMPANIES	3.23	Safe Zone
34	ANKIT METAL AND POWER LIMITED	OTHER COMPANIES	-1.72	Distress Zone
35	DHARANI SUGARS AND CHEMICALS Ltd.	OTHER COMPANIES	1.45	Distress Zone

36	GUJARAT NRE COKE LIMITED	OTHER COMPANIES	-0.96	Distress Zone
37	INNOVENTIVE INDUSTRIES LIMITED	OTHER COMPANIES	-0.31	Distress Zone
38	JAI BALAJI INDUSTRIES LIMITED	OTHER COMPANIES	-0.61	Distress Zone
39	MODERN INDIA LIMITED	OTHER COMPANIES	2.15	Grey Zone
40	OUDH SUGAR MILLS LIMITED	OTHER COMPANIES	2	Grey Zone
41	PLETHICO PHARMACEUTICAL LIMITED	OTHER COMPANIES	1.52	distress Zone
42	PSL LIMITED	OTHER COMPANIES	-3.93	Distress Zone
43	TULSYAN LIMITED	OTHER COMPANIES	0.95	Distress Zone
44	UTTAM SUGARS MILLS LIMITED	OTHER COMPANIES	3.2	Safe Zone
45	VENUS REMEDIES LIMITED	OTHER COMPANIES	1.92	Grey Zone
46	PANACEA BIOTIC LIMITED	OTHER COMPANIES	3.41	Safe Zone
47	MONNET ISPAT	OTHER COMPANIES	-0.81	Distress Zone
48	SHIV VANI OIL AND GAS LIMITED	OTHER COMPANIES	0.01	Distress Zone
49	BASE CORPORATION LIMITED	OTHER COMPANIES	0.17	Distress Zone
50	ELECTROTHERM INDIA LIMITED	OTHER COMPANIES	0.14	Distress Zone
51	BHARATHI SHIPYARD LIMITED	OTHER COMPANIES	4.34	Safe Zone
52	ESSAR OIL LIMITED	OTHER COMPANIES	2.19	Grey Zone
53	TECPRO SYSYEMS LIMITED	OTHER COMPANIES	-0.4	Distress Zone
54	EDUCOMP SOLUTIONS LIMITED	OTHER COMPANIES	0.23	Distress Zone
55	SAKTHI SUGARS LIMITED	OTHER COMPANIES	0.7	Distress Zone

56	GINNI FILAMENTS LIMITED	TEXTILES	3.59	Safe Zone
57	GTN INDUSTRIES LIMITED	TEXTILES	2.79	Grey Zone
58	RAJVEER INDUSTRIES LIMITED	TEXTILES	1.17	Distress Zone
59	SPENTEX INDUSTRIES LIMITED	TEXTILES	-2.52	Distress Zone
60	ABHISHEK CORPORATION LIMITED	TEXTILES	3.33	safe Zone
61	KSL & INDUSTRIES LIMITED	TEXTILES	-1.1	Distress Zone
62	NITIN SPINNERS LIMITED	TEXTILES	2.78	Grey Zone
63	SHRI LAKSHMI COTSYN LIMITED	TEXTILES	-1.37	Distress Zone
64	PRATHIBHA SYSTEX LIMITED	TEXTILES	2.9	Grey Zone
65	RANA POLY COT LIMITED	TEXTILES	-1.49	Distress Zone
66	SURYAJYOTHI SPINNING MILLS LIMITED	TEXTILES	1.65	Distress Zone
67	BOMBAY RAYON FASHION LIMITED	TEXTILES	0.8	Distress Zone
68	BHUSHAN STEEL LIMITED	IRON AND STEEL	0.2	Distress Zone
69	ELECTRO STEEL CASTING LIMITED	IRON AND STEEL	0.15	Distress Zone
70	MSP STEEL AND POWER LIMITED	IRON AND STEEL	1.14	Distress Zone
71	VISA STEEL LIMITED	IRON AND STEEL	-0.56	Distress Zone
72	JINDAL STEEL LIMITED	IRON AND STEEL	1.19	Distress Zone
73	ZION STEEL LIMITED	IRON AND STEEL	0.14	Distress Zone
74	ESSAR STEEL INDIA LIMITED	IRON AND STEEL	1.5	Distress Zone

Table 4.33: Descriptive statistics

Financial Performance	Number of Companies	Percentage
Safe Zone	8	11
Grey Zone	9	12
Distressed zone	57	77
Total	74	100

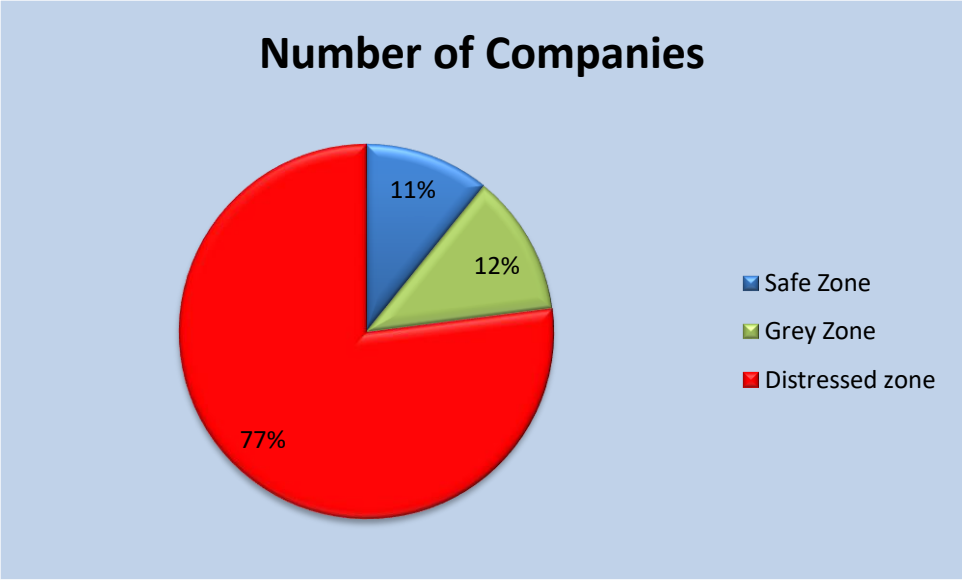

Figure 4.1: Financial performance

Pie Chart 4.1 shows that 77% of the companies which were restructured under the CDR mechanism are in the "Distressed Zone", 11% in the "Safe Zone" and 12% in the "Grey Zone" .i.e., the CDR mechanism has not improved the performance of the selected companies therefore CDR is not effective.

4.6 IMPACT OF CDR OPERATING PERFORMANCE MEASURES OF SELECT INDUSTRIES

It goes without saying that the operating performance of the CDR Companies should improve post-CDR, because improvement operating performance constitutes a very important aspect of turnaround of a company. The following few paragraphs examine the same by comparing the figures before and after the CDR Process.

RESEARCH OBJECTIVE IV: To compare the operating performance measures of select industries before and after the Corporate Debt Restructuring process to study the impact of CDR.

H3: Corporate Debt Restructuring does not improve the measures of operating performance of the selected industries; firms' profitability was lower than the industry peers.

a. Corporate debt restructuring does not improve the Operating Margin and Interest Coverage ratios of the firms in the infrastructure industry; profitability was lesser than industry peers.

b. Corporate debt restructuring does not improve the operating performance measures of firms in the textile industry; firms' profitability was lesser than industry peers.

c. Corporate debt restructuring does not improve the operating performance measures of firms in the iron and steel industry; firms' profitability was lesser than industry peers.

Industry Wise Analysis

The selected sample of 74 companies consists of three major industries i.e., Infrastructure Industry (22 companies), Textile Industry (10 companies) and Iron & Steel industry (7 companies) which have been considered for analysis. The study has checked whether a significant difference exists in the performance of the various industries using the WRS test. Operating margin and Interest Coverage ratio (Alderson and Betker, 2010) have been used as the performance measures. Further, according to Inoue et al. (2010), "the performance of sample firms has been measured in relation to peers in the industry". A comparative analysis on firms in financial distress who have undergone restructuring through CDR has been carried out to relate and understand improvements in their performance when compared to their industry peers.

Table 4.34: Operating Performance Measures of sample INFRASTRUCTURE FIRMS before and after Corporate Debt Restructuring under CDR

Year	N	Percentage with negative operating income	Operating Margin			Interest Coverage	
			median	Industry adjusted median	Percentage Industry Median	Median	Percentage with Interest Coverage<1
-3	17	0.00%	13.35%	11.81***	29.41	2.25***	5.88%
-2	20	0.00%	12.16%	11.45***	35.00	1.86***	15.00%
-1	22	9.09%	10.24%	10.79***	59.09	1.20***	40.90%
0	20	30.00%	1.89%	10.36***	75.00	0.23***	80.00%
+1	22	45.45%	0.93%	10.66***	77.27	0.06***	86.36%
+2	21	50.00%	1.53%	10.66***	80.00	0.08***	85.71%
+3	15	26.66%	8.01%	10.71***	46.66	0.52***	86.66%
+4	9	11.11%	9.50%	10.73**	44.44	0.50**	44.44%
+5	4	25.00%	14.00%	11.32*	50	0.53*	100.00%

This table shows changes in Operating performance and Interest Coverage ratio before and after Corporate Debt Restructuring. The sample firms are financially distressed companies which are restructured under CDR from 2009 to 2016.We denote '0' is restructuring year of firm. -1 to −3 is before restructuring years and +1 to +5 are after restructuring period. The industry-adjusted median is calculated by subtracting the industry median (based on the industry classification from the (Bombay Stock Exchange) from the raw variable. Operating margin is calculated as Operating profit (EBIT) divided by sales.

***significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 1% level(Wilcoxon sign rank test).
**significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 5% level(Wilcoxon sign rank test).
*significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 10% level(Wilcoxon sign rank test)

Table 4.35: Operating Performance Measures of sample TEXTILE FIRMS before and after Corporate Debt Restructuring under CDR

Year	N	Percentage with negative operating income	Operating Margin			Interest Coverage	
			Median	Industry adjusted median	Percentage <Industry Median	Median	Percentage with Interest Coverage<1
-3	6	0.00%	3.28%	7.64***	33.33%	2.01***	16.66%
-2	8	12.50%	7.04%	7.64***	25.00%	2.17***	20.00%
-1	10	10.00%	8.99%	7.65***	60.00%	1.11***	40.00%
0	10	20.00%	5.27%	7.62***	70.00%	0.84***	80.00%
+1	10	20.00%	4.86%	7.64***	50.00%	0.8***	60.00%
+2	10	20.00%	7.82%	7.64**	40.00%	0.83***	80.00%
+3	10	20.00%	4.47%	7.64***	60.00%	0.87***	50.00%
+4	8	37.50%	3.72%	7.64**	62.50%	0.39***	62.50%
+5	5	40.00%	10.19%	7.65**	40.00%	0.02***	60.00%

***significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 1% level(Wilcoxon sign rank test).
**significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 5% level(Wilcoxon sign rank test).
*significantly different from Zero (Operating measures) or one (Interest coverage ratio)at the 10% level(Wilcoxon sign rank test).

Table 4.36: Operating Performance Measures of sample IRON AND STEEL FIRMS before and after Corporate Debt Restructuring under CDR

Year	N	Percentage with negative operating income	Operating Margin			Interest Coverage	
			Median	Industry adjusted median	Percentage Industry Median	Median	Percentage with Interest Coverage<1
-3	5	20.00%	3.13%	9.1***	71.42%	1.64**	40.00%
-2	7	14.28%	17.47%	7.28***	28.57%	1.09***	33.33%
-1	7	14.28%	16.21%	7.35***	28.57%	1.54***	33.33%
0	7	14.28%	5.86%	7.95***	57.14%	0.65**	66.66%
+1	7	42.85%	4.22%	8.54***	57.14%	0.33***	83.33%
+2	6	16.66%	8.85%	8.485***	33.33%	0.57**	83.33%
+3	2	50.00%	13.73%	9.33**	50.00%	0.9	50.00%
+4	2	0.00%	9.90%	8.51	50.00%	0.47	100.00%
+5	2	0.00%	10.90%	9.05*	50.00%	0.85*	50.00%

***significantly different from Zero (Operating measures) or one (Interest coverage ratio) at the 1% level (Wilcoxon sign rank test).
**significantly different from Zero (Operating measures) or one (Interest coverage ratio) at the 5% level (Wilcoxon sign rank test).
*significantly different from Zero (Operating measures) or one (Interest coverage ratio) at the 10% level (Wilcoxon sign rank test).

4.6.1 Impact on Infrastructure Industry

Operating performance measure of Infrastructure firms

Research hypothesis H3a: Corporate debt restructuring does not improve the Operating Margin and Interest Coverage ratios of the firms in the infrastructure industry; profitability was lesser than industry peers.

Table 4.34 shows "the medians of absolute and industry-adjusted accounting variables" of the sample firms in Infrastructure industry. The size samples have changed because of limited data availability. The median operating margin of all firms is positive in all the years before and after restructuring. A decreasing trend is seen only from year -3 to +4 year.

For comparing changes in performance measures of before and after restructuring period, '0'year has been taken as the base year (restructuring year). Year -1 to year -3 are denoted as the pre-restructuring period and year +1 to year +5 as the post-restructuring period. This study has used the WSR test to check if a significant difference is there in the performance of sample firms before and after restructuring period.

The table 4.34 shows that the sample firms' operating margin declines rapidly in the post restructuring period. This is inconsistent with H0 and supports H1. It can be concluded that the sample firms' performance has deteriorated.

The operating performance measure of the sample firms is less than the industry adjusted median and its percentage has increased year to year even after the restructuring year. It is 29.41% in the year -3 and it is 80.00% in the year +2. It is found to be 46.66% and 44.44% in the year +3 and year +4. In the fifth year, almost 50.00% of the firms are less than industry median. The industry-adjusted median is statistically significant in all the years. All the years firms' performance is significantly lesser than the industry median. They fall below the industry median in year +1, year+2, year+3, year+4 and Year+5.These results supports Hypotheses H1.

The interest coverage ratio of sample firms has also been calculated. The median is found to be declining from year -3 to year +3. There is some improvement in the year +4 and Year +5, but this improvement is still less than the industry median. This improvement might be because of relief received as a part of debt restructuring. The percentage of interest coverage is less than 1, showing an increasing trend in all the years except Year+4.

The above results conclude that the CDR mechanism has been largely insufficient in improving the real business of sample firms from the Infrastructure Industry.

4.6.2 Impact on Textile Industry

Operating performance measure of Textile firms

Research hypothesis H3a: Corporate debt restructuring does not improve the Operating Margin and Interest Coverage ratios of the firms in the infrastructure industry; profitability was lesser than industry peers.

The Table 4.35 gives the "medians of absolute and Industry-adjusted accounting variables of sample firms in Textile industry". The size of the sample changes because of limited data availability. The entire firm's median operating margin is positive in all the years before and after restructuring period. The firms operating median shows a decreasing trend in year 0 to +1 year and an improvement in +5 year median.

For comparing changes in performance measures of before and after restructuring period, '0'year has been taken as the base year (restructuring year). Year -1 to year -3 are denoted as the pre-restructuring period and year +1 to year +5 as the post-restructuring period. This study has used the WSR test to check if a significant difference is there in the performance of sample firms before and after restructuring period.

The table 4.35 shows that the sample firms' operating margin declines rapidly in the post restructuring period. This is inconsistent with H0 and supports H1. It can be concluded that the sample firms' performance has deteriorated. The operating performance measure of sample firms is less than the industry adjusted median and its percentage has increased year to year even after the restructuring year. It is 70.00% in the year 0 and it is 60.00% in the year +3. It has been calculated as 62.5% in the year +4 and almost 40.00% in the fifth year. The firms are still below their industry median. The industry-adjusted median is statistically significant over all the years. The performance of all firms over the years is significantly less than the industry median. They fall below their industry median in years +1, year+2, year+3, year+4 and Year+5. These results support Hypotheses H1.

Interest coverage ratio has also been identified for selected firms. The median of the interest coverage ratio of sample firms is declining from year -3 to year +5. The percentage of interest coverage less than one has increased from -3 year to -1 year and is highest in the restructuring year 0 and least in the years +1 and year +4. This improvement is still less than the industry median and might be because of relief received as part of debt restructuring. The percentage of interest coverage less than 1 demonstrates an increasing trend in all the years except Year+3. The above results conclude that CDR has been largely insufficient in improving the real business of sample firms from the Textile Industry.

4.6.3 Impact on Iron and Steel Industry

Operating performance measure of Iron and steel firms

Research hypothesis H3a: Corporate debt restructuring does not improve the Operating Margin and Interest Coverage ratios of the firms in the Iron and Steel industry; profitability was lesser than industry peers.

The Table 4.36 displays the “medians of absolute and industry-adjusted accounting variables of sample firms in Iron and Steel industry”. The size of the sample changes because of limited data availability. The median of all the firms have an operating margin that is positive in all years before and after the restructuring period. The firms’ operating median shows a decreasing trend from year -2 to +1 year.

For comparing changes in the performance measures before and after the restructuring period, ‘0’year has been taken as the base year. Year -1 to year -3 is taken as the pre restructuring period and year +1 to year +5 is considered as the post restructuring period. This study has used the Wilcoxon Signed Rank test to check whether there is a significant difference in the performance of sample firms before and after the restructuring period.

The Table 4.36 shows that the sample firms’ operating margin declines rapidly in year +1and year +3 posts the restructuring period. This is inconsistent with H0 and supports H1. It can be concluded that the sample firms’ performance has reduced. The operating performance measure of sample firms is less than the industry adjusted median and it’s percentage indicates an increase year to year even after the restructuring year. Almost 50.00% of firms had a median less than industry median. The industry-adjusted median is statistically significant over all the years. The performance of the firms over the years is significantly lesser than the industry median. They fall below their industry median in year +1, year+2, year+3, and Year+5.These results support Hypotheses H1.

The interest coverage ratio of the sample firms has also been identified. The median of the interest coverage ratio is declining from year -3 to +4. More than 50.00% of the firms have a percentage of interest coverage ratio that is less than the industry median in the post restructuring period. The percentage of interest coverage less than one shows an increasing trend upto year+4. It can be concluded that CDR has been largely insufficient in improving the real business of sample firms from the Iron and Steel Industry.

Table 4.37: Sector Wise Financial Performance Analysis

Sector	Safe Zone	Grey zone	Distress Zone	Total
Infrastructure	0(0%)	1(4.5%)	21(95.4%)	22
Textile	2(16.66%)	3(25%)	7(58.33%)	12
Iron and steel	0(0%)	0(0%)	7(100%)	7
Other companies	6(18%)	5(15.55%)	22(66.66%)	33
Total	**8**	**9**	**57**	**74**
Percentage	**10.8%**	**12.16%**	**77.00%**	**100**

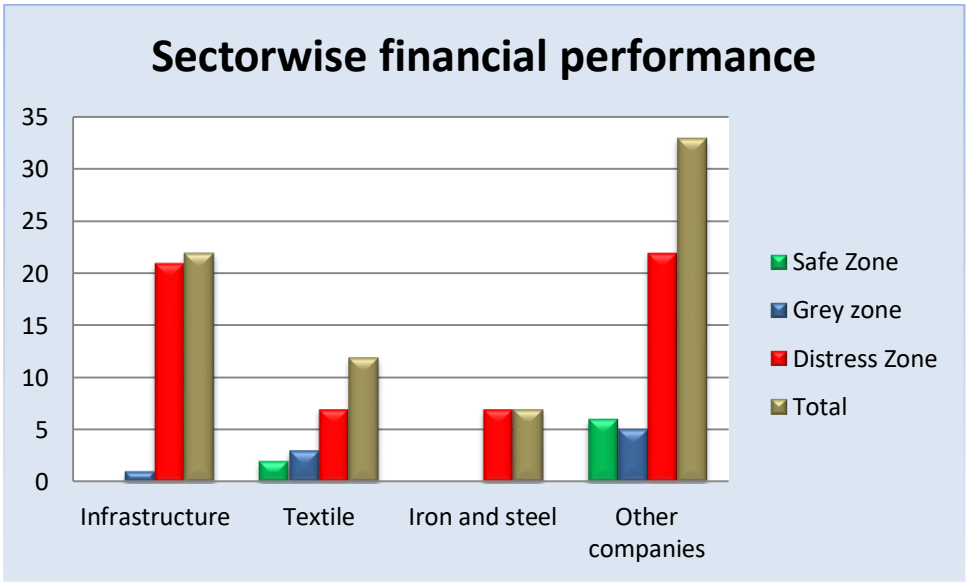

Figure 4.2: Sector Wise Financial Performance Analysis

Table 4.37 shows the sample categorized into 4 industry types: Infrastructure Industry, Textile Industry, Iron & Steel Industry and other Industries. With the Z-score, the financial performance has been calculated as follows: Out of 74 firms in the sample, 10.8% are in the Safe Zone, 12.16% in the Grey Zone and 77.00% of firms are still in the Distressed Zone. Industry wise analysis shows that out of the three industries, Textile industry firms are 5 (40% out of 12 sample) and have been revived from financial distress. Not even a single company from the Iron and Steel Industry has been revived. Other Industries are a total of 33, out of which 6 have been shifted to the safe zone and 5 in the Grey zone. Overall, 22% of the firms have come out of financial distress.

4.7 SUMMARY

In this chapter, the study has analyzed the effectiveness of corporate debt restructuring mechanism on corporate sector. The analysis is in three parts. First, the study analyzed 74 companies' financials three years before and four or five years after restructuring period. Wilcoxon Signed Rank Test has been used to check whether any significance difference in the selected financial parameters of post restructuring period. It has found that there is no significance improvement in financial performance of sample. Second, Altman Z-score model has been used to overall financial position of companies in the post restructuring period and it has found that only 11per cent of sample in "safe Zone", 12 per cent in "Grey Zone" and 77 per cent in "Distressed Zone". Third the study has selected three Industries sample to check whether any significance difference in post restructuring period. Operating performance measures have been considered and it found that there is no improvement in operating performance and it has declined in the post restructuring period.

CHAPTER V

IMPACT OF CORPORATE DEBT RESTRUCTURING MECHANISM ON INDIAN BANKING SECTOR

CHAPTER V

5.1 Introduction

The financial sector plays an important role in economic development. A bank has an active role in sustaining growth and should be in a strong and healthy financial position. Kaplan (1998) explained that corporate financial distress is a situation where companies are unable to fulfill obligations to third parties like banks, financial institutions etc. Distress leads to an increase in the non-performing assets of commercial banks. In the current scenario, there are major reforms like the restructuring program in order to reduce NPA.

After liberalization in 1991, the banking sector has initiated many reforms like the “Prudential norms for asset classification” and “capital adequacy norms”. The Debt Recovery Tribunal (DRT) was also started for the securitization and reconstruction of financial assets and enforcement of securities in 2002. The corporate debt restructuring mechanism was brought into the picture to recover loans and advances. One of the major restructuring schemes introduced by the RBI is “corporate debt restructuring”. This is voluntary and non-statutory mechanism for restructuring of multiple/consortium advances of lenders. It is an out-of-court restructuring programme.

The idea of debt restructuring is to revive the financial health of a company. It is fast and cost effective in comparison to in-court restructuring. The Working Group (2012),”Prudential norms on Income Recognition, Assets classification and provisioning pertaining to Advances” as per CDR norms is a consortium/syndication of banks that can retain asset classifications and restructured loans and upgrade non-performing restructured assets to the standing category after a definite period, charging less from their net income for loan loss provision.

5.2 Overview of Banking Financials Restructured Loans and Non – Performing Assets

Table 5.1: Year wise Gross and Net NPA's (Rs. Billions)

Year	Gross NPA's	Net NPA's
2010-11	979	417
2011-12	1423	649
2012-13	1941	987
2013-14	2644	1426
2014-15	3233	1754
2015-16	6119	3498
2016-17	7918	4331

(Source: www.rbi.org.in)

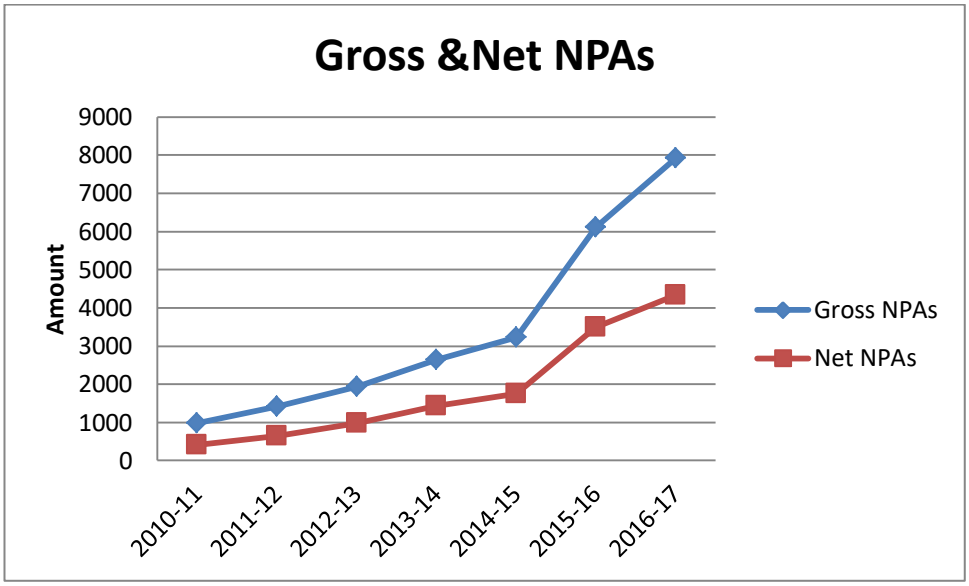

Figure 5.1: Year wise Gross and Net NPA's

Table 5.1 indicates that the overall banking sector's GNPA's and NNPA's are sharply increasing year to year.

Table 5.2: Gross NPA and Net NPA Ratio

Year	Gross NPA percentage of Gross Advances	Net NPA's as percentage of Net Advances
2010-11	2.5	1.1
2011-12	3.1	1.4
2012-13	3.2	1.7
2013-14	3.8	2.1
2014-15	4.3	2.4
2015-16	7.5	4.4
2016-17	9.3	5.3

(Source: www.rbi.org.in)

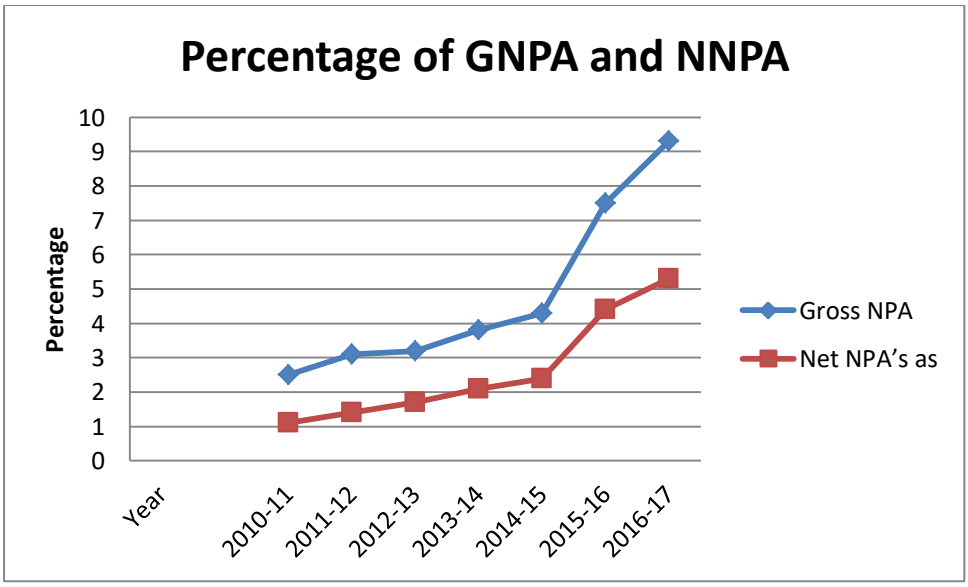

Figure 5.2: Gross NPA Ratio and Net NPA Ratio

Table 5.2 shows the overall banking GNPA's to Gross Advances and NNPA'S to Gross Advances ratio of the Indian banking sector which displays an increasing trend from year to year. It is evident that bank gross advances which were lent have turned bad from year to year.

Table 5.3: Outstanding Corporate Loan Assets under Restructuring and Gross Bank Advances

(Amount in Rs. Millions)

Year	Bank Advances	Restructured Loans	CDR Loans	Non-CDR Loans
2010-11	5,28,85,504.80	6,73,778.20	1,24,036.00	5,49,742.20
2011-12	6,39,40,529.40	23,41,682.30	6,72,133.00	16,69,549.30
2012-13	7,53,18,942.80	32,88,895.50	11,89,957.80	20,98,937.70
2013-14	8,61,78,238.40	40,28,646.00	15,45,021.50	24,83,624.50
2014-15	9,58,56,312.80	52,85,375.00	20,60,114.40	32,25,260.60
2015-16	10,41,63,423.40	44,60,875.20	17,77,443.80	26,83,431.40
2016-17	11,02,59,163.90	38,89,260.30	14,23,016.70	24,66,243.60
2017-18	5,17,85,575.70	13,28,931.90	4,10,667.00	9,18,264.90

(Source: www.rbi.org.in)

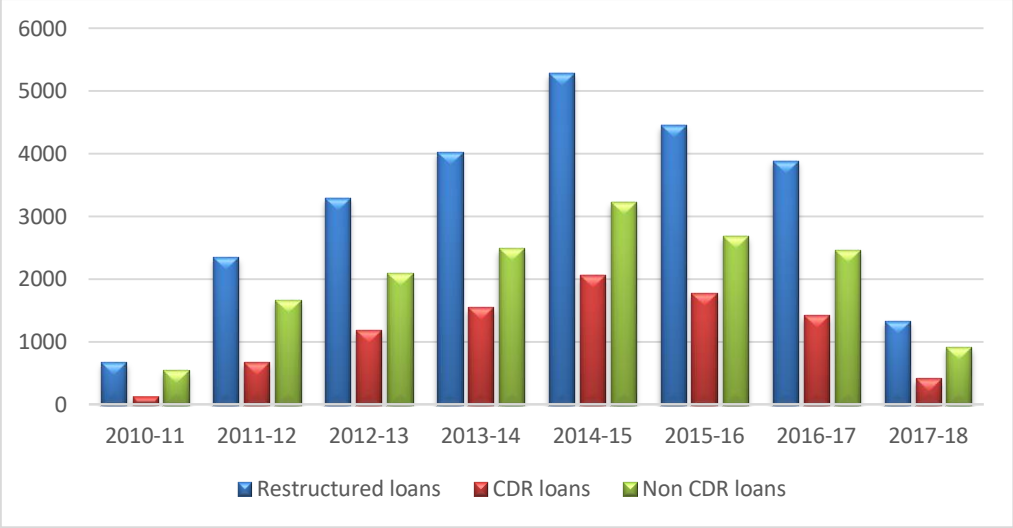

Figure 5.3: Bank Advances and CDR & Non CDR Loans

Table 5.3 indicates the gross bank advances restructured through the CDR and NON-CDR mechanisms from 2010 to 2018.There is an increasing trend in the CDR loans and NON CDR loans from 2010 to 2015 and thereafter it decreases.

Table 5.4: Corporate Debt Restructuring Loans

(Amount in Rs. Millions)

Year	CDR Loans	Standard Assets	Sub-standard Assets	Doubtful Assets
2010-11	1,24,036.00	1,13,230.80	5,760.40	5,044.80
2011-12	6,72,133.00	5,75,490.80	27,388.80	69,253.40
2012-13	11,89,957.80	10,17,507.50	60,516.00	1,10,443.00
2013-14	15,45,021.50	13,29,956.00	80,069.20	1,31,041.90
2014-15	20,60,114.40	16,32,226.60	1,58,907.80	2,62,740.80
2015-16	17,77,443.80	9,09,008.70	2,13,669.20	6,44,924.90
2016-17	14,23,016.70	5,35,578.40	1,18,479.80	7,46,736.40
2017-18	4,10,667.00	24,785.70	19,471.20	3,58,813.80

(Source: www.rbi.org.in)

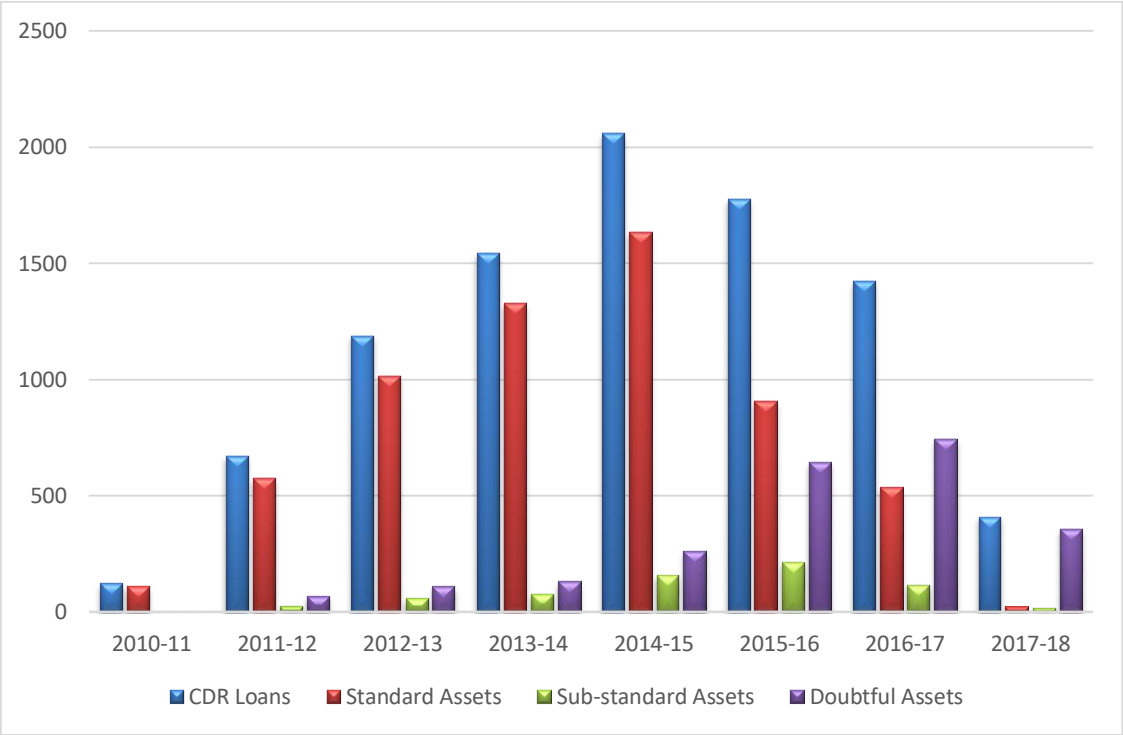

Figure 5.4: Corporate Debt Restructuring Loans

Table 5.4 shows the total loans restructured through Corporate Debt Restructuring from 2010-2018. Total restructured loans are further sub divided into three types i.e. Standard Assets (), Sub-Standard Assets and Doubtful Assets. The CDR cell has restructured a high number of company loans from 2010 to 2015; thereafter, the number of loans restructured show a decreasing trend between 2015 to 2018.

Table 5.5: Ranking of Banks according to GNPA &NNPA Ratio

Bank Name	NPA **ratios GNPA**	**Rank**	NPA **ratios NNPA**	**Rank**
	(%)		**(%)**	
State Bank Of India	10.91	17	5.73	16
HDFC Bank Limited.	1.3	44	0.4	48
I C I C I Bank Ltd.	8.84	20	4.77	21
Punjab National Bank	18.34	8	11.24	6
Axis Bank Ltd.	6.77	25	3.4	27
Bank Of Baroda	12.26	13	5.49	19
Canara Bank	11.84	14	7.48	13
Bank Of India	16.58	10	8.26	11
Union Bank Of India	15.73	12	8.42	10
Central Bank Of India	21.48	6	11.1	8
I D B I Bank Ltd.	27.95	1	16.69	1
Syndicate Bank	11.53	15	6.28	15
Yes Bank Ltd.	1.28	45	0.64	45
Kotak Mahindra Bank Ltd.	2.22	40	0.98	41
Indian Overseas Bank	25.28	2	15.33	3
Oriental Bank Of Commerce	17.63	9	10.48	9
Indusind Bank Ltd.	1.17	47	0.51	47
Indian Bank	7.37	22	3.81	26
Allahabad Bank	15.96	11	8.04	12
State Bank Of Hyderabad [Merged]	5.75	29	3.37	28
Uco Bank	24.64	3	13.1	4

Vijaya Bank	6.34	28	4.32	22
Bank Of Maharashtra	19.48	7	11.24	6
State Bank Of Patiala [Merged]	7.87	21	3.98	25
Federal Bank Ltd.	3	38	1.69	37
State Bank Of Travancore [Merged]	4.78	32	2.77	31
State Bank Of Bikaner & Jaipur [Merged]	4.82	31	2.75	32
Dena Bank	22.04	5	11.95	5
I D F C Bank Ltd.	3.31	36	1.69	37
United Bank Of India	24.1	4	16.49	2
Punjab & Sind Bank	11.19	16	6.93	14
State Bank Of Mysore [Merged]	6.56	26	4.18	23
Jammu & Kashmir Bank Ltd.	9.96	19	4.9	20
South Indian Bank Ltd.	3.59	34	2.6	34
Karur Vysya Bank Ltd.	6.56	26	4.16	24
Karnataka Bank Ltd.	4.92	30	2.96	30
Bandhan Bank Ltd.	1.25	46	0.58	46
R B L Bank Ltd.	1.4	43	0.78	42
City Union Bank Ltd.	3.03	37	1.7	36
Lakshmi Vilas Bank Ltd.	9.98	18	5.66	17
D C B Bank Ltd.	1.79	42	0.72	43
A U Small Finance Bank Ltd.	2.01	41	1.27	40
Equitas Small Finance Bank Ltd.	2.76	39	1.46	39
Catholic Syrian Bank Ltd.	7.25	24	5.51	18
Dhanlaxmi Bank Ltd.	7.35	23	3.19	29
Esaf Small Finance Bank Ltd.	3.79	33	2.69	33
Suryoday Small Finance Bank Ltd.	3.54	35	1.86	35
Capital Small Finance Bank Ltd.	1.02	48	0.72	43

(Source: Author)

Ranks are given below based on the GNPA ratio. The banks with the highest ratio are:

1. **IDBI Bank Limited** with ratio 27.95% of Gross Advances
2. **Indian Overseas Bank Limited** with ratio 25.28% of Gross advances
3. **UCO Bank Limited** with ratio 24.64% of Gross Advances
4. **United Bank of India** with ratio 24.1% of Gross Advances
5. **Dena Bank** with ratio 22.04% of Gross Advances.

NPAs are a universal problem. They are one of the major parameters to judge the financial performance and financial health of a bank. They are also an opportunity cost as much of the profit is reinvested in some return earnings assets. Reduction in profitability leads to adverse impact on the current earning of banks.

Therefore, NPAs require provisions to be written off as they affect bank profitability and their ability to strengthen their capital position. They are a critical factor in assessing the asset quality and financial efficiency of banks. There is a relationship between Gross NPA's and the profitability of banks (Prashant, 2016). Five Banks which have highest NPA's away scheduled banks were selected for this study to understand the relationship between Gross NPA and profitability.

Table 5.6: Gross Non-Performing Assets (GNPA)

YEAR	IDBI BANK	Indian oversea Bank	UCO BANK	DENA BANK	UNITED BANK OF INDIA
2011-12	4551.37	3920.07	4086.2	956.5	2176.42
2012-13	6449.98	6607.96	7130.09	1452	2963.82
2013-14	9960.16	9020.48	6621.37	2616.03	7118.01
2014-15	12684.97	14922.45	10265.05	4393.04	6552.51
2015-16	24875.07	30048.62	20907.73	8560.49	9471.01
2016-17	44752.59	35098.26	22540.95	12618.73	10951.99
2017-18	55588.25	38180.15	30549.92	16361	16552.21

(Source: www.rbi.org.in)

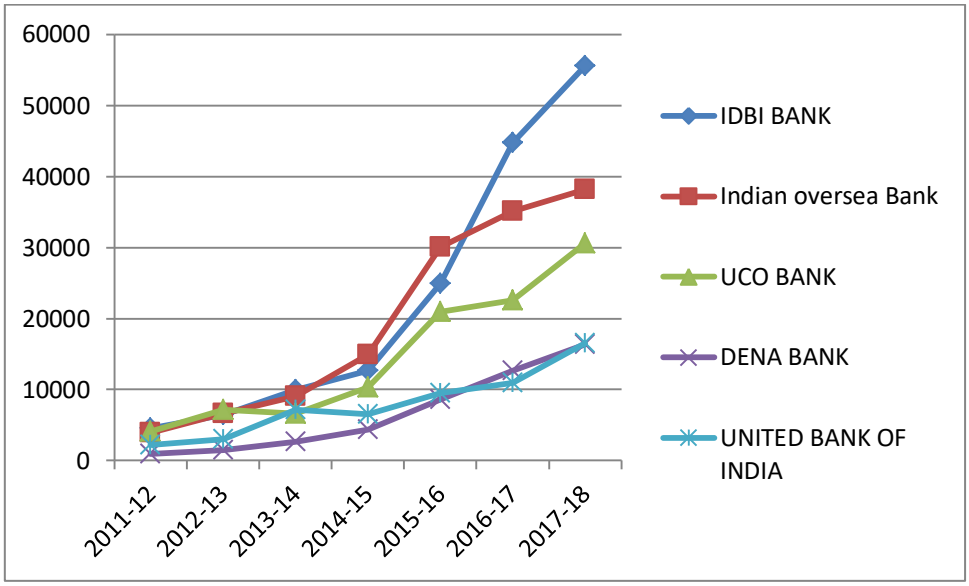

Figure 5.5: Gross Non-Performing Assets (GNPA)

Table 5.7: Net Profit

YEAR	IDBI BANK	Indian overseas Bank	UCO BANK	DENA BANK	UNITED BANK OF INDIA
2011-12	2031.61	1050.13	1108.67	803.14	632.53
2012-13	1882.08	567.23	618.2	810.38	391.9
2013-14	1121.4	601.74	1510.54	551.66	-1213.44
2014-15	873.39	-454.33	1137.8	265.48	255.99
2015-16	-3664.8	-3387.17	-2799.26	-935.52	-281.96
2016-17	-5158.14	-6840.32	-1850.67	-863.62	219.51
2017-18	-8237.92	-6299.5	-4436.37	-1923.15	-1454.45

(Source: www.rbi.org.in)

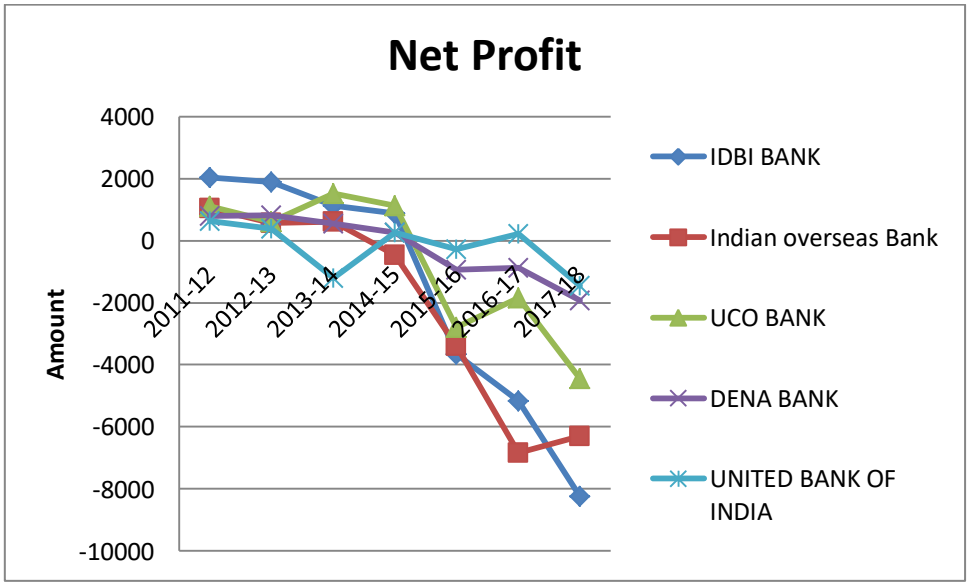

Figure 5.6: Net Profit

Banks lend money to firms. Sometimes firms face difficulty to repay financial obligation. In this situation banks to preempt liquidation of firms and safety of public deposits, they restructured gross advances through CDR mechanism whose outstanding exposure is more than Rs.10 crores. With this in background, it is very important that CDR Mechanism should positively improve the lending banks' recoveries, because CDR is not only aimed at helping the borrower but also to ensure that the banks' loans also are recovered with minimum losses. The next few paragraphs study the impact of the CDR mechanism on the banking industry.

RESEARCH OBJECTIVE V: To study the impact of the CDR mechanism on the banking industry.

The present study analyzes the impact of these restructured loans on banking financial performance. The study has chosen five banks i.e. IDBI Bank Limited, Indian Overseas Bank Limited, UCO Bank Limited, United Bank of India and Dena Bank which have highest percentage of NPAs during period 2011 to 2018.

To study impact, Multiple Linear Regression analysis has been done with parameters Return on Assets as dependent variable and Non-Interest Income to Total Assets, Operating Expenses to Total Assets, Non CDR Loans to Advances, Gross NPA to Total Advances, CDR Loans to Total Advances, and Interest Income to Total Assets as independent variables.

Regression Analysis

Regression analysis is a way of mathematically sorting out which variables do indeed have an effect. Regression is conducted to examine the association between two or more variables which one is independent and dependent variable. It measures causal and effect relationship between variables. Multiple Regression analysis is a measure to check statistical significance between groups of variables. It is alike linear regression and difference only in the number of predictors included in analysis.

5.3 Multiple Linear Regression Analysis

Multiple linear regression analysis is a technique which establishes is often used to check the linear relationship between variables which are independent and dependent variables. In banking and finance literature, it has been used as a very common method to find the determinants of bank performance (Ongore and Kusa, 2013, Sharifi and Akthter, 2016). The present study considered one dependent variable and five independent variables. The regression equation is

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \ldots + \beta K\ XK + \varepsilon$$

Equation of Regression:

Return on Assets = α + β_1 Non-Interest Income to Total Assets+ β_2 Non- CDR Loans to Advances + β_3CDR Loans to Total Advances + β_4 Gross NPA to Total Advances + β_5 Interest Income to Total Assets ----------*(*Equation 1)**.**

Non-Interest Income to Total Assets, Operating Expenses to Total Assets, Non CDR Loans to Advances, Gross NPA to Total Advances, CDR Loans to Total Advances, and Interest Income to Total Assets have been used to determine the variables which have an impact on the Return on Assets. The OLS regression model has been used for the analysis to solve for heteroskedasticity (Pensiero & Krishnamurti, 2014).

RETURN ON ASSETS

Return on Assets is one of the important ratios studied to understand how well the management or banks employ a company's assets or resources to generate more income. It is also called the profitability or productivity ratio. A higher ratio is more favorable to investors as it indicates that the company manages its assets effectively to earn additional Net Income.

$$\text{RETURN ON ASSETS} = \frac{\text{NET INCOME}}{\text{TOTAL ASSETS}}$$

H5: There is significant impact on banking financial performance due to corporate debt restructured loans.

Table 5.8: Descriptive Statistics

Table 5.8 is presenting the descriptive statistics for five banks indicators from the year 2011-18

	Mean	Median	Standard Deviation
Total Assets(In Mn)	2131870.21	2196371.50	870156.04
Total Gross Advances(In Mn)	1259987.11	1316550.10	525446.05
Cdr Loans(In Mn)	1259987.11	1316550.10	525446.05
Non-Cdr Loans(In Mn)	66272.65	54148.40	41657.11
Gross Npa's(In Mn)	14328.73	9471.01	13305.36
Return On Assets	0.08	0.29	1.01
Non-Interest Income/Total Assets	0.92	0.9	0.35
Cdr Loans/Total Advances	3.43	3.42	2.05
Non-Cdr Loans/Total Advances	5.25	4.98	2.28
Interest Income /Total Assets	7.76	7.87	0.62
Log Gnpa's	3.97	3.98	0.42

Table 5.9: Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C		3.092	.903	.374
Non-Interest Income to Total Assets	.442	.594	2.123	.042**
Non CDR Loans to Advances	.045	.085	.232	.818
CDR Loans to Total Advances	-.440	.090	-2.405	.023**
Gross NPA to Total Advances	-.438	.429	-2.430	.022**
Interest Income to Total Assets	.072	.284	.412	.684
R-squared	.348			

**@5%

The above table explains the model described in Eq. (1). The result from Table 5.9 displays that the Non-Interest Income to Total Assets is significant and influences Return on Assets positively. It signifies that the Non-Interest Income to Total Assets has also been a reason for positive Return on Assets. The result is in line with the conclusion of (Dutta, 2013) which also stated that the Non-Interest Income to Total Assets positively leads to Return on Assets.

CDR Loans to Total Advances is found to be significant and negatively influences the Return on Assets. Results are similar to (Dhar,2015) and can be concluded that an increase in CDR loans leads to decrease in the 'Return on Assets'. Gross NPA's to Total Advances is also significant and negatively influencing on the Return on Assets. These results are similar to showing that variables like Non CDR Loans to Advances and Interest Income to Total Assets are not significant. The R Square of the model is 34.80%.

Table 5.10: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.079	5	2.416	3.102	.023[b]
	Residual	22.587	29	.779		
	Total	34.666	34			

a. Dependent Variable: ROA

a. Predictors: (Constant), IITA, NCLA, lnpa, CDRLA, NITA

Table 5.10 gives the results of the ANOVA technique applied to test the Hypotheses. It clearly indicates that the model is significant at 5% level of significance (0.023<0.05); H1 is supported which implies that the Non-Interest Income to Total Assets, CDR Loans to Total Advances and GNPA to Total Advances has a significant impact on the Return on Assets(ROA) of the selected banks.

5.4 SUMMARY

In this chapter, the study has analyzed the impact of corporate debt restructuring mechanism on Indian banking sector. The study has considered five banks which have highest percentage of NPA to Gross Advances. Multiple Linear Regression analysis has been done with parameters Return on Assets as dependent variable and Non-Interest Income to Total Assets, Operating Expenses to Total Assets, Non CDR Loans to Advances, Gross NPA to Total Advances, CDR Loans to Total Advances, and Interest Income to Total Assets as independent variables. It has found that CDR loans have a significance negative impact on Return on Assets of selected sample banks.

CHAPTER VI

PERCEPTION ABOUT CORPORATE DEBT

RESTRUCTURNG MECHANISM AND ANALYSIS

CHAPTER VI

6.1 Introduction

It is important to know the perceptions of the various stakeholders in the CDR Process as they are familiar with the ground realities in the entire mechanism. Effort has, therefore, been made in this chapter to bring together the perceptions of the various stakeholders.

The chapter presents the perception about CDR Mechanism among different groups who are participants in the CDR process. The study tried to understand perception about formulation of CDR plan, most used restructuring methods in the process, reasons for financial distress of firms, CDR working performance and finally suggestions to strengthen the mechanism. Primary data has been used to study the above parameters.

Primary data collection has been collected through a structured questionnaire to know the effectiveness of Corporate Debt Restructuring. The responses were collected from three different groups of respondents; these people included:

1. GMs/AGMs of banks who were in the restructuring process or in some ways dealt with CDR loans.
2. CFOs/FMs of companies which were financially distressed and have undergone the restructuring process through the corporate debt restructuring mechanism.
3. Professionals CAs/CSs who are directly or indirectly associated with the CDR plan process.

6.2 Sample Size

6.1 Sample Size

Respondents	NO.
CFOs/ Financial Managers	32
AGMs/ GMs from Banking sector	56
Professionals (CAs & CSs)	20
Total	**108**

The questionnaire included specific questions about the formulation of CDR plans, most commonly used methods in the CDR plan, reasons for financial distress of corporates, effectiveness of the CDR mechanism and measures for strengthening the Indian corporate debt restructuring mechanism.

6.3 Structure of Questionnaire

The questionnaire consisted of various types of questions included open and close ended questions. Five point Likert scale has also been used.**Table 6.2: Likert Scale weights**

Particulars	Weight
Strongly Disagree (SD)	1
Disagree (D)	2
Neither Agree nor Disagree (NAND	3
Agree (A)	4
Strongly Agree (SA)	5

RESEARCH OBJECTIVE I: To identify the reasons of financial distress in companies referred for Corporate Debt Restructuring.

H1: There is a significant difference of opinion among the selected groups about the Corporate Debt Restructuring plan formulation.

a. There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the borrower or not.

b. There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the banks or not.

c. There is a significant difference of opinion on whether the CDR process formulated with banks takes into consideration the point of view of the CFO/Board or not.

d. There is a significant difference of opinion on whether the CDR process is formulated by joint lender forums or not.

6.4 Tools & Techniques used in Data Analysis

Kruskal- Wallis Test

The Kruskal-Wallis test is a distribution free non-parametric test. It is applied when the assumptions of ANOVA (one-way) are not fulfilled. It assesses the significant differences due to a categorical independent variable (with two or more groups) on a continuous dependent variable. One of the assumptions of ANOVA is that a dependent variable has normally distribution and equal variance across groups for the scores. The Kruskal-Wallis test does not have any such assumptions. It can be used for both continuous and ordinal level dependent variables.

6.5 Data analysis

1. How is the CDR plan formulated?

1.1	Exactly as per the request of the borrower	**1**	**2**	**3**	**4**	**5**
1.2	As per the requirement of the bank	**1**	**2**	**3**	**4**	**5**
1.3	Banker has taken into considerations the viewpoints of CFO/Board	**1**	**2**	**3**	**4**	**5**
1.4	Joint Lender Forum(JLF)	**1**	**2**	**3**	**4**	**5**
1.5	If any other (Specify) ----------					

Research Hypotheses H1a: There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the borrower or not.

Table 6.3: Crosstab

Crosstab

			Q1.1 Exactly as per the request of the borrower					Total
			Strongly	Disagr	Neither Agree	Agre	Strongly	
Group	Bankers	Count	8	9	17	16	6	56
		% within	14.3%	16.1%	30.4%	28.6	10.7%	100.0
	Company	Count	1	11	4	14	2	32
		% within	3.1%	34.4%	12.5%	43.8	6.3%	100.0
	Professionals	Count	3	4	4	8	1	20
		% within	15.0%	20.0%	20.0%	40.0	5.0%	100.0
Total		Count	12	24	25	38	9	108
		% within	11.1%	22.2%	23.1%	35.2	8.3%	100.0

Table 6.4: Mean Ranks

Ranks			
	Group	N	Mean Rank
Q1.1 Exactly as per the request of the borrower	Bankers	56	53.88
	Company	32	56.47
	Professionals	20	53.08
	Total	108	

Table 6.5: Test Statistics

Test Statistics[a,b]	
	Q1.1 Exactly as per the request of the borrower
Df	2
Asymp. Sig.	.903
a. Kruskal Wallis Test	
b. Grouping Variable: Group	

From table 6.5, it can be observed that the Pearson chi-square asymp. sig. value is more than 0.05. Therefore, the null Hypotheses is accepted. This implies that there is no significant difference of opinion between the various groups when it comes to formulation of the CDR plan exactly as per the request of the borrower.

RESEARCH HYPOTHESES H1b: There is a significant difference of opinion on whether the CDR process is formulated exactly as per the request of the banks or not.

Table 6.6: Crosstab

			Q1.2 As per the requirement of the bank					Total
			Strongly	Disagree	Neither	Agree	Strongly	
Group	Bankers	Count	2	18	13	18	5	56
		%	3.6%	32.1%	23.2%	32.1%	8.9%	100.0%
	Company	Count	1	10	4	14	3	32
		%	3.1%	31.3%	12.5%	43.8%	9.4%	100.0%
	Professionals	Count	0	2	5	13	0	20
		%	0.0%	10.0%	25.0%	65.0%	0.0%	100.0%
Total		Count	3	30	22	45	8	108
		%	2.8%	27.8%	20.4%	41.7%	7.4%	100.0%

Table 6.7: Mean Ranks

Ranks			
	Group	N	Mean Rank
Q1.2 As per the requirement of the bank	Bankers	56	50.75
	Company	32	55.33
	Professionals	20	63.68
	Total	108	

Table 6.8: Test Statistics

Test Statistics[a,b]	
	Q1.2 As per the requirement of the bank
Df	2
Asymp. Sig.	.243
a. Kruskal Wallis Test b. Grouping Variable: Group	

From table 6.8, the test statistics show that the Pearson chi-square asymp. sig. Value is more than 0.05. Therefore, the null Hypotheses is accepted. This shows that there is no significant difference of opinion between the various groups when it comes to formulation of the CDR plan as per the requirement of the bank.

RESEARCH HYPOTHESES H1c: There is a significant difference of opinion on whether the CDR process formulated with banks takes into consideration the point of view of the CFO/Board or not..

Table 6.9: Crosstab

Crosstab								
			Q1.3 Banker has taken into considerations the					Total
			Strongly	Disagre	Neither	Agree	Strongly	
Group	Bankers	Count	4	2	7	38	5	56
		% within	7.1%	3.6%	12.5%	67.9%	8.9%	100.0
	Company	Count	0	4	4	15	9	32
		% within	0.0%	12.5%	12.5%	46.9%	28.1%	100.0
	Professionals	Count	1	4	2	11	2	20
		% within	5.0%	20.0%	10.0%	55.0%	10.0%	100.0
Total		Count	5	10	13	64	16	108
		% within	4.6%	9.3%	12.0%	59.3%	14.8%	100.0

Table 6.10: Mean Ranks

Ranks			
	Group	N	Mean Rank
Q1.3 Banker has taken into considerations the viewpoints of CFO/Board	Bankers	56	53.37
	Company	32	60.69
	Professionals	20	47.78
	Total	108	

Table 6.11: Test Statistics

	Q1.3 Banker has taken into considerations the viewpoints of CFO/Board
Df	2
Asymp. Sig.	.240
a. Kruskal Wallis Test b. Grouping Variable: Group	

Table 6.11 shows that the test statistic Pearson chi-square asymp. sig. is more than 0.05. Hence, the null Hypotheses is accepted. This implies that there is no significant difference of opinion between the various groups when it comes to formulation of the CDR plan with the banker taking into consideration the viewpoint of the CFO/Board.

RESEARCH HYPOTHESES H1d: There is a significant difference of opinion on whether the CDR process is formulated by joint lender forums or not.

Table 6.12: Crosstab

Crosstab								
			Q1.4 Joint Lender Forum(JLF)					Total
			Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
Group	Bankers	Count	2	1	9	26	18	56
		% within Group	3.6%	1.8%	16.1%	46.4%	32.1%	100.0%
	Company	Count	0	4	2	15	11	32
		% within Group	0.0%	12.5%	6.3%	46.9%	34.4%	100.0%
	Professionals	Count	0	2	2	10	6	20
		% within Group	0.0%	10.0%	10.0%	50.0%	30.0%	100.0%
Total		Count	2	7	13	51	35	108
		% within Group	1.9%	6.5%	12.0%	47.2%	32.4%	100.0%

Table 6.13: Mean Ranks

Ranks			
	Group	N	Mean Rank
Q1.4 Joint Lender Forum(JLF)	Bankers	56	54.27
	Company	32	55.53
	Professionals	20	53.5
	Total	108	

Table 6.14: Test Statistics

Test Statistics[a,b]	
	Q1.4 Joint Lender Forum (JLF)
Df	2
Asymp. Sig.	.967
a. Kruskal Wallis Test b. Grouping Variable: Group	

Table 6.14 shows that the test statistics value of the Pearson chi-square asymp. sig. is more than 0.05. Hence, the null Hypotheses is accepted. This indicates that there is no significant difference of opinion between the various groups when it comes to formulation of the CDR plan by the Joint Lender Forum (JLF).

Table 6.15: RESULTS

Q.NO		Asymp.sig	Null Hypotheses
1.1	Exactly as per the request of the borrower	0.903	Supported
1.2	As per the requirement of the bank	0.243	Supported
1.3	Banker has taken into considerations the viewpoints of CFO/Board	0.240	Supported
1.4	Joint lender forum (JLF)	0.967	Supported

Table 6.15 above shows that in each of the four statements, the null Hypotheses is supported i.e there is no significant difference of opinion between the various groups involved when it comes to the formulation of the CDR plan. This indicates that the CDR plan is adopted by financially distressed companies with the mutual agreement of corporates and bankers. Bankers form a Joint Lender Forum taking into consideration the point of view and perceptions of a company's CFO/Board.

To identify most used methods in the CDR plan Henry Garrett Ranking method has been used

Henry Garrett's Ranking Method

This method is used to rank preferences of a respondent on different factors. First, a respondent is asked to give ranks to all the factors presented in the questionnaire; those ranks are converted into score values by using formula

$$\textbf{Percent position} = \frac{100\,(R_{ij} - 0.5)}{N_j}$$

Where R_{ij} = Rank given for the i^{th} variable by j^{th} respondents

N_j = Number of variable ranked by j^{th} respondents

The Garrett's table is used to find the percent estimated for each position which is converted into scores. For each factor, the scores of each individual are added and then the total value of the score and mean values of the score are calculated. The factors having the highest mean value are considered to be the most important ones.

2. What are the methods most used in a CDR plan? Rank them.

	Methods	**Rank**
A	Conversion of debt into equity	
B	Concession in repayment of loan	
C	Converting the un-serviced portion of interest into term loans	
D	Waiver of a part of interest	
E	Rescheduling	
F	Providing fresh term loan	
G	Providing fresh working capital borrowings	

Table 6.16: Henry Garrett Ranking

Henry Garrett Ranking	
Various methods used in a CDR plan	**Rank**
Q2a Conversion of debt into equity	**7**
Q2b Concession in repayment of loan	**4**
Q2c Converting the un-serviced portion of interest into term loans	**2**
Q2d Waiver of part of interest	**5**
Q2e Rescheduling	**1**
Q2f Providing Fresh term loan	**3**
Q2g Providing fresh working capital borrowings	**6**

From table 6.16, above, it is evident that rescheduling is the method most used in a CDR plan followed by converting the portion of interest that is un-serviced into term loans. Conversion of debt into equity method has least priority in the formulation of a CDR plan. Also, the table reveals that banks further provide fresh term loans if a company is viable and needs funds to complete the current project.

3. What are the main reasons for financial distress of companies? Rank them.

		Rank
A	Financial factors	
B	Operational factors	
C	Marketing factors	
D	Managerial factors	
E	Technological factors	
F	Political factors/Economic factors	

Table 6.17: Henry Garrett Ranking

Henry Garrett Ranking	
Variables	**Rank**
Q3a Financial factors	**1**
Q3b Operational factors	**2**
Q3c Marketing factors	**5**
Q3d Managerial factors	**4**
Q3e Technological factors	**6**
Q3f Political factors/Economic factors	**3**

The table 6.17 shows various factors which are reasons for financial distress. The main reason behind financial distress of a company is found to be the financial factors followed by the operational factors. Technological factors least influence the financial atmosphere of a company. It clearly indicates that financial factors are main reason to financial distress of firms.

To identify the reasons for financial distress of companies which were restructured in CDR plan, Factor analysis has been to identify the relevant factors.

Factor Analysis

Factor analysis is used to identify the factors that can be used to represent the relationship among a set of interrelated variables. It is a statistical tool.

A factor is defined as a set of observed variables that have similar response patterns. Factors are usually listed according to factor loadings or based on the amount of deviation of the data set. The two types are

1) Exploratory Factor Analysis 2) Confirmatory Factor Analysis

1. **Exploratory Factor Analysis:** "It is used when one does not have any information about the structure of the data or the number of dimensions in a set of variables."
2. **Confirmatory Factor Analysis:** "It is used for confirmation when specific information is available about the structure of the data and the number of dimensions in a set of variables."

Exploratory Factor analysis (EFA)

Exploratory Factor Analysis is one of the important steps in the process of scale development. The goal is to summarize the items into meaningful factors as given by Costello & Osborne, (2005). Groups are formed based on correlation analysis, with highly correlated groups named

as “Factors”. There are two methods to EFA: “Principal Component Analysis” (PCA) and “Common Factor Analysis”. Differences are drawn based on communalities. Principal Component Analysis “considers total variance that includes unique and common variances whereas Common Factor analysis considers only common variance” (Costello & Osborne, 2005).

4. Financial distress is caused by

4.1	Excessive borrowings by the company leading to sub-optimal capital structure	1	2	3	4	5
4.2	Inaccessibility to finance	1	2	3	4	5
	a) For starting the project	1	2	3	4	5
	b) For working capital	1	2	3	4	5
4.3	Short term funds used for long term purpose	1	2	3	4	5
4.4	Investments are diverted into other projects	1	2	3	4	5
4.5	Investments in associates and subsidiaries are much more than the Net worth	1	2	3	4	5
4.6	Lack of effective collection machinery	1	2	3	4	5
4.7	Application of funds for unauthorized purposes	1	2	3	4	5
4.8	Choice of wrong project	1	2	3	4	5
4.9	Delay in commencement of operations due to delay in clearance	1	2	3	4	5
4.10	Lack of focus on implementation of the projects	1	2	3	4	5
4.11	Higher cost of production	1	2	3	4	5
4.12	Less than expected sales	1	2	3	4	5

4.13	Lack of market research	1	2	3	4	5
4.14	Tough competition in the market	1	2	3	4	5
4.15	Unviable business strategy	1	2	3	4	5
4.16	Lack of critical tie ups	1	2	3	4	5
4.17	Lack of adequate control	1	2	3	4	5
4.18	Lack of timely diversification	1	2	3	4	5
4.19	Lack of planning for technology upgradation	1	2	3	4	5
4.20	Changes in policies of government(s)	1	2	3	4	5
4.21	Slowdown in Economy	1	2	3	4	5
4.22	Increase in the interest rates	1	2	3	4	5
4.23	Changes in the value of rupee	1	2	3	4	5
4.24	Delay in obtaining permissions	1	2	3	4	5
	a)Legal	1	2	3	4	5
	b)Regulatory	1	2	3	4	5
	c)Technical	1	2	3	4	5
4.25	If any other (specify)_____					

The present study adopted Principal Component Analysis (PCA) to identify the underlying structure of data. The following assumptions should be fulfilled for factors

Firstly, the KMO test must be conducted to ensure the adequacy of the data set. The result of the test for this study was found to be 0.744.

Secondly, Bartlett's Test of Sphericity has to be carried out to test the null Hypotheses based on whether correlations are possible or not between the set of items. In this case, the null Hypotheses was rejected, which indicates that correlation matrices are possible between the various items.

Table 6.18: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.744
Bartlett's Test of Sphericity	Approx. Chi-Square	707.334
	Df	136
	Sig.	.000

Communalities

Communalities refer to "the variance explained in an item by the factors extracted. In other words, it is a common variance or the variance shared by all other items. Initially, PCA considers communalities as 1 (which includes common and unique variance). According to

various studies, the communality value should be >.50 (Hair, 2010), which indicates that the explained variance of the items should be more than the unexplained variance."

Table 6.19: Communalities

	Initial	Extraction
Inaccessibility to finance to starting project	1.000	.833
for working capital	1.000	.850
Short term funds used by long-term purpose	1.000	.624
diverted funds to other projects	1.000	.825
Invested in subsidiaries more than net worth	1.000	.790
Lack of effective collection machinery	1.000	.412
Application of funds for unauthorized purpose	1.000	.617
choice of wrong projects	1.000	.659
Delay in commencement of operation clearance	1.000	.574
higher cost of production	1.000	.693
less than expected sales	1.000	.604
Lack of adequate control	1.000	.628
Lack of technology upgradation	1.000	.681
changes in policies government	1.000	.580
slowdown in economy	1.000	.574
increase in interest rates	1.000	.712
changes in the value of rupee	1.000	.666

Extraction Method: Principal Component Analysis.

Factor Extraction

PCA with Varimax (Variance maximum) rotation was conducted to extract the factors. In the scale development procedure, Varimax rotation is a commonly used method (Brakus et al.). From the results, items that cross loaded (0.20) on different factors were removed (Podsakoff, Mac Kenzie, 2003). Finally, five factors were extracted which explained 66.609% of the variance

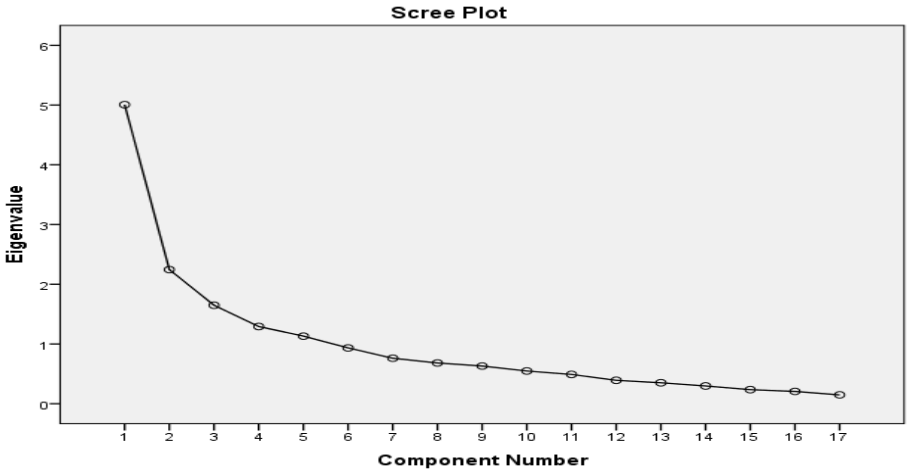

Figure 6.1: Scree Plot

Table 6.20: Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.006	29.450	29.450	5.006	29.450	29.450	3.785	22.266	22.266
2	2.245	13.205	42.655	2.245	13.205	42.655	2.249	13.230	35.496
3	1.649	9.698	52.353	1.649	9.698	52.353	2.038	11.991	47.487
4	1.292	7.600	59.953	1.292	7.600	59.953	1.800	10.590	58.077
5	1.131	6.656	66.609	1.131	6.656	66.609	1.450	8.532	66.609
6	.934	5.497	72.105						
7	.761	4.479	76.585						
8	.682	4.013	80.597						
9	.630	3.709	84.306						
10	.548	3.222	87.528						
11	.490	2.884	90.412						
12	.392	2.305	92.717						
13	.351	2.063	94.780						
14	.297	1.747	96.528						
15	.236	1.386	97.914						
16	.206	1.213	99.127						
17	.148	.873	100.000						
Extraction Method: Principal Component Analysis.									

PCA with Varimax rotation provided five components with 17 items. The 5 factors are:

1. **"Financial factors"** with seven items and 22.26% variance
2. **"Production & Sales Factors"** with 4 items and 13.23% variance
3. **"Managerial Factors"** with 2 items and 11.99% variance
4. **"Economic & Political"** factors with 3 items and 10.59% variance
5. **"Monetary Policy Factors"** with 2 items and 8.53% variance

The reliability value (Cronbach's alpha) was checked while deleting items to test if the removing of a particular item significantly reduced scale reliability.

Table 6.21: Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Diverted funds to other projects	.880				
Invested in subsidiaries more than	.861				
Application of funds for	.733				
Inaccessibility for working Capital	.693				
Short term funds used by long-term	.657				
Inaccessibility to finance to starting	.560				
Lack of technology upgradation		.769			
Higher cost of production		.696			
Lack of adequate control		.686			
Less than expected sales		.622			
Choice of wrong project			.889		
Lack of effective collection			.885		
Slowdown in economy				.738	
Changes in policies of the				.724	
Delay in commencement of	.422			.565	

Increase in interest rates					.790
Changes in the value of rupee					.772
Extraction Method: Principal Component Analysis.					
a. Rotation converged in 6 iterations.					

Note: 1=Financial Factors, 2=Production & Sales Factors, 3=Managerial Factors 4=Economic & Political Factors, 5=Monetary Policy Factors.

To study perception about the effectiveness of the CDR plan, firstly factors have been identified through factor analysis. Secondly, ANOVA has been used to check the significance of difference in opinion on those factors.

H4: There is a significant difference in the various opinions on the effectiveness of the Corporate Debt Restructuring mechanism.

a. There is a significant difference of opinion related to flaws of the CDR policy among respondent groups.

b. There is a significant difference of opinion on the effectiveness of CDR policy in banks among respondent groups.

c. There is a significant difference of opinion on the effectiveness of CDR policy in controlling corporate distress among respondent groups.

5. The following statements are regarding the effectiveness of the CDR mechanism.

5.1	CDR is the one of the best restructuring mechanism to turnaround from financial distress	**1**	**2**	**3**	**4**	**5**
5.2	CDR helps to come out from temporary cash flow problems	**1**	**2**	**3**	**4**	**5**
5.3	CDR helps in utilization of the idle assets of the business	**1**	**2**	**3**	**4**	**5**
5.4	CDR helps in strengthening the financial health of the borrower	**1**	**2**	**3**	**4**	**5**
5.5	CDR helps in reducing Non-performing assets of the bank	**1**	**2**	**3**	**4**	**5**
5.6	CDR makes healthy and sound financial system	**1**	**2**	**3**	**4**	**5**

5.7	CDR cell delays approval of restructuring package	**1**	**2**	**3**	**4**	**5**
5.8	CDR often largely ignores unsecured creditors	**1**	**2**	**3**	**4**	**5**
5.9	CDR is Ineffective in helping to mobilize additional finance needed	**1**	**2**	**3**	**4**	**5**
5.10	CDR is first a way to reduce NPA provisioning	**1**	**2**	**3**	**4**	**5**
5.11	CDR mechanism is not serving interest of all concerned	**1**	**2**	**3**	**4**	**5**

Factor Analysis

Table 6.22: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.700
Bartlett's Test of Sphericity	Approx. Chi-Square	295.680
	df	55
	Sig.	.000

KMO adequacy was 0.700, clearly above the commonly recommended value of 0.6 and the result of Bartlett's Test of Sphericity was also significant (Chi-Square=295.68, P<0.01).

PCA was used because the main purpose was dimension reduction and to find and compute composite scores for underlying factors. Eigen values are the "variances of the factors". Initial Eigen values indicated that the first three factors explained 26.06%, 21.998% and 9.771 of the variance, respectively. The three factor component solution which explained 57.83% of the variance was preferred.

Table 6.23: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.868	26.069	26.069	2.868	26.069	26.069	2.524	22.949	22.949
2	2.420	21.998	48.067	2.420	21.998	48.067	1.962	17.834	40.783
3	1.075	9.771	57.838	1.075	9.771	57.838	1.876	17.055	57.838
4	.990	9.002	66.840						
5	.802	7.292	74.133						
6	.732	6.659	80.792						
7	.510	4.634	85.426						
8	.489	4.450	89.876						
9	.438	3.979	93.855						
10	.392	3.563	97.419						
11	.284	2.581	100.000						
Extraction Method: Principal Component Analysis.									

b. when components are correlated, “sum of squared loadings cannot be added to obtain a total variance”

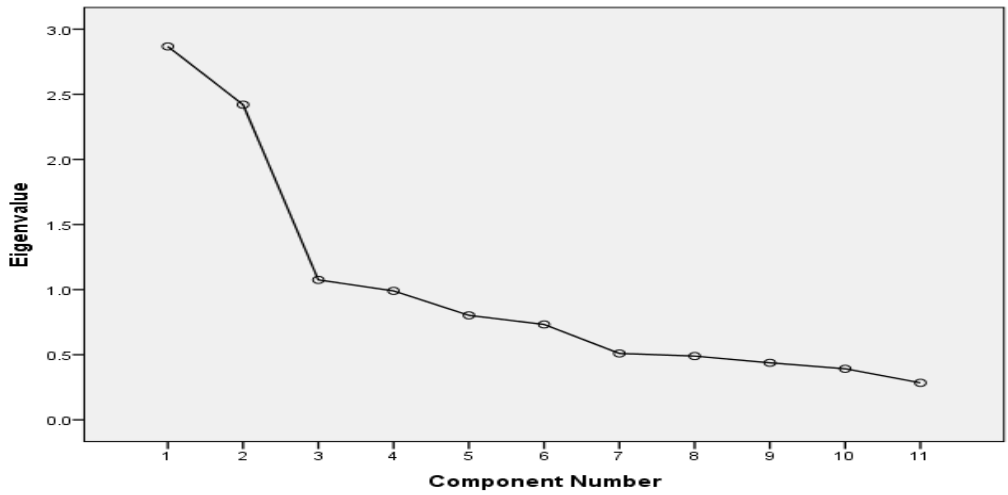

Figure 6.2: Scree Plot

Table 6.24: Rotated Component Matrix[a]

	Component		
	CDR policy Flaws	CDR policy Effectiveness on Banking	CDR Effectiveness of controlling corporate distress
Q5.1 CDR is the one of the best restructuring mechanism to turnaround from financial distress			.613
Q5.3 CDR helps in utilization of the idle assets of the business			.805
Q5.4 CDR helps in strengthening the financial health of the borrower			.691
Q5.5 CDR helps in reducing Non-performing assets of the bank		.737	
Q5.6 CDR makes healthy and sound financial system		.624	
Q5.10 CDR is first a way to reduce NPA provisioning		.642	

Q5.7 CDR cell delays approval of restructuring package	.706		
Q5.8 CDR often largely ignores unsecured creditors including banking and financial institutions	.761		
Q5.9 CDR is Ineffective in helping to mobilize additional finance needed	.659		
Q5.11 CDR mechanism is not serving interest of all concerned	.772		
Extraction Method: Principal Component Analysis.			

Overall analysis indicated the presence of three underlying factors in the responses, referred to as Factor 1: CDR mechanism policy flaws, Factor 2: CDR effectiveness on banks and Factor 3: CDR effectiveness on control of corporate distress.

ANOVA

Table 6.25: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
F1	Between Groups	1.029	2	.514	1.158	.318
	Within Groups	46.629	105	.444		
	Total	47.657	107			
F2	Between Groups	9.621	2	4.810	10.142	.000
	Within Groups	49.801	105	.474		

	Total	59.421	107			
F3	Between Groups	4.637	2	2.318	5.312	.006
	Within Groups	45.823	105	.436		
	Total	50.460	107			

Table 6.26: Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
F1:CDR policy Flaws	Bankers	Company	-.22321	.14767	.290	-.5743	.1279
		Professionals	-.11071	.17359	.800	-.5234	.3020
	Company	Bankers	.22321	.14767	.290	-.1279	.5743
		Professionals	.11250	.18995	.825	-.3391	.5641
	Professionals	Bankers	.11071	.17359	.800	-.3020	.5234
		Company	-.11250	.18995	.825	-.5641	.3391
F2: CDR policy Effectiveness on Banking	Bankers	Company	-.30692	.15261	.115	-.6697	.0559
		Professionals	-.79911*	.17940	.000	-1.2256	-.3726

	Company	Bankers	.30692	.15261	.115	-.0559	.6697
		Professionals	-.49219*	.19631	.036	-.9589	-.0255
	Professionals	Bankers	.79911*	.17940	.000	.3726	1.2256
		Company	.49219*	.19631	.036	.0255	.9589
F3: Effectiveness of controlling corporate distress	Bankers	Company	-.47470*	.14639	.004	-.8227	-.1267
		Professionals	-.22679	.17209	.388	-.6359	.1823
	Company	Bankers	.47470*	.14639	.004	.1267	.8227
		Professionals	.24792	.18830	.389	-.1998	.6956
	Professionals	Bankers	.22679	.17209	.388	-.1823	.6359
		Company	-.24792	.18830	.389	-.6956	.1998

*. The mean difference is significant at the 0.05 level.

Table 6.27: Results

Factors	Sig.	Null Hypotheses
F1:CDR Policy flaws	0.318	Not supported
F2:CDR policy effectiveness on banks	0.000	Supported
F3:CDR policy effectiveness on controlling corporate distress	0.006	Supported

The table 6.27 above shows that there is a no significant difference of opinion among the groups related to CDR effectiveness on banks and on controlling corporate distress. Factor 1 indicates a significant0 difference of opinion, pointing at the flaws in the CDR policy.

The stakeholders at the ground level would be the best parties to suggest measures for greater effectiveness of the CDR Mechanism. Therefore, the study sought the suggestions of the stakeholders for enhancing the effectiveness of CDR. The following few paragraphs, present the findings in this context.

RESEARCH OBJECTIVE VI: To identify measures for greater effectiveness in the norms, design and implementation of the Corporate Debt Restructuring Process.

The present study used Principal Component Analysis (PCA) to identify the underlying structure of data. There are some assumptions which have to be met before extracting factors from the data.

KMO test must be conducted to ensure the adequacy of the data set. The result of the test for this study was found to be 0.626.

Table 6.28: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.626
Bartlett's Test of Sphericity	Approx. Chi-Square	411.408
	Df	136
	Sig.	.000

Table 6.29: Communalities

	Initial	Extraction
Q6.4	1.000	.476
Q6.5	1.000	.540
Q6.6	1.000	.540
Q6.8	1.000	.557
Q6.9	1.000	.494
Q6.10	1.000	.550
Q6.11	1.000	.590
Q6.12	1.000	.468
Q6.13	1.000	.546
Q6.15	1.000	.723
Q6.16	1.000	.582
Q6.19	1.000	.647
Q6.20	1.000	.482
Q6.21	1.000	.702
Q6.22	1.000	.631
Q6.23	1.000	.664
Q6.24	1.000	.679

Extraction Method: Principal Component Analysis.

Factor Extraction

PCA with Varimax (Variance maximum) rotation was conducted for extracting factors. Finally, five factors were extracted, explaining 58.062% of the variance

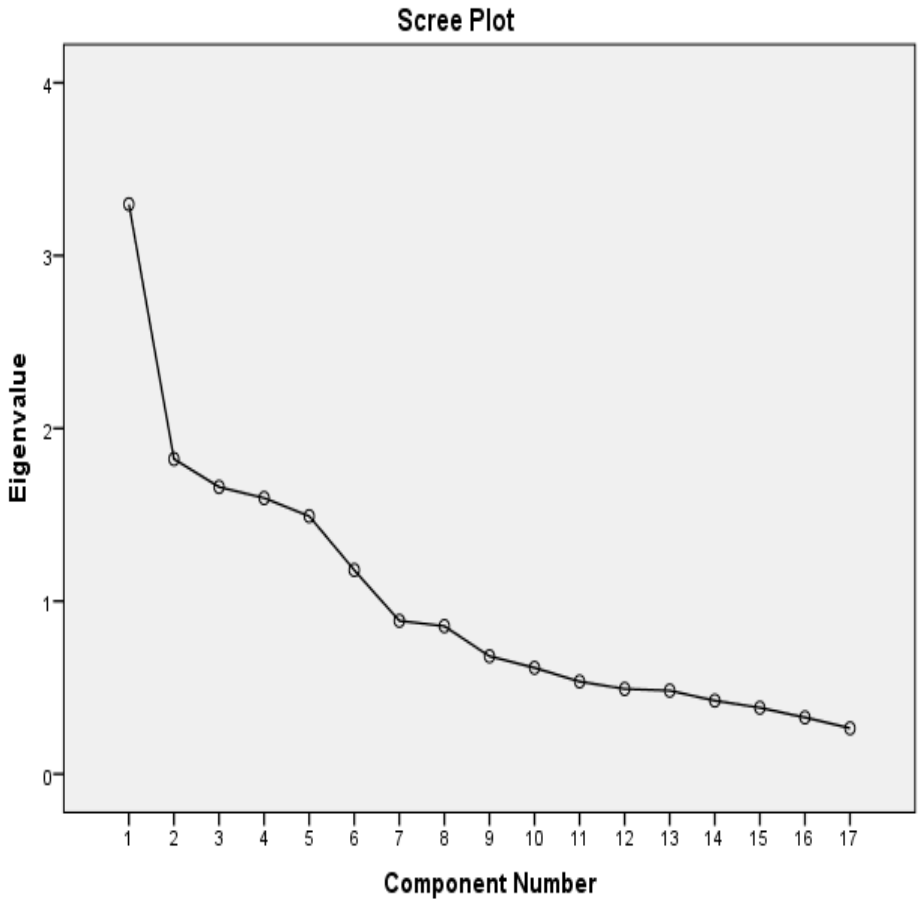

Table 6.30: Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.297	19.396	19.396	3.297	19.396	19.396	2.268	13.338	13.338
2	1.823	10.722	30.118	1.823	10.722	30.118	2.132	12.538	25.877
3	1.661	9.773	39.891	1.661	9.773	39.891	2.061	12.126	38.003
4	1.597	9.394	49.284	1.597	9.394	49.284	1.718	10.107	48.110
5	1.492	8.778	58.062	1.492	8.778	58.062	1.692	9.953	58.062
6	1.180	6.943	65.006						
7	.887	5.218	70.224						
8	.856	5.034	75.258						
9	.682	4.011	79.269						
10	.615	3.616	82.885						
11	.535	3.147	86.032						
12	.492	2.895	88.927						
13	.483	2.839	91.765						
14	.425	2.498	94.263						
15	.383	2.255	96.518						
16	.327	1.926	98.444						
17	.265	1.556	100.000						
Extraction Method: Principal Component Analysis.									

PCA with Varimax rotation resulted in five final components with 17 items. The 5 factors are:

1. **"Responsibility Measures"** with five items and 13.33% variance
2. **"Policy measures"** with 4 items and 12.12% variance
3. **"Administrative Measures"** with 3 items and 12.12% variance
4. **"Evaluation Measures"** with 3 items and 10.10% variance
5. **"Accountability Measures"** with 2 items and 9.95% variance

Table 6.31: Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
Q6.9	.665				
Q6.11	.659				
Q6.4	.636				
Q6.19	.618				
Q6.10	.543				
Q6.15		.808			
Q6.16		.694			
Q6.20		.649			
Q6.23			.812		
Q6.24			.750		
Q6.12		.447	.546		
Q6.13			.518		
Q6.6				.684	
Q6.8				-.670	
Q6.5				.562	
Q6.21					.765
Q6.22					.760
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 8 iterations.					

6.6 SUMMARY

The present chapter has studied perception about effectiveness of Corporate Debt restructuring mechanism among the different groups who participated in CDR plan process. These groups are AGMs/GMs in banking sector, CFO/FM in corporates and Professionals like CAs and CSs who actively assist in CDR process. Factor analysis, ANOVA, Kruskal Wallis test and Henry Garrett Ranking methods have used in the study. First, it has found that there is no significant difference opinion in the CDR plan formulation. Second, Rescheduling, conversion of un-serviced portion of interest into term loan, providing fresh term loan are most used methods and conversion of debt into equity is least preference in the CDR plan. Third, Financial factors, Operational factors and Political/Economical factors are most important reasons for financial distress of companies. Fourth, it is found that there is no significant difference of opinion among groups about CDR effectiveness on controlling corporate distress; banking performance but there is a significance difference opinion about CDR policy flaws. Finally, it is found that Responsibility measures, Policy measures, Administrative measures, Evaluation measures and Accountability measures will help to strengthen the CDR mechanism.

CHAPTER VII

INSOLVENCY AND BANKRUPTCY CODE (IBC), 2016

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INSOLVENCY AND BANKRUPTCY CODE (IBC), 2016

7.1 Introduction

Corporate Debt Restructuring continues to be a preferred mechanism for debt recovery, with new guidelines incorporated it in the form of the Insolvency and Bankruptcy Code, 2016 (Amended in 2018). This chapter discusses the code, introduced with the intention of strengthening the existing CDR mechanism.

Banks ensure a continuous and focused approach in monitoring of all accounts, in order to identify potential buildups of imminent stress in any particular account and accordingly undertaking immediate, corrective action. The ratification of IBC, 2016 by the RBI has introduced a Revised Framework for Resolution of Stressed Assets wide its circular dated February 12, 2018. In it, the RBI withdrew existing instructions on how stressed assets such as the Corporate Debt Restructuring Scheme (CDR), Framework for Revitalization of Distressed Assets, Strategic Debt Restructuring Scheme (SDR), Change in Ownership outside SDR, Scheme for Sustainable Structuring of Stressed Assets (S4A) and Flexible Structuring of existing Long Term Project Loans are to be resolved. Under the revised frame work, RBI has directed borrowers to enforce Board approved policies in order to resolve stressed assets, which include time lines of the procedures. Accordingly, banks have formulated suitable policy approved by the Board and circulated it since April 2018.

7.2 Need for a New Code

1. According to the World Bank's Ease of Doing Business Index 2016, India was categorized as one of the worst performers among the BRICS nations. With a position of 136, it was nowhere near the other competing nations like China and Russia, both at the 55th position. The recovery

rates in countries like the USA, UK, Singapore, Canada and Australia were impressive with 88.6 %, 81.5%, 89.7%, 87.3% and 82.1% respectively, while India had a recovery rate of 25.7%. This implied the need for improvement in the 'Ease of Doing Business' ranking, as India was ahead of only Brazil in terms of the rate of recovery.

2. There was a need for an effective insolvency and bankruptcy regime necessary for the resolution and recovery of stressed assets.
3. Attracting FDI in India was essential to meet the huge and continuous capital needs of the country.
4. Assurance for international investors in the debt market had to be improved.
5. The multiplicity and complexities of various present laws had left a disoriented approach to issues of debt recovery and value destruction.
6. Increasing stressed assets and late recovery actions had become prominent.
7. The Sick Industries & Companies Act, 1985(SICA) had failed. Also, track record of the Lok Adalat, the DRTs, and actions initiated under the SARFAESI Act had been poor, with a recovery rate of barely 20-30%.
8. To avoid reluctance to liquidate once categorized as NPA.
9. To develop the existing bond and credit markets.

A need for a sound and robust insolvency process arose in order to:

a. Preserve the economic value of an enterprise.
b. Make decisions as to whether it was a financial failure or business failure.
c. Realise/salvage the maximum economic value.
d. Adhere to the RBI and Supreme Court's decision to provision all bank balances by March 2017.
e. Instill better credit discipline in Indian borrowers

7.3 What makes IBC, 2016 different?

1. It differentiates between operational creditors and financial creditors.
2. The Moratorium period is given.
3. The Creditor is in possession during the CIRP process.
4. Business decisions are taken by the COC (Committee of Creditors).
5. Insolvency resolution is carried out through managed, time bound negotiations.

Liquidation process is carried out:

1. If an agreement is not reached by the COC in the stipulated period.
2. If the COC decides to proceed with the process of liquidation before receiving approval of the RP (Resolution Professional).
3. If the CD (Corporate Debtor) fails to follow the terms approved by AA (Adjudicating Authority) of the RP
4. When sale proceeds are followed by the Waterfall mechanism, overriding any other central or state statues that are in force.
5. When the transactions are voidable.
6. In cases of :

i. Minor triggers
ii. Concealment of property
iii. Defrauding creditors
iv. Fraudulent trading
v. Contravention of moratorium
vi. Contravention of Resolution Plan leading to penalties.

7.4 Need & objectives of IBC, 2016

1. To revise, modify and combine extant laws related to insolvency resolution and reorganization.
2. To ensure maximum value of assets for corporate debtor.
3. Promoting availability of credit and consequently, entrepreneurial activity.
4. Taking the interests of all stakeholders into account and balancing them.
5. To change the order of priority of payment of government dues.

Need of IBC, 2016

1. It promises to resolve insolvency in lesser time.
2. It would foster and develop confidence in investors.
3. Any confusions or ambiguity caused due to a complex judicial framework would be eliminated.
4. The situation of NPAs could be addressed in a decisive manner.
5. It would help develop the bond and credit markets.
6. It would entail a single framework for insolvency and bankruptcy.
7. It would lead to a process which is clear and unambiguous, and can be followed in a time-bound manner by all stakeholders.
8. A commercial solution to a commercial issue would be provided.
9. Failed businesses which are genuine can be given a second chance
10. Lenders rights and enforcements can be strengthened and made more confident.

7.5 Impact & Benefits to Lenders

1. Maximization of recovery and the right to control borrowers in case of default.
2. The option to start the process even if the debt is of another lender.
3. In order to enable judicious use of powers, more robust monitoring systems are needed.

4. The borrower can be pushed to liquidation if there is lack of consensus in lenders on resolution plan.
5. Priority of distribution (waterfall) has to be cleared upon liquidation; secured creditors and unsecured financial creditors, followed by government dues.

Impact & Benefits to Borrowers:

1. On default of Rs 1 lakh or more, insolvency can be filed by any creditor.
2. The operations and management of the borrower can be taken over by the IP during CIRP
3. Liquidity is the main focus of borrowers – with tight cash flow forecasting and staying current on payments through monitoring.
4. Developing and implementing a turnaround plan requires proactive steps to identify issues and communicate with lenders
5. In cases where the diversion of assets is deceitful, imprisonment is possible and personal contribution can also be sought.

7.6 ELIGIBILITY TO INITIATE CIRP

WHO CAN INITIATE	WHO CANNOT INITIATE
1. Companies 2. Limited Liability Partnership 3. Partnership Firms 4. Individuals 5. Any other entity notified by CG	1. CD undergoing CIRP 2. Twelve months preceding the date of application, CD should have completed CIRP 3. Violation of any terms of RP, approved 12 months before the date of an application by CD or FC 4. Liquidation order is made with respect to CD

PARTIES/ENTITITES INVOLVED

INSOLVENCY AND BANKRUPTCY BOARD OF INDIA (IBBI)	The board will manage bankruptcy experts, indebtedness proficient offices and data utilities set up under the code. The board will comprise of agents of RBI, Ministries of Finance and Corporate Affairs and Law.
INSOLVENCY PROFESSIONALS	These are a specific framework of authorized experts who regulate the goals procedure, deal with the advantages of the account holder and give data to leasers to help them in dynamic decision making.
INSOLVENCY PROFESSIONAL AGENCIES	The bankruptcy experts/insolvency professionals are enlisted under such offices. The organizations lead the assessments to confirm with the indebtedness experts and uphold implicit rules for their exhibition.
INFORMATION UTILITIES	Creditors will report budgetary data of obligation owed to them by the indebted person. Such data will incorporate records of obligation, liabilities and defaults.
ADJUDICATING AUTHORITIES (AA)	The NCLT (National Company Law Tribunal) for companies and DRT (Debt Recovery Tribunal) for individuals will oversee the proceedings of the resolution process. The initiation of the resolution process, appointment of insolvency professionals and final approval decision of creditors is taken by the AA.

Source: www.ibbi.gov.in

BROAD ROLE OF RP AND COC

ROLE OF RP

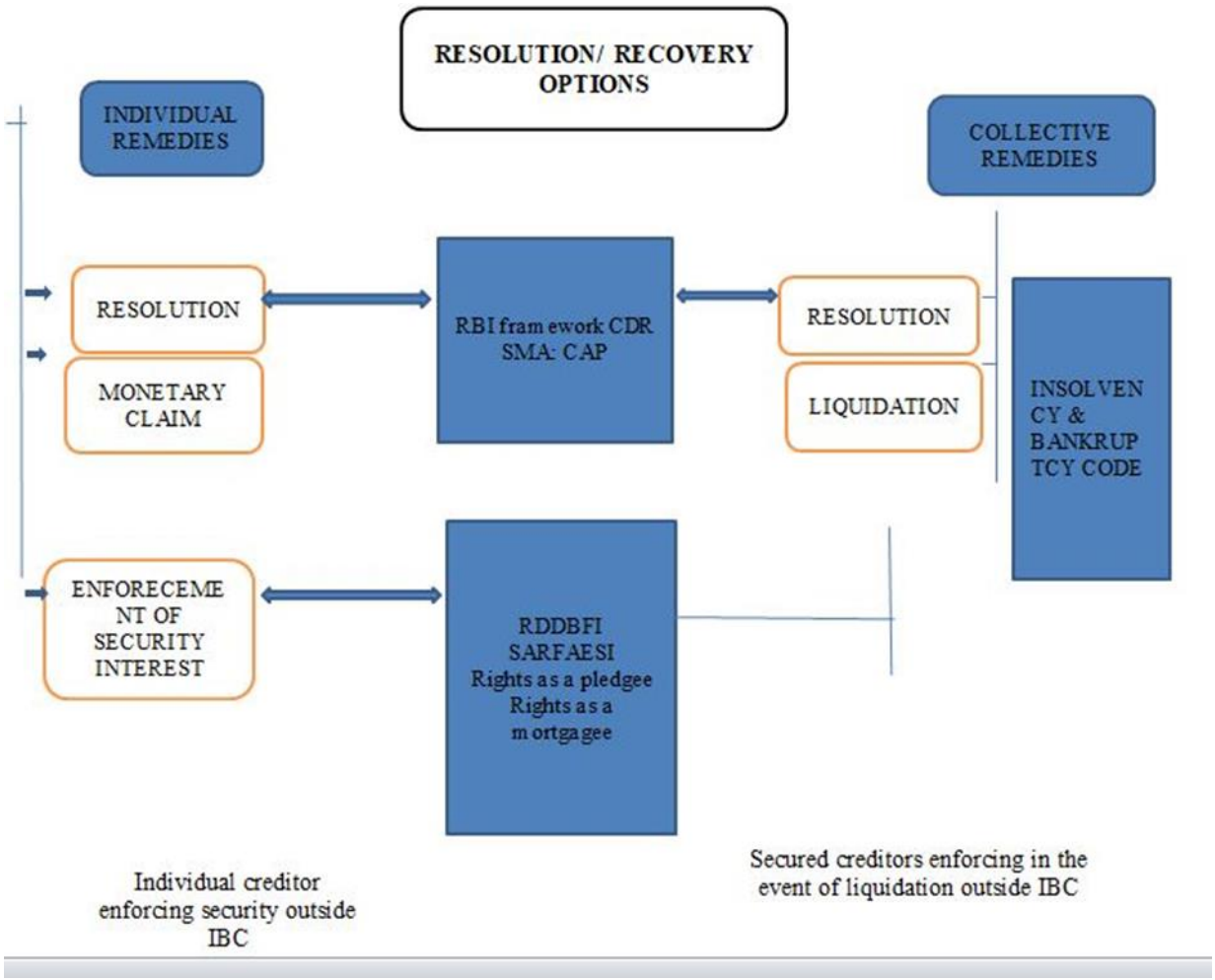
IRP (Interim Resolution Professional) is confirmed by RP by COC. During CIRP, entire management of the CD is taken over by RP who:

1. Preserves & protects the assets and ensures continuity of business operations.
2. Takes custody and control of assets including business records.
3. Raises interim finance.
4. Prepares IM (information Memorandum) with respect to CD.
5. Examines the RP
6. Applies to AA for avoidance of any preferential / undervalued/ extortionate transactions.

ROLE OF COC

1. COC has to be constituted within 30 days of initiation of CIRP.
2. Comprises of all FC's and CDs – both secured and unsecured.
3. Each FC can appoint one's own representative.
4. Has power to substitute IRP.
5. Votes on resolution plan. Resolution plan has to mandatorily provide for liquidation value of the operational creditors and dissenting FC's.
6. Need equal or more than 75% for positive action or more than 25% for negative action.

7 RECOVERY OPTIONS (Figure.7.1: Resolution/Recovery options)



COLLECTIVE REMEDIES

1. Collective actions by all the creditors gives corporate debtors breathing time to focus on business.
2. As much as plausible, liquidation must be avoided. Failure to reach resolution results in liquidation.
3. Ensuring business remains a going concern during CIRP.
4. In case of liquidation, business gets much better valuation as a going concern.
5. Insolvency principle works on PariPassu principle.
6. Ensures equitable distribution.

PROCESS OF APPOINTMENT OF RP

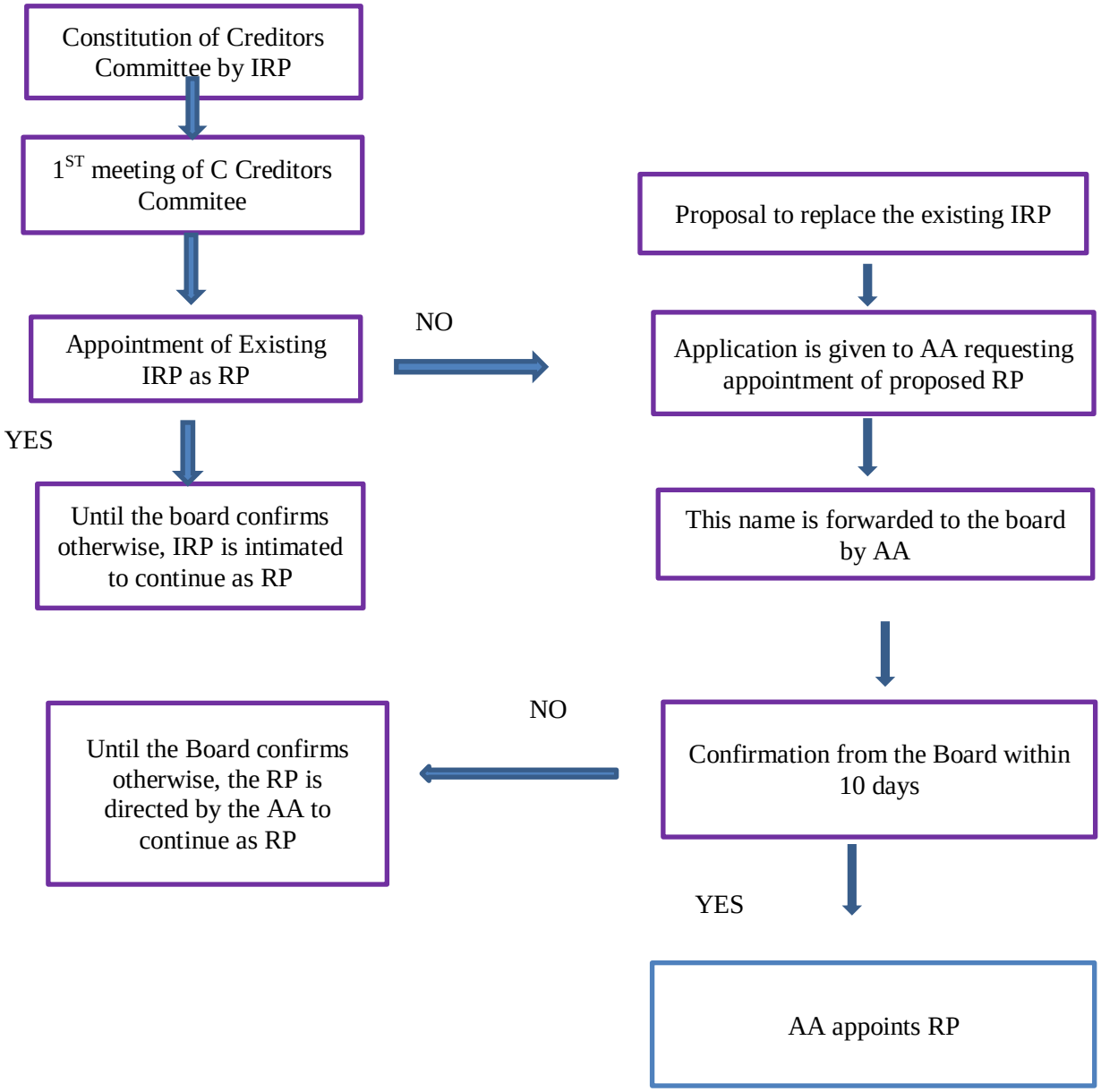


Figure.7.2: Process of appointment of Resolution professionals

7.8 CIRP AND LIQUIDATION PROCESS

The **C**orporate Insolvency and Bankruptcy Code, 2016 has been a tremendous respite in the economic scenario of failures of debt repayments that need quick initiation and action.

Applications for insolvency and bankruptcy of start-ups, individuals, partnership firms, limited liability partnership firms and companies are all mentioned in a systematic provision of the code.

Every amount category in the code has a specified slab. The government intimates the final amount with which to start the proceedings, keeping in view that the amount is not minimum or maximum but a range, fixed to be as amount of default debt.

Step 1. HOW TO APPLY TO NCLT

The creditor of a firm (operational/financial) or the firm itself can file application with NCLT. It is applied against the debtor, provided with evidence that the default exceeds 1, 00,000 and the NCLT either replies or passes an order i.e. accepting or denying the application within fourteen days of receipt of such application. The IBC maintains a record of all information and evidences in the form of Information Utilities**.** A demand of unpaid debt is to be made by the operational creditor. This claim is then defended by a corporate debtor during the ongoing dispute.

Step 2. ONSET OF CIRP PROCEDURE

The Board of the company gets dissolved and an Interim Resolution Professional takes over the proceedings of the process of resolution once the application is accepted.

The affairs of the company cease to be under the purview of its management, with the IRP having a close watch on everything.

Moratorium broadly prohibits the following

a. Legal proceedings are initiated/continued against the corporate debtor.
b. Assets are transferred.
c. Any security interest, if available, is enforced.
d. Any property/properties by the owner are recovered.
e. The supply of essential goods and services are suspended/terminated, with the moratorium lasting for the period the debtor is in CIRP.
f. The contracts in which the debtor is involved in, the moratorium is not applicable.

Step 3. AUTHENTICATION AND CATEGORIZATION OF CLAIMS

a. The adjudicating authority requests IBBI to refer the IRP by submitting an application to CIRP.
b. The IRP is responsible for taking over the disciplinary of the proceedings.
c. The IRP is for a temporary period of 30 days unless a new RP is appointed in the first meeting of the COC.
d. The IRP invites and verifies for claims and classifies them. COC (Committee of creditors) is formed with all the financial creditors and debtors after 30 days have passed from the admission of the CIRP.

Step 4. HOW THE RESOLUTION PROFESSIONAL IS APPOINTED

The COC choose an RP who is independent for the remaining process of CIRP. Here, the RP can be the same person that was appointed as IRP or a new person can be appointed as RP by consensus.

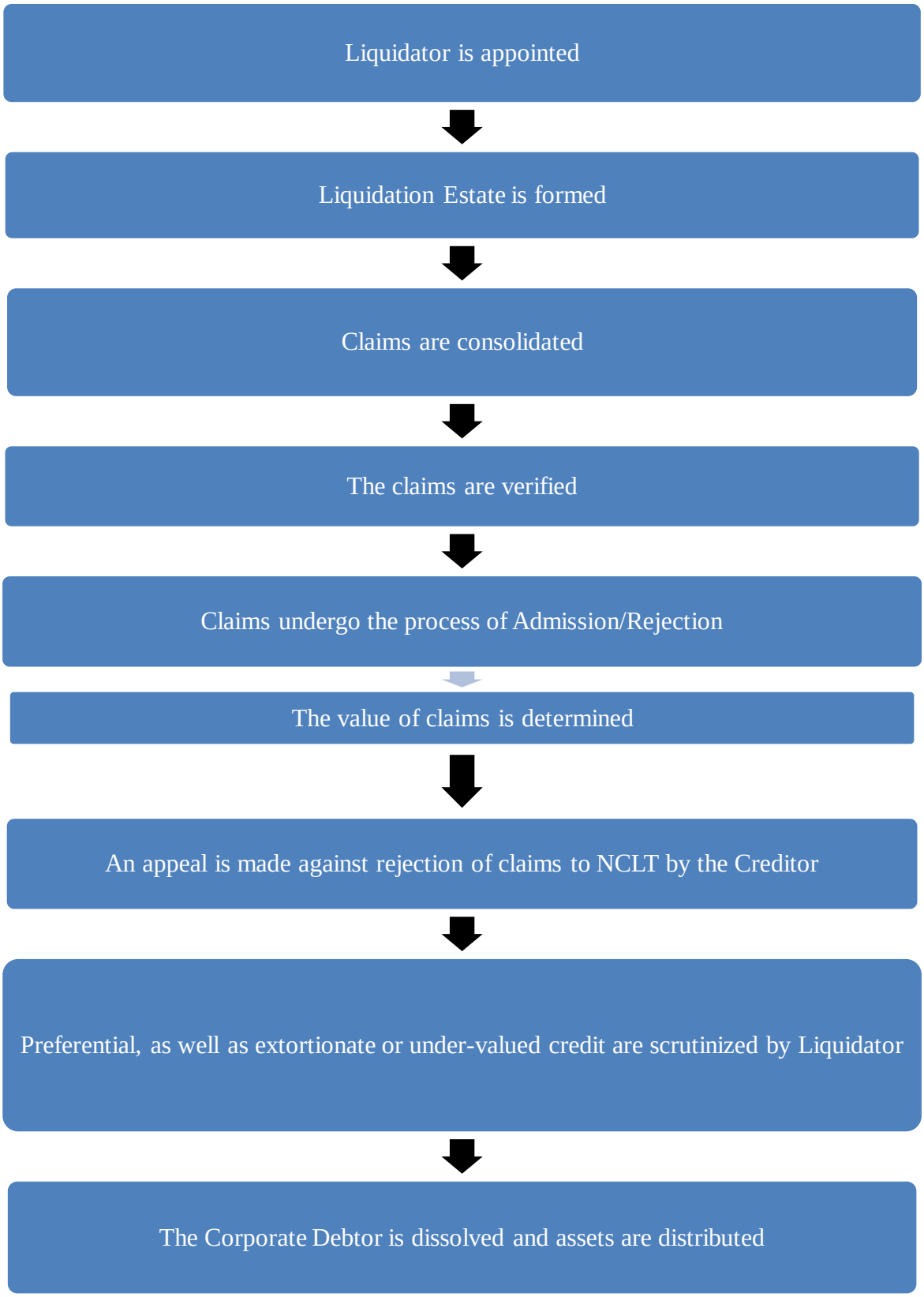
Step 5: APPROVAL OF RESOLUTION PLAN

The CIRP process must come up with a resolution plan within 180 days with an extension of another 90 days, making it a maximum of a period of 270 days. The plan can be proposed by any person, management, creditors or a third party. The RP is responsible for seeing whether it meets the criteria as suggested by the IBC. Once the plan is approved within the given period, it is then approved by NCLT.

It is binding on all employees, stakeholders, creditors and members. If the resolution is not approved, then the NCLT requires for the company to be liquidated. The COC appoints liquidator after the approval of liquidation in order to sell assets of the corporate debtor. These are distributing among the stakeholders as mentioned under section 53 of IBC Act.

LIQUIDATION PROCESS:

At any time during the CIRP but before the resolution plan is confirmed, the RP intimates the NCLT of the decision to liquidate the corporate debtor by the CoC, leading to the passing a liquidation order. RP appointed for CIRP shall act as liquidator for the purpose of liquidation unless replaced by NCLT


Liquidator is appointed
Liquidation Estate is formed
Claims are consolidated
The claims are verified
Claims undergo the process of Admission/Rejection
The value of claims is determined
An appeal is made against rejection of claims to NCLT by the Creditor
Preferential, as well as extortionate or under-valued credit are scrutinized by Liquidator
The Corporate Debtor is dissolved and assets are distributed

CIRP TIME LINES

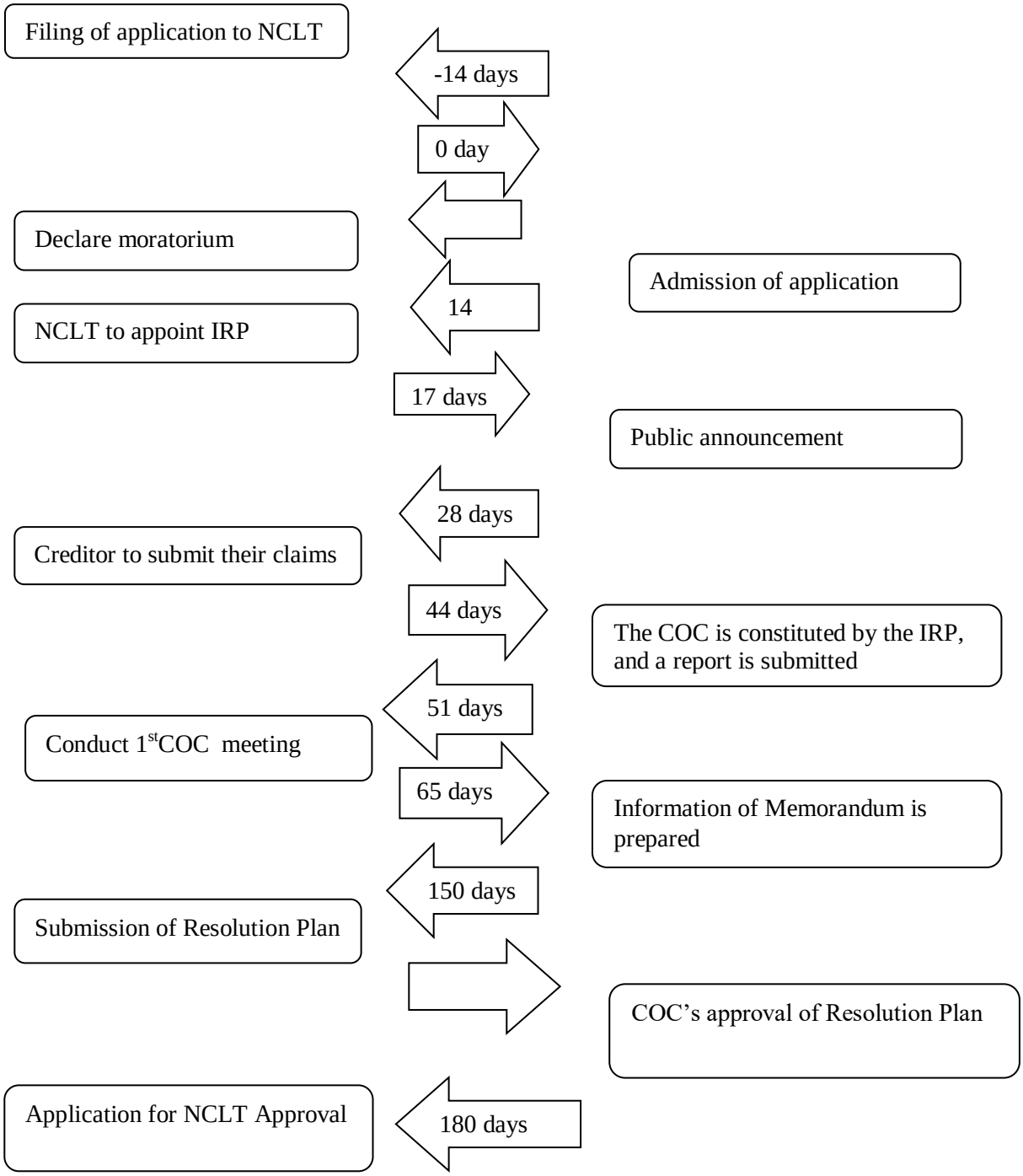


Figure.7.3 CIRP time lines

WATERFALL OF CLAIMS PRIORITY UNDER LIQUIDATION:

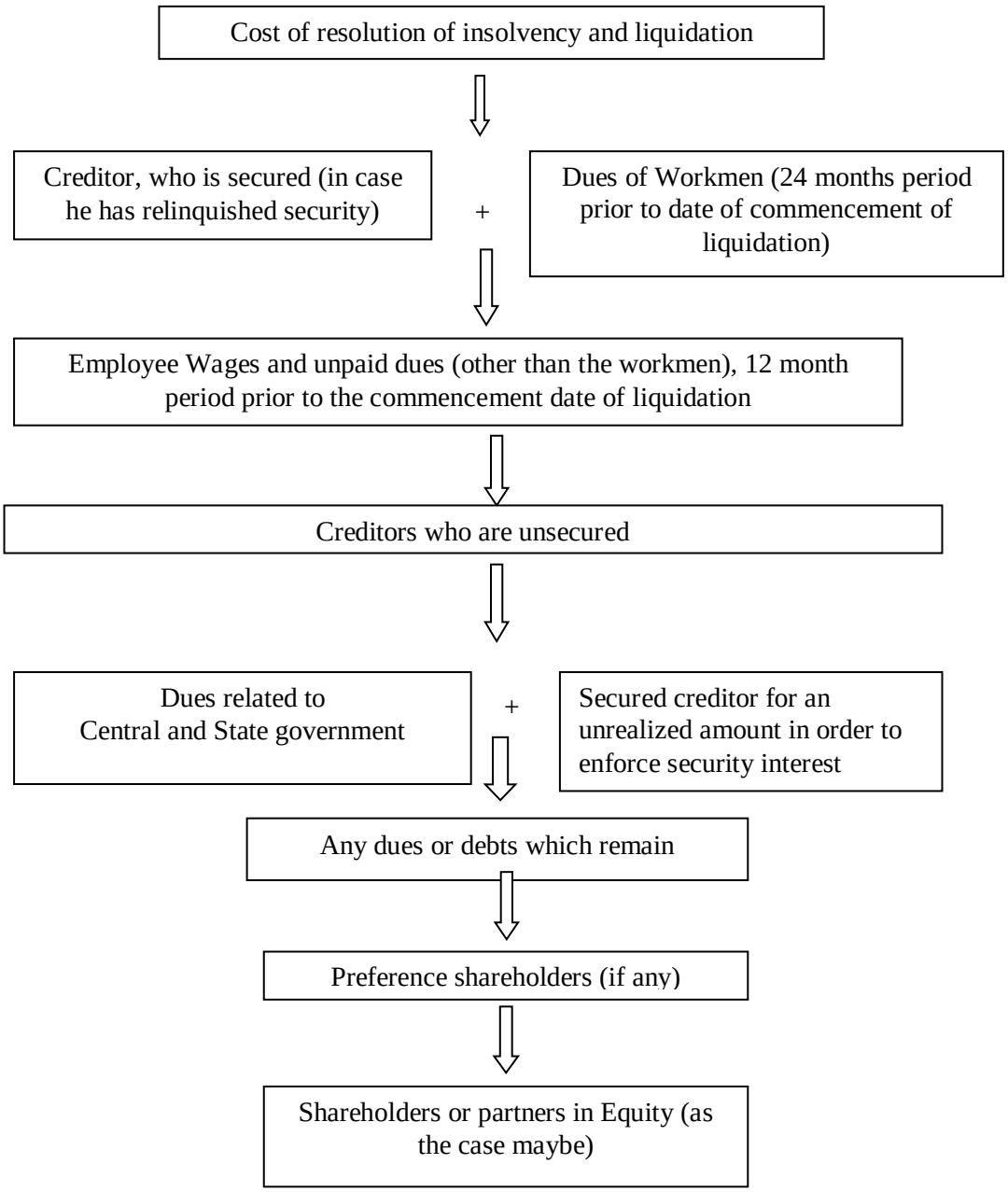


Figure.7.4 :Waterfall of claims priority under liquidation

7.9 CHALLENGES FOR BANKS UNDER IBC MECHANISM

1. It is not cost effective as the chance of full recovery is rare and insolvency process is cumbersome and tedious.
2. There is a shortage of skilled professionals to facilitate efficient insolvency resolution process.
3. Non-cooperation of management and promoters of corporate debtors make it difficult.
4. There are only 20 NCLT benches as on date which is inadequate to handle large number of cases.
5. The maximum timeline of 330 days makes it stringent, which can label a company as an NPA just because it failed to pay dues even though it is a financially sound company.
6. There is no proper timeline mentioned for disposal of appeals against the order of Adjudicating Authority (NCLT).
7. Potential higher provisioning.
8. Threshold of 60% is difficult to achieve.
9. Dilution of rights of secured creditors: COC.
10. Absence of Information Utilities.

7.10 INSOLVENCY AND BANKRUPTCY CODE, 2016: AN OVERVIEW

The provisions of CIRP has initiated on December 1, 2016. Since then, 3312 CIRPs have been initiated by the end of December 2019, as shown in Table 1. From these, 246 CIRPs are in the stage of closed on appeal or review or settled; 135 CIRPs have been withdrawn; 780 of them have ended being liquidated and 190 have received approval of their resolution plans. The distribution of CDs by sector under CIRP is shown in the Table below.

7.1 Corporate Insolvency Resolution Process (CIRP) (NUMBER)

Quarter	CIRPs at the beginning of the Quarter	Admitted	Appeal/ Review/ setteled	Withdrawal under Section 12A	Approval of Resolution Plan	Commencement of Liquidation	CIRPs at the end of the Quarter
Jan-Mar,2017	0	37	1	0	0	0	36
Apr-Jun,2017	36	130	8	0	0	0	158
July-Sep,2017	158	235	18	0	2	8	365
Oct-Dec,2017	365	144	40	0	7	24	438
Jan-Mar,2018	438	196	21	0	11	59	543
Apr-Jun,2018	543	250	22	1	14	52	704
July-Sep,2018	704	242	32	27	29	87	771
Oct-Dec,2018	771	276	10	39	18	82	898
Jan-Mar,2019	898	376	35	22	20	86	1111
Apr-Jun,2019	1111	300	22	24	27	95	1243
July-Sep,2019	1243	565	23	18	32	153	1582
Oct-Dec,2019	1582	561	14	4	30	134	1961
Total		**3312**	**246**	**135**	**190**	**780**	**1961**

Source: www.ibbi.gov.in

Table: 7.2 Commencement of Corporate Insolvency Resolution Process

Quarter	NO.OF Corporate Insolvency Resolution Process initiated by			
	Operational Creditor	Financial Creditor	Corporate debtor	Total
Jan-Mar,2017	7	8	22	37
Apr-Jun,2017	58	37	35	130
July-Sep,2017	98	99	38	235
Oct-Dec,2017	65	65	14	144
Jan-Mar,2018	89	85	22	196
Apr-Jun,2018	130	102	18	250
July-Sep,2018	128	98	16	242
Oct-Dec,2018	147	113	16	276
Jan-Mar,2019	162	193	21	376
Apr-Jun,2019	154	129	17	300
July-Sep,2019	291	265	9	565
Oct-Dec,2019	301	245	15	561
Total	**1630**	**1439**	**243**	**3312**

Source: www.ibbi.gov.in

As seen in the distribution of stakeholders who have triggered the resolution process, Operational Creditors triggered 49.21%, followed by about 43.44% by Financial Creditors and the remaining have been triggered by Corporate Debtors.

As per the Ease of Doing Business Report 2020, India's rank in resolving insolvency has improved to 52 this year from its rank of 100 last year. With the enactment of the code, and by promoting reorganization proceedings, India has made resolving insolvency easier than before. The new law has presented the choice of the indebtedness goals for business elements as an option in contrast to liquidation or different components of obligation requirement, reshaping the manner in which bankrupt organizations can reestablish their money related prosperity. The code has set up compelling instruments for lenders to effectively negotiate, effectuating extraordinary opportunities to understand their dues. The time taken for resolving insolvency has is now around 1.6 years, significantly down from 4.3 years.

CHAPTER-VIII

FINDINGS, SUGGESTIONS AND CONCLUSION

CHAPTER-VIII

FINDINGS, SUGGESTIONS AND CONCLUSION

The present chapter summarizes the findings and key observations from research study. This chapter also demonstrates suggestions, implications, Limitations and scope for further studies in the future.

8.1 Findings of the study

1. In case of CDR formulation, the study found that there is no significant difference of opinion among groups i.e. companies, bankers and professionals. It implies that the restructuring process is being formulated with the mutual consent of companies and bankers. In some cases, companies request bankers and vice-versa for mutual benefit considering the requirements of both parties.

2. Different methods are used in the design of the CDR plan. Among these methods, the most commonly used ones from the selected sample are rescheduling, converting that portion of interest which is un-serviced into term loans, providing fresh term loans and concession in repayment of loan and least method is debt to equity conversion.

3. The study found the reasons for financial distress of companies to be financial factors, operational factors, political and economic factors followed by managerial factors.

4. Opinions were collected on the effectiveness of the CDR mechanism. All groups agreed that CDR plans are effective in stabilizing banks' performance and in controlling corporate distress. A significant difference was found in the opinions regarding CDR flaws like delay in approval of the restructuring package, ineffectiveness in helping to mobilize additional finance needed and not serving the interest of all concerned.

5. Through analysis of the causes for financial distress of selected sample firms using factor analysis, it was found that financial factors were the most important reason for distress followed by operational factors

Financial factors	Diversion of funds to other projects Investment in subsidiaries more than Net worth Application of funds for unauthorized purposes Using short term funds for long term purposes Inaccessibility to finance for working capital
Operational& Sales factors	Lack of technology up gradation Higher cost of production Lack of adequate control Less than expected sales
Economic/Political factors	Delay in commencement of operations due to legal and technical issues Slowdown in economy Changes in policies of the government
Managerial factors	Choice of wrong projects Lack of effective collection machinery
Monetary Policy factors	Increase in interest rate Changes in value of rupee

6. The present study has tested the effectiveness of the CDR mechanism on corporate performance. A significant difference in the performance of sample firms in the post restructuring period was found. The mean of the sample firms' Current Ratio, Net Sales to Total Assets, Net Worth to Total Assets, Operating Profit Ratio and Interest Coverage ratio showed a sharp decline in the post restructuring period. This result supports the research Hypotheses H2 and leads to the conclusion that the CDR Plan is not very effective in improving the performance of the selected firms.

7. The financials of three industries i.e. Infrastructure Industry, Textile Industry and Iron and Steel Industry were analyzed and compared with their industry peers. Not much improvement was seen in the financials of the selected firms after restructuring.

8. The analysis of the financials of 74 sample firms by using the Altman Z-score Model yielded the following results: out of 74 firms, 11% of firms were found to be in the "Safe Zone", 12% in the "Grey Zone" and 77% of firms in the "Distressed Zone". It can be concluded that CDR plan is not effective.

9. As per industry analysis, out of 22 Infrastructure firms only one firm was found to be in the "Grey Zone" and 21 firms in the "Distressed Zone". Out of 12 Textile firms, 2 are in the Safe Zone, 3 in the Grey Zone and 7 in the Distressed Zone. In the Iron and Steel industry, out of 7 firms, all firms are in the Distressed Zone appearing in the post restructuring period. The CDR plan is not at all effective in the case of Infrastructure and Iron and steel industry, although, there is a positive impact on few cases of textile industry.

10. The study has been extended to check the impact of the CDR mechanism on the banking sector. The gross NPAs to Gross advances ratio of banks showed an increasing trend from 2010-2018.

11. Restructured loans show an increasing trend from 2011 to 2018. The restructured loan amount of CDR loans has increased from year to year up to 2015-2016. Thereafter, a decreasing trend can be observed.

12. The percentage of Gross NPAs to Gross Advances is as follows: IDBI Bank Limited (27.95%), Indian Overseas Bank Limited (25.28%), UCO Bank Limited (24.64%), United Bank of India (24.1%) and Dena Bank (22.04%).

13. The impact of CDR Loans, Non-CDR loans, Gross NPAs, Interest Income and Non-Interest Income on Return on Assets was tested for the selected sample. It was found that CDR Loans and Gross NPAs have a significant and negative impact on Return on Assets (ROA). Non-Interest Income is also significant and has a positive impact on the ROA of banks.

General Findings from Discussions

Very important and deep insights were obtained from the discussions from the various groups of respondents. These insights, in fact, throw up realities which should be recognized and taken care of, especially by banks, because they are custodians of public money. Moreover, their sensitivity to these realities will result in better lending processes, better monitoring, and better financial health for themselves, as also the entire economy, because they are systemically important, apart from the borrowers. These are presented briefly below:

- Lack of enforceability
- Most of the companies which borrowed excess amounts of money were unable to pay the debt service amount, no matter how much ever extension of time they were given.
- CDR has not been able to identify what is suitable (or) unsuitable debt.
- CDR has not addressed issues related to management inefficiency.

- CDR does not give much importance to the promoters' contribution in the restructuring package.
- Companies are unable to meet the projections of the CDR cash flows, so they are unable to pay back the debt.
- Banks do not provide additional funds.
- During the restructuring process, banks suffer from losses in NPV.
- Promoters do not dilute their equity.
- CDR mechanism is good but implementation part is delayed and it is misused.
- Continued poor performance of companies in textile and iron and steel industries one of reasons is imports from China.
- Support from all the lenders is not good as few banks have security against loans.
- Projections of project are overdrawn.
- Banks also see interest rates in a commercial view not regulatory base and they lend loans with political influence.
- Sectioned additional loans also being used for installment of banks loan only.
- Banks lent to financial unhealthy firms that were the least likely to pay the loan back.
- Slump in economic growth, high borrowing cost which leads to low cash flows of companies.
- In many cases banks do not release funds which were agreed upon in restructuring plan.
- Recast of loans Rs.1.2 lakh crore under corporate debt restructuring scheme has failed since the CDR cell is initiated by RBI, 2001.

- Delay in permissions i.e., land acquisition and clearance from government and institutions are reason to delay in start project and fixed charges are remain same but no cash flows which leads to unable to back loan and those loans becomes NPAs.

8.2 Conclusions

Corporate Debt Restructuring is a financial technique used in assisting corporates to come out of financial distress and to enable reduction in the volume NPA of banks. It helps in increasing the financial performance of corporates and banks

The first objective was to identify reasons for financial distress of selected firms that underwent the restructuring process through the CDR mechanism. Financial factors and operational factors, followed by managerial factors were found to be the main reason for financial distress prior to restructuring.

The second objective of the study was to check the impact of the CDR mechanism on corporates by comparing the financials of selected firms' pre and post the implementation of the restructuring mechanism. The Wilcoxon Signed Rank test was used to check the significant difference in pre and post financials. Financial ratios i.e. Current Ratio, Debt to Equity Ratio, Assets Turnover Ratio, Operating Profit Ratio And Interest Coverage Ratio have been used in the analysis. It was found that there is a significant difference in financials of selected firms and a sharp decline was seen in their performance in the post restructuring period.

The third objective was to study the overall financial health of the firms after a few years of CDR implementation. The Altman Z-score model with multiple discriminant analysis has been used. The study found that out of 74 firms, 11% of firms are in "Safe Zone", 12% are in "Grey Zone" and 51% of the firms are in "Distressed Zone". Overall, only approximately 20% of firms managed to come out from distress.

Further, the study was extended to evaluate industry wise performance of selected firms and compared the results with their industry peers. Wilcoxon Signed Rank test was used to check financials before and after restructuring. Operating Margin and Interest Coverage Ratios have been used as performance indicators. The study found that there is a significant difference in the results with selected firms having performed less than their industry peers. Thus, the corporate debt restructuring mechanism did not help much in improving the performance of firms after restructuring.

The impact of the CDR plan on the banking sector has also been studied. Multiple Linear Regression was used to conclude that CDR loans and Gross NPAs have a significant and negative impact on banks' performance (Return on Assets) whereas Non-Interest Income has a significant and positive impact on their performance. This shows that the increase in CDR loans has led to a decline in various banks' performance.

The factors that strengthen the norms and policies of corporate debt restructuring have been determined to be Responsibility measures, Policy measures, Administrative measures, Evaluation measures and Accountability measures, considered to be most effective.

Finally, the CDR mechanism was found to be largely ineffective on companies as very few firms have been able to recover from financial distress while many of them failed. Due to this, a negative impact was found on the performance of banks.

8.3 SUGGESTIONS

To Companies

1. Debt is a double edged sword. Excessive debt is a burden on any company when cash flow projections are not met. Hence, companies should maintain optimal capital structure and standard norms.
2. Through this study, financial factors have been identified as the main reasons behind financial distress. Companies should, therefore, not use debt for the long term or unauthorized purposes. Investments should not be diverted into other projects and subsidiaries with an intention to make more profits.
3. Companies should have adequate internal control.
4. Top level management must be responsible in reviving a company from financial distress. As suggested in literature, change in senior management may work positively for the performance of the company.
5. Companies should have the right spirit to utilize the assistance of the CDR plan and must be accountable till a firm revives from distress.

To Consortium of Banks

1. Banks should evaluate cash flow projections rigorously prior to the lending process. The consortium of banks or lead bank should appoint a few people to monitor the financials of borrowers.
2. If a company is in financial distress and referred to the CDR cell for restructuring, then the cell must examine whether the debt is sustainable or unsustainable with the help of techno-commercial industry experts. If the debt is sustainable, only then the restructuring process should be implemented.

3. Banks must appoint a member in the board to give suggestions in the decision making of the company being restructured till it comes out of the state of distress.
4. The restructuring process should only be implemented after receiving the contribution from promoters, as prescribed by the CDR cell.
5. The CDR cell must counsel a firm undergoing the restructuring process about the best practices of similar successful industry peers.
6. Banks must examine the financials of borrowers and identify signs of distress in the incipient stage itself.
7. CDR cell should be careful about unsecured creditors being a part of the restructuring process.
8. If debt is sustainable, banks can provide additional funds to assist firms in financial distress.

To Professionals

1. The bridge between banks and companies is the auditor's reports. Reliable audit reports can support in the success of the CDR mechanism. Therefore, it is important for auditors to be ethical.

To Government

1. Government intervention is required for the success of the CDR mechanism and reducing the burden of Non-Performing Assets in the banking sector. The study identified from discussion with participants, one of the reasons for financial distress being delay in obtaining permissions: Legal, Regulatory and Technical. Hence, the Government should be fast and prompt in granting permissions for companies to reach their cash flow projections.

2. RBI must formulate guidelines to provide additional funds if debt is sustainable.
3. RBI must renew the present mechanism, suitable for the present scenario of economic conditions.

The present study concludes that the CDR mechanism has been initiated with the intention to help distressed companies and reduce Non-Performing Assets in the banking sector to bring about a positive wave in the Indian economy, but its implementation has not met or fulfilled the expected levels of success and effectiveness. With the support of RBI guidelines, the right spirit of the participants i.e. companies, banks and professionals can make it a real success.

8.4 LIMITATIONS AND FUTURE SCOPE

The preset study has been taken up with sample of 74 companies and few industries to analyze the effectiveness of corporate debt restructuring on corporate performance. The study analyzed impact of CDR loans on five banks financial performance.

Future studies can be taken up with more number of companies or all the restructured companies through CDR cell and all the banks can be considered to study impact. Corporate Debt Restructuring mechanism can be compared with other mechanism especially with Insolvency and Bankruptcy Code 2018.

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APPENDICES

Questionnaire

Respected Sir /Madam,

I, K. Appa Rao am a research scholar pursuing Ph.D. from University of Hyderabad. The topic is: **"The effectiveness of Corporate Debt Restructuring Mechanism in India: A Study of Select Cases".** As part of my research, I am undertaking a survey on **"reasons for corporate financial distress and CDR effectiveness".** I request you to kindly to spare valuable time and fill in the following questionnaire as it will be very valuable for my research. The information provided by you will be kept confidential and would be used for academic purpose only. Thank you once again.

I. Formulation of CDR plan.

Please mark the most appropriate number of each statement which correspond most closely to your opinion.

(1=strongly agree, 2=Agree, 3=neither agree nor disagree, 4=Disagree, 5=strongly disagree)

1. How CDR plan is formulated?

1.1	Exactly as per the request of the borrower	1	2	3	4	5
1.2	As per the requirement of the bank	1	2	3	4	5
1.3	Banker has taken into considerations the viewpoints of CFO/Board	1	2	3	4	5
1.4	Joint lender forum(JLF)	1	2	3	4	5
1.5	If any other (Specify) ……..					

2. What are the most used methods in the CDR plan. Rank them.

		Rank
a)	Conversion of debt into equity	
b)	Concession in repayment of loan	
c)	Converting the un-serviced portion of interest into term loans	
d)	Waiver of part of interest	
e)	Rescheduling	
f)	Providing Fresh term loan	
g)	Providing fresh working capital borrowings	

II. Reason for financial distress.

3. What are the main reasons for financial distress of companies .Rank them.

		Rank
a)	Financial factors	
b)	Operational factors	
c)	Marketing factors	
d)	Managerial factors	
e)	Technological factors	
f)	Political factors/Economic factors	

Please mark the most appropriate number for each statement which correspond most closely to your opinion.
(1=strongly agree, 2=Agree, 3=neither agree nor disagree, 4=Disagree, 5=strongly disagree)

4. Financial distress is caused by

4.1	Excessive borrowings by the company leading to sub-optimal capital structure	1	2	3	4	5
4.2	Inaccessibility to finance	1	2	3	4	5
	a) For starting the project	1	2	3	4	5
	b) For working capital	1	2	3	4	5
4.3	Short term funds used for long term purpose	1	2	3	4	5
4.4	Investments are diverted into other projects	1	2	3	4	5
4.5	Investments in associates and subsidiaries are much more than the Net worth	1	2	3	4	5
4.6	Lack of effective collection machinery	1	2	3	4	5
4.7	Application of funds for unauthorized purposes	1	2	3	4	5
4.8	Choice of wrong project	1	2	3	4	5
4.9	Delay in commencement of operations due to delay in clearance	1	2	3	4	5
4.10	Lack of focus on implementation of the projects	1	2	3	4	5
4.11	Higher cost of production	1	2	3	4	5
4.12	Less than expected sales	1	2	3	4	5
4.13	Lack of market research	1	2	3	4	5
4.14	Tough competition in the market	1	2	3	4	5
4.15	Unviable business strategy	1	2	3	4	5
4.16	Lack of critical tie ups	1	2	3	4	5
4.17	Lack of adequate control	1	2	3	4	5
4.18	Lack of timely diversification	1	2	3	4	5
4.19	Lack of planning for technology upgradation	1	2	3	4	5
4.20	Changes in policies of government(s)	1	2	3	4	5
4.21	Slowdown in Economy	1	2	3	4	5
4.22	Increase in the interest rates	1	2	3	4	5
4.23	Changes in the value of rupee	1	2	3	4	5
4.24	Delay in obtaining permissions	1	2	3	4	5
	a)Legal	1	2	3	4	5
	b)Regulatory	1	2	3	4	5
	c)Technical	1	2	3	4	5
4.25	If any other (specify)_____					

III. Effectiveness of CDR mechanism

Please mark the most appropriate number of each statement which correspond most closely to your opinion.
(1=strongly agree, 2=Agree, 3=neither agree nor disagree, 4=Disagree, 5=strongly disagree)

5. The following statements are regarding effectiveness of CDR mechanism.

5.1	CDR is the one of the best restructuring mechanism to turnaround from financial distress	1	2	3	4	5
5.2	CDR helps to come out from temporary cash flow problems	1	2	3	4	5
5.3	CDR helps in utilization of the idle assets of the business	1	2	3	4	5
5.4	CDR helps in strengthening the financial health of the borrower	1	2	3	4	5
5.5	CDR helps in reducing Non-performing assets of the bank	1	2	3	4	5
5.6	CDR makes healthy and sound financial system	1	2	3	4	5
5.7	CDR cell delays approval of restructuring package	1	2	3	4	5
5.8	CDR often largely ignores unsecured creditors including banking and financial institutions	1	2	3	4	5
5.9	CDR is Ineffective in helping to mobilize additional finance needed	1	2	3	4	5
5.10	CDR is first a way to reduce NPA provisioning	1	2	3	4	5
5.11	CDR mechanism is not serving interest of all concerned	1	2	3	4	5

IV. Measures for strengthening the mechanism

Please mark the most appropriate number of each statement which correspond most closely to your opinion.
(1=strongly agree, 2=Agree, 3=neither agree nor disagree, 4=Disagree, 5=strongly disagree)

6. The following measures can strengthen the CDR mechanism.

6.1	Bank should use proper project appraisal techniques &Tools at the time of initial sanction of loan	1	2	3	4	5
6.2	Banks should avoid loaning against project cash flow without collateral	1	2	3	4	5
6.3	The top management of the bank should not be given powers to sanction big ticket loans without scientific justification	1	2	3	4	5
6.4	Banks should not be discretionary lending	1	2	3	4	5
6.5	Bank should use proper project appraisal techniques &Tools at the time of CDR plan	1	2	3	4	5
6.6	Companies should have adequate internal control	1	2	3	4	5
6.7	Top management of the borrower should be responsible for reviving unit	1	2	3	4	5
6.8	Bankers should monitor financials of borrower every month	1	2	3	4	5
6.9	Restructuring must be implemented only after promoters contribution comes in cash	1	2	3	4	5
6.10	CDR cell should counsel the borrower on best practices of similar	1	2	3	4	5

	successful companies					
6.11	Banks should agree on Specific and individual responsibilities for monitoring by individual bank	1	2	3	4	5
6.12	Empowering the lender's nominee in the board of the company	1	2	3	4	5
6.13	Concurrent audit should be done till the units are revived	1	2	3	4	5
6.14	Banker should acquire more control over the company by converting debt into equity	1	2	3	4	5
6.15	Promoters should be refrained from promoting new entities until company's exit from CDR	1	2	3	4	5
6.16	Promoters contribution should be increased	1	2	3	4	5
6.17	There may be a need for repeated restructuring in certain industries	1	2	3	4	5
6.18	The eligibility into CDR mechanism outstanding exposure is to be increased	1	2	3	4	5
6.19	Restriction on number of bankers in syndication to prevent dodging by promoter	1	2	3	4	5
6.20	Banks should create own pool of experts to help in monitoring CDR cases	1	2	3	4	5
6.21	CDR should share terms and conditions of CDR proposal to non CDR lender/Suppliers to know how far mechanism is going to affect their interest in the company	1	2	3	4	5
6.22	CDR scheme need to be taken care of unsecured creditors who are not taking part in the CDR scheme	1	2	3	4	5
6.23	There should be Good governance of all participants in CDR Process	1	2	3	4	5
6.24	CDR process should be fast and prompt	1	2	3	4	5
6.25	If any other (Specify)					

6.9 Brief suggestions to strengthen the CDR mechanism?

Organization profile

Organization Name: _____

Industry to which the organization belongs: _____

Age of the company: _____

Size of the company: _____

PEOPLE: International Journal of Social Sciences
ISSN 2454-5899

Appa Rao & Jessica, 2017

Volume 3 Issue 1, pp. 516 - 522

Date of Publication: 21st March, 2017

DOI-https://dx.doi.org/10.20319/pijss.2017.s31.516522

This paper can be cited as: Rao, K., A., & Jessica, V., M. (2017). Corporate Financial Distress – Corporate Debt Restructuring Mechanism in India. PEOPLE: International Journal of Social Sciences, 3(1), 516-522.

CORPORATE FINANCIAL DISTRESS – CORPORATE DEBT RESTRUCTURING MECHANISM IN INDIA

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Abstract

After Recession, corporate was not doing well. There is a situation where the company's cash flow is not enough to pay financial obligation is called Corporate Financial Distress. External and internal factors of an environment are causes for corporate financial distress. The main objective of this paper is to know the causes for financial distress. This study finds that Delay in obtaining permissions, Short term funds used for long term purpose, Slowdown in Economy and Investments are diverted into other projects most important factors for the financial distress of companies. In this situation, Corporate Debt Restructuring Mechanism is a platform for corporate to stop winding up and come out from financial distress. This study finds that 97 out of 530 companies exited successfully come out from CDR Mechanism.

Keywords
Financial Distress, CDR, Corporate, Turnaround

EPRA International Journal of Economic and Business Review

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e - ISSN: 2347-9671

InnoSpace, (SJIF) Impact Factor: 4.618 (Morocco)

ISI Impact Factor: 1.259 (Dubai, UAE)

www.epratrust.com

Date : **05/12/2015**

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Paper ID :**DEC/15/1136**

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This is to certify that, **Mr. K. Appa Rao**, Research Scholar, presented a paper entitled "**Sustainable growth management- Corporate debt restructing**" in PFSB: PPP National Conference 2013, organized by the Department of Management Studies, Indian Institute of Technology Roorkee.

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