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RELAVANCE OF KNOWLEDGE TOWARDS MEASUREMENT OF HUMAN RESOURCES ON INVESTMENT DECISIONS IN SRI LANKA

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ABSTRACT

The success or failure of every organization is based on effective utilization of the enterprise's resources. Accountants much concern physical and financial assets while tend to ignore similar accountability for key element for success of the organization. That is organization's employees. Since Human Assets are one of the most important factors to any of the organization, measuring and inclusion of Human Assets into the financial statement will benefit to the users specially for investors. (Elias N., 1972). According to the literature, investor's decision will be affected by the different variables. Knowledge on human accounting is a key variable which effected to investment decisions and researcher should focused on this matter. (Johanson U. ,1996). But no one empirically tested the Knowledge of the Investor toward Human Resources Accounting Information. Therefore, this study attempts to examine the relevance of knowledge towards measurement of human resources on investment decisions in Sri Lanka.

This study was carried out among 37 corporations that invest in commercial banks registered under CSE. Sample was selected by using the random sampling method. A self administered questionnaire was used for collecting data from the decision makers.

The findings revealed that Knowledge of the Investor towards the measurement of human resources significantly relevant to corporate investor's stock acquisition decisions (0.000) at significance level 0.05. Based upon the responses, null hypothesis was rejected. At the same time Knowledge of the Investor towards the measurement of human resources significantly relevant to corporate investor's stock disposal decisions (0.007) at significance level 0.05.

KEY WORDS

behavioral aspect, investor, Human resources accounting information, Knowledge of the investor

1. INTRODUCTION

Human Resource is now becoming one of the most important assets to any organization in the modern world. Accounting professionals totally ignored this valuable asset until approximately 45 years ago. (Committee on Human Resources Accounting 1974, p. 115, Tomassini L.A, 1977, p. 904). At the same time decision makers exclude the most important factor when they make their particular decisions. According to the traditional point of view, Human Assets exclude by users because of various arguments. The Committee on Human Resources Accounting (1973, p. 171) pointed out that 'While valuable assets exist in the form of the human organization, many believe that the nature of these assets is such that any attempt to quantify them may be unreliable, costly or fruitless'. But during the past few decades, the need to measure human Assets has been discussed extensively. (Likert, 1961, 1967; Hermanson, 1964; Hekimian and Jones, 1967; Brummet, Flamholtz, 1969, 1971a; and Lev and Schwartz, 1971; cited by Hendricks A.,1976) As a result of number of speculative and controversial articles on Human Resources Accounting, different measurement methods have been aroused. Ex. Historical cost or Acquisition cost method, Replacement cost method, Opportunity cost method etc.

External parties have been demanding information on Financial Statements before they make decisions. Disclose each and every item in Financial Statements will be an additional advantage to the decision maker. Since Human Assets are one of the most important factors to any of the organization, measuring and inclusion of Human Assets in to the Financial Statement will be benefit for the users. Details relating to changes of human assets during the period will be shown a clear and correct picture about both the assets position and income of the organization. For example, from the external decision makers' perspective, the ratio of human assets to total assets may be useful to predict the future profitability of the organization. Because it has been found that there is a positive correlation between a firm's investment in human assets and its future profitability. (Brummet, Flamholtz, and Pyle 1968, p. 218,)

Though there appears to be widespread interest in developing concepts and systems for valuing human resources globally, Sri Lankan investors still standing on their traditional point of view. Less identification on this area is the major reason for this situation. Higher education system or standards setters do not provide any theoretical knowledge on this regard. This study therefore, aims to examine the relevance of knowledge towards measurement of human resources on investment decisions in Sri Lanka.

2. LITERATURE REVIEW

An organization today is passing through a phase of transformation with the change and uncertainty in the environment. In any organization human element is the most important input. The success or failure of an organization depends on its human resources. At present more than ever before, the processes of human resource management are facing a complex and rapidly changing environment (Tang 2005). Although corporations have the insight that their most substantial value driver is the company's staff, they do not know how to assign any value to it (Gebauer 2003).

In order to reflect the true value of an organization and to make the standard accounting ratios more meaningful, there is a need to represent the asset value of intangibles in the organizations balance sheet (Sheedy-Gohil 1996). Human resource is considered as one such intangible asset that required to be shown in the balance sheet (Johanson *et al* 1998). "Reporting about the value of an organization is more and more attached to the value of the personnel resources (human resources/human assets) (Gebauer 2003).

Though balance sheets exhibit value related to business transactions, it's unfortunate that the value of human resources is not included in the balance sheet. To find out the productivity of investment in respect of human beings in any Enterprise Human Resource Accounting will be helpful (Batra 1996). Human Resource Accounting (HRA) deals with the measurement of the value of human resources (Gebauer 2003). Human Resource Accounting is also a scaling tool that generates and reports quantitative control information about the contribution of human resources for promoting industrial productivity. It can help management by taking many vital decisions relating to selection, lay-offs, transfers, training, promotion etc (Batra 1996).

In 1973, the American Accounting Association's committee on Human Resource Accounting defined HRA as "the process of identifying and measuring data about human resources and communicating this information to interested parties" Managers have to learn about HRCA models. Thus two types of knowledge have to be improved: knowledge of human resource costs and values or the normal outcome of different human resource measures within the organization; knowledge of models of how to calculate costs, incomes and values (Johanson 1999). Most studies have shown that the second kind of knowledge can be increased by training (Johanson 1999). The first kind of knowledge must be continuously influenced by efficient information systems (Johanson 1999). The study carried out by Johanson and Nilson (1996b) successfully influenced the knowledge of participants by training them on HRCA and by changing information systems (Johanson and Nilson 1996b; cited by Johanson 1999).

HRA represents both a paradigm, a way of looking at human resource decisions and issues, and a set of measures for quantifying the effects of Human Resource Management strategies upon the cost and value of people as organization valued resources (Grojer and Johanson 1998a). The concept and methods of HRA examine what information is necessary and how this information has to be combined to determine the value of human resources (Gebauer 2003).

In today's economy, it is more and more important to reveal information about the values of organizations. Whenever there is a transition of a business share to another owner, the question is about the value of such a proportion of the corporation and therefore about the value of the enterprise in its whole. HRA can serve as a tool to reduce information asymmetries (Gebauer 2003).

In Sweden, there has been a strong and even increasing interest in HRCA in both research and education (Grojer and Johanson 1998a). The School of Business at the Stockholm University teaches students HRCA. A special research institute, Personnel Economics Institute has been established for studies in this area and they have launched the Journal of Human Resource Costing & Accounting.

The biggest challenge in HRA is that of assigning monetary values to different dimensions of HR costs, investments and the worth of employees. Over the years there have been a number of models put forward as a basis for the computation of the monetary value of employees (Dawson, 1994a, Milost, 2007). These models can be categorized into two main approaches. The Cost Approach and the Economic Value Approach Historical or Acquisition Cost Models. Opportunity Cost Model and Replacement Cost Models are main models of cost approach and Flamholtz's Model of Determinants of Individual Value to Formal Organisations, Flamholtz's Stochastic Rewards Valuation Model, The Lev and Schwartz Model and Hekimian and Jones Competitive Bidding Model are main models of Economic Value Approach.

Information disclosed in financial statements of an organization will be geared primarily to external users including investors. (Flamholtz, 1990; Flamholtz, Bullen, Wei Hua, 2002). It is difficult to compare across companies when the measures involve subjectively and considerable use of estimates. Traditional accounting's conservatism has made it difficult for investors to compare Human Assets in firms. Further HRA measure incorporate subjectively, they are very relevant to the real needs of decision makers and investors. (Flamholtz, 1990; Flamholtz, Bullen, Wei Hua, 2002).

Committee on HRA (1973) pointed out the purpose of HRA as 'improve the quality of financial decisions made both internally and externally concerning an organization.' For external users, particularly investors could benefit from HRA through the provision of information on the extent to which the Human assets of the organization have been increased or have diminished during the period. (Report of the Committee on Human Resource, 1973).

Stakeholders such as shareholders, investors, creditors, debtors ect. used company's annual reports before they make decisions. In this situation HRA will act as a tool of enhancing decision making degree. (Flamholtz, Bullen, Wei Hua, 2002). Management can use HRA Information to analyze the effects of decisions such as job cuts, layoffs, hiring, rehiring qualified employees ect. and to understand the long-term implication and hidden cost of such decisions. More important role of HRA is monitoring and quantifying the cost and the value of the people from the Human Resource perspective and it delivers the message as people are more valuable organization resources. (Flamholtz, Bullen, Wei Hua, 2002). This will affect the morale of the employees and ultimately, it will affect to the productivity.

HRA Information can demonstrate that investment in Human Resource which will improve the future profitability of the company. (Brummet, Flamholtz, and Pyle 1968, p. 218,). This information may useful to the Share holders of the company and potential investors, since it imply the future improvement of shareholders wealth.

It seems clear that inclusion of Human Resources Accounting Information to the Financial Statement will enhance the investors' opportunity to make better decisions specially in developing countries like Sri Lanka.

3.1 RESEARCH PROBLEM

According to an experiment done by Nabil Elias (1972) to determine whether different decisions would result if human assets accounting data were incorporated into the financial statement, he founded that, inclusion of HA statement affect the decisions of the advanced accounting students and the finance students but did not affect to the intermediate accounting students. Further, Elias tried to find the back ground variables that may cause decision to be different. Except the variable of the 'degree to which advising investors constitutes part of the job', none of the given variables (familiarity with human assets accounting, business experience, level of education, recency of education, accounting professional courses completed, age, experience with buying and selling stock, the degree to which consulting or advising investors constitutes part of the job) yielded a significant result. However, at the end no conclusion could be drawn about the effect of these variables on decision making because the study did not observed consistent about the pattern.

According to the James A Hendricks (1976) in his study of 'the impact of Human Resources Accounting Information on stock investment decision, he has found that stock investment decisions are affected by the addition of HRA information to conventional accounting information. Further, this study attempts to answer the question of "why HRA information might affect stock investment decision?" According to findings, experience of the investor is the only variable related to the decision difference. Other variables such as age, number of courses completed in accountancy and finance, number of years of experience, employment status, the extent to which advising investors or evaluating stock is part

of the job, number of stock transaction completed, the number of human assets articles read, and the number of human assets accounting lectures or class meetings attended were become less significant.
In this context researches have expressed their findings of impact of valuing and inclusion of human resources on investment decisions and some were addressed the variables affect different kind of decisions.
In this setting the research problem is as follows.
"Does knowledge of the investor towards measurement of Human Resources influence decision makers for the acquisition and disposal of shares (stocks) in the banking sector in Sri Lanka?"

3.2 PROBLEM JUSTIFICATION

Presently, 235 companies representing 20 sectors listed at the Colombo Stock exchange in Sri Lanka. Out of this 235 companies, Commercial Bank of Ceylon Ltd, Hatton National Bank Ltd, Nations Trust Bank Ltd, Pan Asia Banking Corporation Ltd, Sampath Bank Ltd, Seylan Bank Ltd have registered and active in Sri Lanka as registered commercial banks in CSE. Employees of the banks can be identified as the most valuable assets of the bank. Therefore, the bank should manage its people in a manner which contribute to the success. Most of the banks have been realized the importance of the people factor and setting their policies which place their people at the centre. (Commercial Bank Annual Report, 2007)
In this setting, it is difficult to ignore people who work in banks at the time the investor's making their investment decisions.
To make a better investment, an investor should consider all information including details of employees. Because the information relating to the fluctuations of the employee will be benefited to gain a real picture of the organization. Unless they consider the information relating to human assets for their decision making, they automatically under value the assets of the company when they make investment decisions.
In the Sri Lankan scenario, some banks measure human assets and include in their annual reports (Commercial Bank). But usage of this Information in case of decision making by the investor is questionable.
There has been no of research conducted on this area internationally. But it is difficult to find the prior research in this area in Sri Lanka specially in the banking sector. There is a vast gap in this area. Therefore this study will be contributed to fill that gap to a certain extent and this effort will be researcher's original attempt.

4. OBJECTIVES OF THE STUDY

Major objective of the study is to examine the relevance of knowledge towards measurement of human resources on investment decisions in Sri Lanka.

5. SIGNIFICANCE OF THE RESEARCH

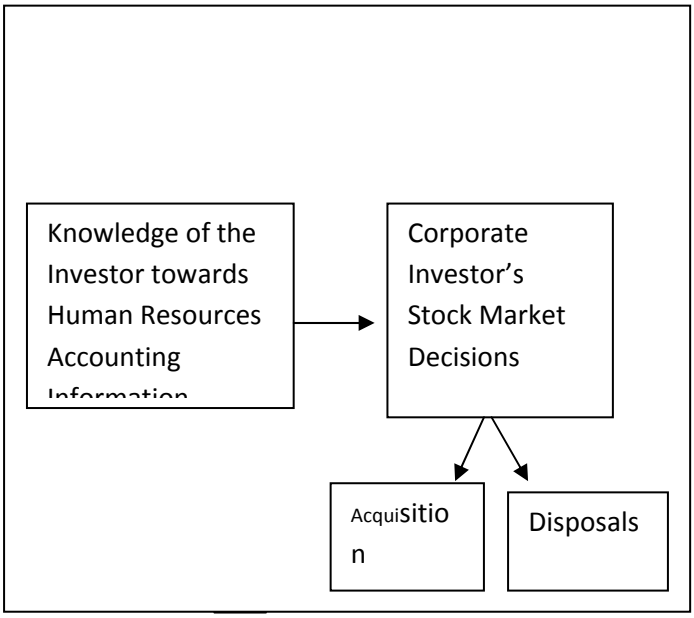
Traditional thinking pattern of the investors was to analyze the financial statement which is included in the annual report of the company. Findings of the study will be enable the investors to go beyond from their traditional thinking pattern on how to measure the future performance of the company by using different information including information on human resources of the company . Further, findings of the study will help investors to make strategic decisions specially in the case of investment.
After having a deep understanding about the value of the human assets, Central Bank can use the information to set the human resource development index which can compare with index of the other countries. This will help to change the government policies such as education policies according to the international standard. Further, this will be benefit to the government to implement the new tax policy on organizations in the future.
Building company-wide accountability is a key element and it makes a business sustainable over a long period of time. Society is a major party that organization should be accountable. The study will help society to gain knowledge about the value of the accounting information which used for the different type of decision.

6. METHODOLOGY

This study is based on investigating the relevance of knowledge towards measurement of human resources on investment decisions in Sri Lanka rather than establishing definite cause – effect relationships among the variables. The type of the investigation of this study was therefore correlation rather than causal. Because this study attempted to analyze the relationship between the dependent variable and independent variables, this study was analytical or in hypotheses testing in nature or purpose. Time horizon of the study was cross sectional due to the reason that the data collection was done over a period of several weeks. The unit of analysis is the organization. In order to achieve objectives of the study, a self administered questionnaire was used to collect data. Hence, the researcher interference on normal flow of event was minimal.
For the purpose of this study a sample of corporate investors selected among 'Top 20 registered shareholders' of six commercial banks registered under Colombo Stock Exchange such as Commercial Bank of Ceylon Ltd, Hatton National Bank Ltd, Nations Trust Bank Ltd, Pan Asia Banking Corporation Ltd, Sampath Bank Ltd, Seylan Bank Ltd. For this purpose, researcher has eliminated common corporate investors and individual investors from the list of 'Top 20 registered share holders'.
It was considered as appropriate to use the random sampling technique. Based on that, sample was randomly selected from the corporate investors who acquire and dispose shares in commercial banks (registered under CSE) in Sri Lanka.

6.1. THEORETICAL FRAMEWORK

Investors point of view, there is a main variable which have an impact on investor's decision making. Knowledge of the investor towards HRAI. (Johanson 1999, Masood, 2005, Jensen M.R.H. et al, 2006, David W. et al, 2007). Conceptual framework of the study is as follows.
Conceptual Framework



(Source: compiled by the author)

6.2.HYPOTHESES

$H1_A$. Knowledge towards measurement of human resources significantly relevance to stock acquisition decision in Sri Lanka.
$H2_A$. Knowledge towards measurement of human resources significantly relevance to stock disposal decision in Sri Lanka.

7. DATA ANALYSIS AND PRESENTATION

7.1Analysis of the Reliability
Cronbach's Alpha Test
The Cronbach's Alpha test was examined in order to test the reliability of the questionnaire used to collect the data. The results of Cronbach's Alpha test are given in the Table 1.0 which suggests that the internal reliability of instrument is very high.

Table 1.0 Cronbach's Alpha Coefficients

Cronbach's Alpha	0.883

(Source: Survey findings)

7.2. INFERENTIAL STATISTICS

7.2.1 CORRELATION OF DATA

Correlation or association between variables- Knowledge towards measurement of human resources and stock acquisition decisions and stock disposal decisions are as follows.

Table 1.1: Correlations between variables- KOIN and investor's stock acquisition decisions

	AVKOIN	INVACQ
AVKOIN	1	
INVACQ	.806(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
(Source: Survey findings)

According to the table 1.1, High positive correlation can be identified between Knowledge of the Investor towards measurement of Human Resources and stock acquisition decisions. That is 0.806 at a significant level of 0.01.

Table 2: Correlations between variables- KOIN and investors stock disposal decisions

	AVKOIN	INVDIP

AVKOIN	1	
INVDIP	.436(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
(Source: Survey findings)

As shown in the table 2, correlation between variable- Knowledge of the Investor towards measurement of Human Resources with Investors stock disposal decision shows positive relationships as 0.436 respectively.

7.3 REGRESSION ANALYSIS

Hypotheses *1*

$H1_0$. Knowledge towards measurement of human resources not significantly relevance to stock acquisition decision in Sri Lanka.

$H1_A$. Knowledge towards measurement of human resources significantly relevance to stock acquisition decision in Sri Lanka.

The statistical format of simple regression model built to test the above hypothesis is as follows.

$Y= \beta_0 +B_1 X_1$

Interpretation of model

Y= Investors decision to acquire the stocks

B_1 =Y intercept

β_1=Slope coefficient- Change in Y due to a corresponding change of one unit of X.

X_1=KOIN

Table 3 reflect the simple linear regression analysis used to test the hypothesis 1.

Table 3 Model Summary – hypothesis 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.806(a)	.650	.640	.32399

a Predictors: (Constant), AVKOIN
(Source: Survey findings)

According to the table 3, 65% of the variation in Investors decision to acquire the stocks was explained by associating the variable with Level of Knowledge of the Investor towards Human Resources Accounting Information. At the same time only a small margin of error, e = .324 is involved in the regression line.

Table 4 ANOVA(b) – hypothesis 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.819	1	6.819	64.959	.000(a)
	Residual	3.674	35	.105		
	Total	10.492	36			

a Predictors: (Constant), AVKOIN
b Dependent Variable: INVACQ
(Source: Survey findings)

As per the table 4, the *F*-test revealed a relative magnitude of the regression (explained by the regression) and the residual (unexplained by the regression), F (1, 35) = 64.959. Table 4 reveals the significance is 0.000, which is lower than 0.05. Accordingly, null hypothesis will be rejected and the alternative hypothesis will be accepted. So it can be said that there is a significant relationship between Knowledge of the Investor towards measurement of Human Resources and corporate investor's stock acquisition decision at a significant level of 0.05.

Hypotheses *2*

$H2_0$. Knowledge towards measurement of human resources not significantly relevance to stock disposal decision in Sri Lanka.

$H2_A$. Knowledge towards measurement of human resources significantly relevance to stock disposal decision in Sri Lanka.

The statistical format of simple regression model built to test the above hypothesis is as follows.

$Y= \beta_0 +B_2X_2$

Interpretation of model

Y= Investors decision to dispose the stocks

B_2=Y intercept

β_1=Slope coefficient- Change in Y due to a corresponding change of one unit of X.

X_2=KOIN

Table 5 reflect the simple linear regression analysis used to test the hypothesis 6.

Table 5 Model Summary – hypothesis 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436(a)	.190	.167	.66022

a Predictors: (Constant), AVKOIN
(Source: Survey findings)

According to the table 5, 19% of the variation in Investors decision to acquire the stocks was explained by associating the variable Knowledge of the investor towards measurement of Human Resources. Further the regression line involved an error of, e = 0.660.

Table 6 ANOVA(b) – hypothesis 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.585	1	3.585	8.224	.007(a)
	Residual	15.256	35	.436		
	Total	18.841	36			

a Predictors: (Constant), AVKOIN

b Dependent Variable: INVDIP

(Source: Survey findings)

As per the table 6, the *F*-test revealed a relative magnitude of the regression (explained by the regression) and the residual (unexplained by the regression), F (1, 35) = 8.224. Table 6 reveals the significance is 0.007, which is lower than 0.05. Accordingly, null hypothesis will be rejected and the alternative hypothesis will be accepted. So it can be said that there is a significant relationship between Knowledge of the Investor towards measurement of Human Resources and corporate investor's stock disposal decisions at a significant level of 0.05.

Table 7 -Summary of hypothesis testing

Investors decision / Variables	Investors acquisition decision	Investors disposal decision
KOIV	significantly relevant	significantly relevant

(Source: Compiled by the author)

8.CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

This study was carried out to answer the question of "Does knowledge of the investor towards valuation of Human Resources influence decision makers for the acquisition and disposal of shares (stocks) in the banking sector in Sri Lanka?"

Researcher considered one underline independent variable knowledge of the Investor towards measurement of Human Resources. Findings of the study revealed that knowledge towards measurement of human resources significantly relevant to investor's for the acquisition and disposal of shares (stocks) from the banking sector in Sri Lanka.

8.2 RECOMMENDATIONS

Internationally several attacks on the issue of "ignoring the most valuable assets, key element of the success of an organization" is currently under way. International Accounting Standards Committee and other authorized accounting bodies urgently recommended to give serious consideration to adding the concept of measuring human resources to the current agenda. But, Sri Lanka still standing on their traditional accounting system. Therefore, following recommendations can give in order to align with the international standard.

Short term recommendations

Educate the highest people (board of directors, managerial levels ect.) in the organizations regarding importance of having Human Resources Accounting Information System.

Attitude regarding 'Human Resource Accounting' of accountants should be changed.

Necessity of having relevant quantitative and qualitative disclosures regarding Human Resources Accounting in the financial statements should be stressed out.

Knowledge of the accountants should be improved by the way of seminars, workshops, short term training ect. Here, two types of knowledge have to be improved.

Knowledge of human resources cost and values or the normal outcome of different human resource measures within the organization.

Knowledge of the models of how to calculate costs, income and values

Long term recommendations

Examination of implications associated with incorporation of Human Assets data as part of conventional accounting system through further research and surveys ect. .

"Human Resources Accounting" should be included in the education system at university level and professional level.

Include terms about Human Resources Accounting in Sri Lankan company law.

Introduce Human Resources Standard (Accounting and Auditing) locally.

Introduce legal requirements regarding Human Resources Accounting.

Attention should be focused on developing software on Human Resource Accounting Information System.

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CORPORATE GOVERNANCE AND FINANCIAL DISTRESS IN THE BANKING INDUSTRY: A CASE OF NIGERIAN ECONOMY

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ABSTRACT

The Nigerian banking industry occupies a major segment in Nigerian economy of which the growth and development depends on the success of the industry. The industry has contributed in no small measure to the development of the national economy from pre-independence to date. However; the industry has been experiencing a major problem in the area of financial distress. This cankerworm has resulted into the liquidation of some institutions in the economy, investors have lost their investments, depositors money have become irrecoverable which other stakeholders have been adversely affected. A critical issue which is yet to be properly addressed by the operators and regulatory authorities is the problem of corporate governance which has negatively impacted the interest of investors, depositors and stakeholders. The main objective of this paper is to evaluate the relationship between corporate governance and financial distress with a view to installing sound corporate governance in the industry. The work is empirical, descriptive and exploratory .Multivariate Analysis of Variance statistical model was used to analyze the result of the primary data while multiple linear regression analysis was adopted in analyzing the secondary data. The findings were that poor corporate governance in the system is the major factor that has given rise to the financial distress in the banking industry, even after reformation and consolidation that took place. The paper recommends the full recognition of shareholders interest and the application of Organization for Economic Cooperation and Development (OECD) code of corporate governance in Nigerian banking industry. Other recommendations are that the banking institutions should fully comply with fiscal and monetary authorities, display transparency in their reporting system while the regulatory authorities should automate their supervisory systems whereby all banking institutions are linked to CBN and NDIC management information system.

KEY WORDS

Accountability, Distress, Evaluation, Governance, ,Transparency.

INTRODUCTION:

The banking sector is part of Nigerian financial system and financial system refers to the totality of the regulatory and participating institutions, including financial markets and instruments involved in the process of financial intermediation. The major objectives of investing in the banking sector are to provide financial services to the economy and earn compensatory returns on capital employed. The sector is the enabling hub of national and global payments system by facilitating trade transactions within and amongst numerous national, regional and international economic units and by so doing, it enhances commerce, industry and exchange. The Banks and Other Financial Institutions Act no 25 of 1991 defines a bank as one licensed under the Act and banking business as the business of receiving deposits on current, saving or other similar account and pay and collecting cheques.This sector is the channel for effective implementation of monetary and fiscal policy measures designed to achieve stated objectives.Chukwudire (2004:15) analyzed the importance of this sector to the development process of Nigeria which is made more apparent now that the economic reform process is encouraging less of the public sector and more of the private sector. In performing its various functions in the enabling environment provided by the government, fluctuating fortunes occasioned by a number of challenges resulting in a barrage of criticisms and consequent near loss of public confidence. Some of the challenges are policy induced like the effect of the prudential guidelines; others are competition, hostile operating environment, ethical issues, ineptitude of management and board which culminated into the problem of very poor corporate governance.

CONCEPT OF CORPORATE GOVERNANCE:

Corporate governance refers to the control of corporate policy through the power legally vested in a group or groups of people to chart a course of action to be followed by the organization in areas of fundamental importance to its survival, prosperity and proper functioning (Egwuonwa,1997).It encompasses the mode of structure, the power that determines the rights and responsibilities of the various group involved in running the organization, the legitimacy expectation of the business, the method of operating and the overall accountability management and the directors. Corporate governance as a concept has also been viewed overtime from these two perspective: "a narrow one in which it is viewed merely as being concerned with the structures within which a corporate entity or enterprise receives its basic orientation and directory and a broad perspective in which it is regarded as being the heart of both a market economy and a democratic society. The narrow view perceives corporate governance in terms of issues relating to shareholder protection, management control and the popular principal-agency problems of economy theory (Oyejide and Soyibo, 2001). Corporate governance looks at the institutional and policy framework for corporations from their very beginnings in the entrepreneurship, through their governance structures, company law, privatization, to market exit and insolvency. Good corporate governance therefore is the set of rules and practices that govern the relationship between the managers and shareholders of corporations as well as other stakeholders like employees, creditors, tax authorities, trade unions, suppliers and other public authorities. In other words good corporate governance is all about proper conduct of the affairs of the business. The

objective of corporate governance is to achieve business excellence and enhance shareholder value, while not neglecting the need to balance the interest of all stakeholders.

The four pillars of corporate governance are accountability, fairness, transparency and independence and they play out to prevent corporate collapse. These four pillars are key attributes of good corporate governance which the banking industry must cultivate with new zeal in order to provide stakeholders with the necessary information to judge whether their interests are being taken care of. Central Bank of Nigeria (CBN) asserted that there are many deficiencies in the information disclosed, particularly in the areas of risk management, risk concentration, performance measures which need to be addressed. Central Bank of Nigeria asserted in their Corporate Governance code that "Financial scandals around the world and the recent collapse of major corporate institutions in the USA and Europe have brought to fore, one again the need for the practice of good corporate governance, which is a system by which corporations are governed and controlled with a view to increasing shareholders value and meeting the expectations of other stakeholders. For the financial industry ,the retention of public confidence through the enthronement of good corporate governance remains of utmost importance given the role of the industry in the mobilization of funds, the allocation of credit to the needy sectors of the economy ,the payment and settlement system and the implementation of monetary policy,"

Central Bank of Nigeria highlighted the weakness in corporate Governance of banks in Nigeria to include the following:

a. Disagreement between the Board and Management giving rise to Board squabbles.

B .Ineffective Board oversight functions.

c. Fraudulent and self-servicing practices among members of the board, management and staff.

d. Overbearing influence of Chairman or MD/CEO, especially in family-oriented banks.

e. Weak internal controls.

f. Non-compliance with rules,laws and regulations guiding banking business.

g. Passive shareholders.

h. Poor risk management practices resulting in large quantum of non-performing credits including insider-related credits.

FOCUS:

This paper focuses on the phenomenal financial distress in the industry occasioned by very poor corporate governance in the Nigerian banking industry. This phenomenal distress has led to the liquidation of many banking institutions, lost of deposits and investments by many investors and loss of confidence by the general public from pre-independence to date. The statistic below supports this discovery:

Table 1 Number of Liquidated distressed banks in Nigeria

Sno	Item	No of banks
1	Pre-independence	22
2	1992	3
3	1994	4
4	1998	26
5	2005 Consolidation	14

Source: Central Bank of Nigeria 2002, 2006.

The following post-consolidation effects occurred from poor corporate governance.

a. On January 5, 2007, Central Bank of Nigeria sacked the board and management of Spring Bank plc for technical distress and falsification of mergers and acquisition reports.

b. On March 10,2008 Central Bank of Nigeria sacked the Managing Director of Wema Bank plc for technical distress and lack of transparency in reporting.

c .On August 12,2009,the Central Bank of Nigeria sacked the Managing Directors of the following banks for technical distress in their institutions: Intercontinental Bank Plc.,Afribank Plc., Finbank Plc.,Oceanic bank Plc.,and Union bank Plc.

d. In October 2009, the Central Bank of Nigeria sacked the Managing Directors of the following banks; Spring bank Plc, Equatorial bank limited and BankPHB Plc for technical distress discovered in their institutions.

e. Central Bank of Nigeria had to inject N620billion into these banks as bail-out capital until they would recapitalize.

Sanusi (2009) stated that the removal of the banks' chiefs was due to the excessive high level of non-performing loans, which was attributable to poor corporate governance practices, lax credit management practices.Sanusi stated further that the problem of the banks was that they were built around single personalities which weakened corporate governance.

The objectives of this paper are two-fold:

1. To evaluate the relationship between corporate governance and performance, this will positively impact sustainability and stability of business in the banking industry.
2. To assess corporate governance as determinant factor for corporate existence to ensure increased capital, liquidity, profitability and efficiency in resources management in the banking industry.

The key research questions that are attributable to proffering solution to this problem are:

1. How can corporate governance impact corporate existence to enhance the increase in capital, liquidity, profitability and efficiency in resources management?
2. Does corporate governance have any relationship with sustainability, stability and performance in the banking industry?

RESEARCH HYPOTHESES:

Two hypotheses for this work were formulated in null forms and tested statistically.

Hypothesis 1: Corporate governance, strategic planning and performance do not affect sustainability and stability in the banking industry.

Hypothesis 2.Corporate governance is not a determinant factor for corporate existence and has no positive impact on performance for capital, liquidity, profitability, asset quality, dividend paid and tax paid in the banking industry.

LITERATURE REVIEW:

Chukwudire (2004:16-18) asserted that though the board has the primary responsibility, best results are achieved through collaborative governance-involving all interested parties. Good corporate governance emphasizes the need for transparency, full disclosure, fairness to all stakeholders and effective monitoring of the state of corporate affairs. That recent corporate scandals at the national and international levels have brought issues of corporate governance to the fore. Examples of such scandals include the wholesale liquidation of some banking institutions in Nigeria. In consequence, the minds of governments, regulators, investors, companies and the general public are agitated by the level of weaknesses in the corporate governance systems and the need to address the issue. He further explained that the organization for Economic Cooperation and Development (OECD) pioneered the work on the establishment of a code of best practices for corporate governance. In May 1999, OECD issued the principles of corporate governance, which have been accepted as the benchmark for corporate governance by both members and non-members. The principles as enumerated by the OECD are a guide to policy makers, regulators and market participants who desire to improve the legal, institutional and regulatory framework that underpins corporate governance.

The highlights of OECD guidelines are:

a. Ensuring the basis for an effective governance framework which should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.

b. The rights of shareholders and key ownership functions which the corporate governance framework should protect and facilitate the exercise of shareholders rights.

c. The equitable treatment of shareholders which the framework should treat so as to have equal opportunities to obtain redress for violation of their rights.

d. The role of stakeholders in corporate governance which should be established either by law or through mutual agreement; and encourage active cooperation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.

e. Disclosure and transparency which should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation,performance,ownership and governance of the company.

f. Responsibilities of the Board which should ensure the strategic guidelines of the company, the effective monitoring of the management by board, and the board's accountability to the company and to shareholders.

Oditah (2009:27-31) highlighted that there are three principal corporate governance structures which are: The Board of Directors which is entrusted to the care and management of the board of directors and the management of the company. In practice the board delegates its management power and function to the executive management; the shareholders in general meeting who are supposed to participate in the governance of their company by attendance at infrequent general meetings principally the annual general meeting which must occur every 15months. Their roles are as stated in section 214 of Companies and Allied Matters Act (CAMA) 2004 as amended. The third composition is the Audit committee whose functions are set out in section 359 sub-section 6 of CAMA and include ascertaining whether the accounting and reporting policies of the company accord with legal requirements and agreed ethical practices and reviewing the effectiveness of the company's system of accounting and internal control. By sections 279 to 283 of CAMA, the roles of the audit committee are clearly spelt out.

Sanusi (2010) explained that the Nigerian banking sector witnessed dramatic growth post-consolidation. However; neither the industry nor the regulators were sufficiently prepared to sustain and monitor the sectors explosive growth. Prevailing sentiment and economic orthodoxy all encouraged this rapid growth, creating a blind spot to the risks building up in the system. He asserted that prior to the crisis, the sentiment in the industry was that the banking sector was sound and growth should be encouraged. The International Monetary Fund (IMF) endorsed the strength of the banking system to support the growth. However, the sentiment proved misplaced due to some independent factors principal among which is major failures in corporate governance of banks. That the huge surge in capital availability occurred during the time when corporate governance standards at banks were extremely weak.Conolidation created bugger banks, but failed to overcome the fundamental weakness in corporate governance in many of Nigerian banks. Some banks were engaging in unethical and potentially fraudulent business practices and the scope and depth of these activities were documented in CBN examinations. He stated further that governance malpractice within banks, unchecked at consolidation became a way of life in large parts of the sector, enriching a few at the expense of many depositors and investors. Corporate governance in many banks failed because boards ignored these practices for reasons including being misled by executive management, participating themselves in obtaining un-secured loans at the expense of depositors and not having the qualifications to enforce good governance on bank management.

METHODOLOGY:

The work **is** empirical, descriptive and exploratory and centered on financial distress in Nigerian banking industry. Hence, Nigerian banking industry is the population for the study while the universal banking sector of the industry and the five regulatory authorities in the industry were chosen as the sample representatives. The 24 universal consolidated megabanks, the two supervisory authorities i.e. Central Bank of

Nigeria and Nigerian Deposit Insurance Corporation, the two professional bodies that regulate ethics in the industry i.e. The Chartered Institute of Bankers on Nigeria and The Institute of Chartered Accountants of Nigeria, and the capital market regulatory authority i.e. The Nigerian Stock Exchange were the sample representatives in the industry. Primary and secondary data were used for this work. The primary data was obtained through corporate questionnaires distributed to each sample representative while the secondary data was collated using performance indices of the banks from 1998 to 2007.Macro data was obtained from Central Bank of Nigeria, Nigeria Deposit Insurance Corporation and Nigerian Stock Exchange for the following bank performance indices used for the analysis: Capital, Asset, Profit before tax, Liquidity, Dividend paid and Tax paid. 1998 to 2007 constitute data of 89banks before 2005 consolidation exercise and for 24consolidated banks after consolidation in order to get accurate result and for objectivity. Multivariate Analysis of Variance (MANOVA) was adopted to analyze the primary data while Multiple Linear Regression analysis was used to analyze the secondary data.

For the analysis of the primary data to satisfy MANOVA requirement, the banking institutions that constitute the sample representatives was divided into three groups with seven research questions to solve the problem of poor corporate governance and financial distress. The institutions were segmented as follows:

Type of bank	Criteria	Grade/Score
Very Strong bank	Profit before tax of N20miilion And above	3
Strong bank	Profit before tax of N10million To N19million	2
Slightly Strong bank	Profit before tax of N1millon To N9million	1

Each research question was taken as dependent variable, while the banking institutions were regarded as independent variables.

ANALYSIS OF RESULTS:

PRIMARY DATA:

Out of the twenty nine corporate questionnaires administered, twenty eight were returned representing 96.55per cent response rate. This was considered adequate for the purpose of the research work.

DESCRIPTIVE STATISICS:

From the table 1 below, the field result of question 1 shows 100percent in total agreement that corporate governance is a determinant factor for corporate existence. This reflects in the high mean of 4.6429 and below one scale point standard deviation of .4880.This shows that corporate governance cannot be separated from corporate existence. With the second question drawn in a negative form, 75percent in strong disagreement with a reasonable mean of 2.23857, and a below one scale point standard deviation of .5345, it shows that there is a strong relationship between corporate governance and financial reporting because shareholders are interested in performance and leadership of the organization as this is the only way that confidence can be built for stability in business and for which distress can be addressed.

The result of the third research statement shows that 96.4percent are in total agreement with the opinion. With a mean of 4.6071 which is reasonable and high and a below one scale point standard deviation of 0.5669,it clear shows therefore that poor corporate governance can result into downturn in business, distress and effectual liquidation of the business. For question four field result,92.9 percent response were in total disagreement with the content of the question. With a reasonable mean of 2.5714 and a below one scale point standard deviation of .6441,the result shows that corporate governance cannot be separated from sustainable growth. Therefore there is a strong relationship between corporate governance and sustainable business growth. The result of question five reflects that 96.5percent supported the content of the research question with a mean of 4.4643 and a below one scale point standard deviation of .6929.This shows that there is homogeneity between boardroom upheavals and crisis in the banking institutions which in effect will have a strong negative impact on business performance. This shows that good corporate governance will bring stability into the board which in effect will enhance customers' patronage and expansion of business. The sixth research statement in negative form shows that 82.1percent were in total disagreement. With a reasonable mean of 2.6071 and a standard deviation of 0.8751 that is below one scale point, it shows that good corporate governance will enhance the safety of shareholders investment and depositors' money as the two variables cannot be separated from each other. The field result of the seventh question shows that 95percent were in agreement with the research statement. The mean is 4.7500 which is reasonable and high and a standard deviation of 0.4410 which is below one scale point. The analysis shows that there is a strong relationship between consistence in board constitution ,knowledge of the operating environment and growth/expansion of business in the banking industry .With afore analysis, it shows there is a strong relationship between corporate governance and performance for business sustainability and stability that will resolve financial distress in the banking industry.

TABLE 2
This is to evaluate the relationship between corporate governance and performance for business sustainability and stability in the banking industry.

	MEAN	SD	SA	A	DA	SDA	UD
[1] Good corporate governance is a determinant Factor for corporate existence to ensure increased Capital, liquidity, profitability and efficiency in Resources management, absence of which will bring collapse of business in the organization.	4.6429	.4880	64.3%	35.7%	0%	0%	0%
[2] There is no relationship between corporate Governance and financial reporting as stakeholders in the business are not concerned about who leads and manage the organization.	2.2857	.5345	0%	3.6%	21.4%	75%	0%
[3] Poor Corporate governance can result into Downturn in business, distress and effectual liquidation of the business	4.6071	.5669	64.3%	32.1%	3.6%	0%	0%
[4] The sustainable growth in the business of a banking institution can not be determined by the type of corporate governance in operation.	2.5714	.6341	0%	3.6%	53.6%	39.3%	3.6 %
[5] Boardroom upheavals and crisis in the banking Institutions have very strong negative impact on Customers patronage and expansion of business, and this can be attributed as one of the major causes of financial distress in the banking industry.	4.4643	.6929	53.6%	42.9%	0%	3.6%	0%
[6] The shareholders lost of their investments and depositors lost of their deposits in the liquidated banks can not be attributed to poor corporate governance.	2.6071	.8751	3.6%	10.7%	32.1%	50.0%	3.6 %
[7] Consistence in the constitution of the Board of Directors and knowledge of the operating environment by the directors motivate the growth and expansion of Business.	4.7500	.4410	75.0%	25%	0%	0%	0%

TEST FOR HYPOTHESIS 1:
Corporate governance, strategic planning and performance do not affect sustainability and stability in the banking industry.

In addition to the descriptive statistics, four tests using multivariate analysis of variance were computed to determine the position of the hypothesis:

i.Multivariate test: This is to test the significant differences within the groups on a linear combination of the dependent variables if any of the results obtained is less than .05.The multivariate test shows the following results: Pillar's Trace=0.909;Wilk's Lambda=0.924;Hotelling's Trace=0.937 and Roy's Largest Root=.795.None of the test is below .05signicant level. This shows that the interrelationship between the seven dependent variables and the three groups of banks is collinear and homogenous.

ii. Between Subject Ettects: Bonferroni adjustment model was adopted to obtain a higher alpha level to determine if the significant results of the seven variables will be lower than .05. All the seven dependent variables show significant level of each higher than .0072 upper alpha level indicating that the dependent variables fit the same way and hang together in solving the problem of distress in the three groups of banks.

iii. Comparing group means: In comparing the group means to determine if there is significant difference in the mean of the independent variables as to the suitability of the dependent variables for decision making in solving the problem of distress, it was discovered that in each of the seven dependent variables, the mean differences between the very strong banks, strong banks and slightly strong banks is not significant. In each case the difference is below .5 and they range between 0.018 and 0.402. This shows that all the seven dependent variables are suitable and fit together to take decision in implementing good corporate governance to resolve the problem of financial distress in the three groups of banks.

iv.Levene's test of equality of error of variance. At the significant level of .05,the group significant level is 2,471 and each dependent variable has an alpha level above .05.With the degree of freedom of 2 for the independent variables and 3 for dependent variable, the F-test for the group is 11.71 which is above the tabulated of 3.38.

With the four results obtained, it is concluded that the null hypothesis be rejected while the alternate is accepted. This shows that corporate governance, strategic planning and performance affect sustainability and stability in the banking industry.

TEST FOR HYPOTHESIS 2:

Corporate governance is not a determinant factor for corporate existence and has no positive impact on performance for capital, liquidity, profitability, asset quality, dividend paid and tax paid in the banking industry.

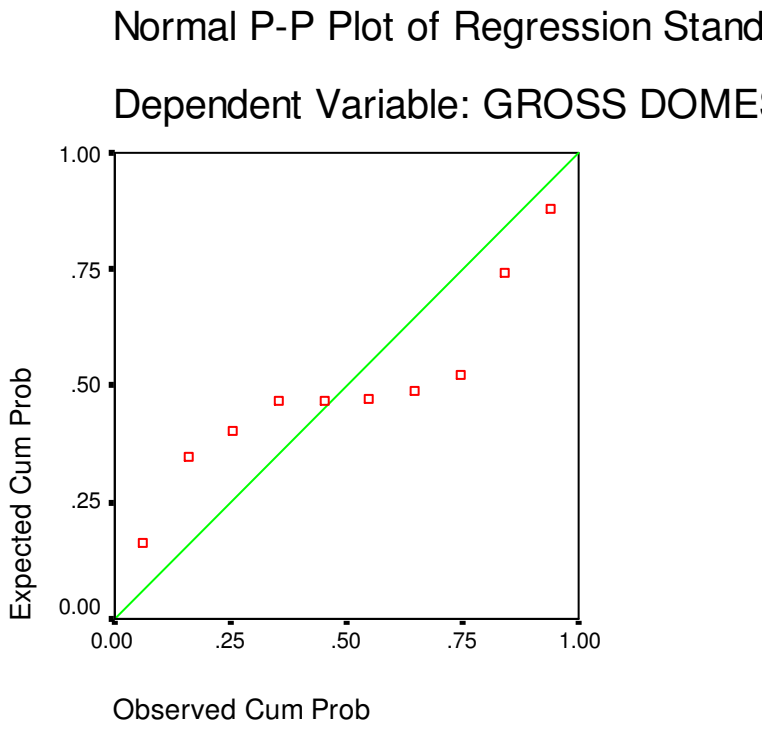
The macro secondary data obtained was used to analyze and test for this hypothesis. The performance indices of the banks for 10 years were analyzed against the Nigeria Gross Domestic Product (GDP) for the period. GDP was taken as the dependent variable while the six performance indices of capital, asset, profit, liquidity, dividend paid and tax paid were regarded as independent variable to show whether there is co-movement between them. Multiple Linear Regression analysis was used to compute the data. Analysis below shows the findings:

1.Correlations:The results obtained showed that with GDP at constant 1,the independent variables which are the predictors have the following regression results: Capital=0.982,Asset=0.963,Liquidity=0.981,Profit=0.919,Dividend paid=0.895 and Tax Paid=0.932.With the results, there is a perfect positive linear relationship between GDP and bank performance. This shows that increase in bank performance indices have a corresponding increase in GDP and vice versa.There is co-movement between them.

ii.Model Summary: In the model summary, the R-Square is 99.7 percent which means that bank performance indices explains 99.7 percent of the variance in Gross Domestic Product through good corporate governance which is quite a respectable result.

iii. Normal probability plot: In the normal probability plot of regression standardized residual in figure 1 below the point lie in a straight diagonal line from the bottom left to the right.

Figure 1: Normal Probability plot of regression standardized residual.



From the graph position, there is no major deviation from normality. This shows that a linear relationship exists between the dependent variable (GDP) and the independent variables

iii.Analysis of Variance (ANOVA).From table 3 below, at the alpha level of 0.05 and degree of freedom 6 and 3,the computed F-test is 147.963 as against the tabulated critical value of 8.94.Also the ρ of .001 is less than the significance level of .05 F-test computed is higher than tabulated which shows the significance of the relationship between the dependent and independent variables.

Table 3 :ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3553557523958608.000	6	592259587326013.300	147.963	.001
	Residual	120082736412597.8	3	40027578804199.3		
	Total	3565565797597340.000	9			

a Predictors: (Constant), TAX PAID, DIVIDEND PAID, LIQUIDITY, CAPITAL, ASSET, PROFIT BEFORE TAX

b Dependent Variable: GROSS DOMESTIC PRODUCT

From the analysis of the results, the null hypothesis was rejected and the alternate accepted indicating that corporate governance is a determinant factor for corporate existence and have positive impact on bank performance for capital growth, asset quality, increase in liquidity, growth in profitability, enhanced dividend payment and equitable payment of tax. There is a strong co-movement between them.

CONCLUSION:

Banking industry in Nigerian economy has been the bedrock of the economy and will continue to be.However, the practice of corporate governance in this important sector of the economy leaves much to be desired .Corporate governance is concerned primarily with protecting weak and widely dispersed shareholders against self-interested directors and managers. Banking institutions are expected to run on best practices of corporate governance. The interests of the shareholders who own the company should be protected alongside other stakeholders. It is quite a dangerous signal when the board and management functions are built around only one overbearing personality who is instrumental to almost the important decisions. There is a wide gap between the management of Nigerian banking institutions and the four pillars of corporate governance which are accountability, fairness, transparency and independence which are to prevent corporate collapse. This wide gap has resulted into a phenomenal problem of financial distress in the Nigerian banking industry. The major elements of corporate governance which are good board practices, control environment, transparent disclosure, well-defined shareholders' right and board commitment are missing in the industry.

RECOMMENDATIONS:

For the industry to return to sustainable performance growth, sustainability and stability in industry, the regulatory and supervisory authorities should ensure the following measures:

1.Good corporate governance should be installed in the industry. The set of rules and practices that govern the relationship between the managers and shareholders of the banks as well as other stakeholders should be in place and enforced by the regulatory authorities. Each bank should established the underlining Organization for Economic Cooperation and Development (OECD) codes.(a) ensuring the basis for an effective governance framework which would promote transparent and efficient markets (b) protect and facilitate the rights of shareholders and key ownership functions.(c) ensure the equitable treatment of all shareholders(d)should ensure timely and accurate disclosure is made on all material matters regarding the corporation including the financial situation, performance ownership and governance of the banks.

2.Good investment policy; This will be a planned line of conduct for all banks in the light of which decisions are made and coordinated to achieve the following (a) good credit appraisal to avoid non-performing loans and advances(b) effective management of assets and liabilities to enhance good returns on investment and liquidity availability (c) avoid growing assets more than liabilities so as not to create liquidity problem.(d) to ensure quality earning assets are created.

3.The regulatory authorities should enhance their supervisory roles by introducing state of the art technology in capturing the operational transactions of the banks through wide area network. This will curtail the abuse of governance of the management and board of the banks.

4 Effective capacity building by designing functional training programmes for the board, management and the staff of the institutions in the areas of management, controls, credit analysis and management, financial distress and the effects on the fortunes of the banks.

5. The regulatory authorities should design functional organograms for the banking institutions to avoid overbearing personality who is instrumental to almost all the important decisions.

6.The regulatory authorities should enforce the banks to comply with the annual monetary and fiscal policies to ensure soundness in business and at same time, the authorities should ensure stability in regulations so as not to distort operations of the banks.

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ITC LIMITED - STRATEGIC FORAYS INTO THE FOODS BUSINESS

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ABSTRACT

After a period of recession, the Indian economy is recovering and is poised on the growth path. With the rapidly expanding Indian population, living standards are rising, food consumption is increasing and a diversification in diet of the Indian people can be seen. This presents before the country a set of challenges and opportunities and measures can be undertaken to modernize and diversify the agriculture to meet the increased domestic and international demand for a wide variety of food products. In light of this, large corporate houses like ITC Limited, consider it their duty to show a commitment towards the Indian consumers, which extends way beyond just the consumer delight. This Case analyzes ITC's diversification moves and its impact on the company's profitability. After the ban on Tobacco advertising in May 2004, ITC Limited ventured into Foods business and came out with a range of high quality biscuits using the brand name 'Sunfeast'. But having been known for tobacco products, selling processed food became difficult for ITC. This case analyzes the opportunities and threats faced by ITC and how it would overcome competition from existing giants like Britannia and Parle. Set in the background of current Indian economic scenario, this case raises key questions relating to how ITC would sustain multiple drivers of growth, matching internal capabilities with emerging market opportunities.

GLOBAL ECONOMY

As do all major sociological changes, transition in economies too evolves over a period of time. Over the past decade, almost every aspect of business has been reinvented. Operations have been changed completely owing to computerization and just-in-time supply chain management. There have been technological breakthroughs in accounting systems too. So, the economy as a whole witnessed a shift from manufacturing, offering standardized products and aiming at expansion of markets to achieve economies of scale, towards differentiated, customized and personalized information and productivity gains.

The emerging economy is marked with increase in demands for service and a consequent shift in business priorities from satisfying shareholders to delighting customers. This emerging economy is ought to be knowledge-based with focus on effectiveness in reaching, servicing and retaining consumers. Post-liberalization period, in India, of a decade or more is opening up new markets which has not only brought about new opportunities for export of goods but has also increased pressure on domestic industry to cope up with competition from imports.

Such economic reforms during the last decade have radically altered the business environment of India and posed a set of new challenges to the business firms in the country. Liberalization measures brought through the new industrial and trade policies – including liberalization of industrial licensing, curtailment of public sector, Foreign Exchange Regulatory Authority (FERA) liberalization, lowering of import tariffs, abolition of import licensing of certain categories, encouragement to foreign investment etc. aimed at integrating India's economy with the global economy. Access, on a global basis, to modern technology, capital resources and markets is now a more critical determinant of international competitiveness. No country can isolate itself completely from the forces being unleashed by a rapidly globalizing community of nations.

INDIAN ENVIRONMENT

India's inherent strength and comparative advantage lie in the presence of entrepreneurial acumen of the highest quality, an established scientific and industrial base, cheap skilled English speaking work force and a large domestic market. The relocation, by large transnational companies, of their manufacturing base to India and sourcing of products from here by other Fortune 500 companies is evidence of the bright future of the Indian industry. Unless India is proactive in responding to the imperatives of the changing environment, there is a very serious danger that it would be left far behind in today's race for the survival of the fittest.

It is significant to note that consumption of manufactured consumer goods is recognized as one of the most widely accepted measures of standard of living and quality of life. Manufacturing industry provides the driving force for stimulating rapid economic growth. The growth rate of the manufacturing industry normally surpasses that of the agriculture and service sectors. It is for this reason that industry is considered as backbone of the economy. It is in recognition of this special importance that raising industry's share in GDP is ranked as the foremost objective for this sector in the 10th Five Year Plan of the Indian Government.

IMPERATIVES OF AN EMERGING ECONOMY

Enterprises represent engines of economic growth in emerging economies such as India. Emerging economies are disadvantaged by the absence of adequate pool of internationally competitive enterprises. The ability of an enterprise to sustain value creation over time is crucially dependent upon its ability to continuously upgrade competitive capability, more so in the context of increasingly globalizing marketplace. Enterprises cannot however, become competitive in isolation in view of their linkages with the broader economy for supply of cost effective inputs, as well as for growth in demand for their output.

It is now universally acknowledged that no long-term economic growth agenda for India can be feasible without including in its fold the agricultural sector, which is home to 72 per cent of the population and 60 per cent of the nation's workforce. Indeed, while targeting a real growth of over 8 per cent in India's GDP, the planning commission observed that *"Agricultural development must be viewed as a core element of the plan since growth in this sector is likely to lead to the widest spread of benefits, especially to the rural poor including agricultural labour"*.

In this context, it is also well understood that reforms are crucial to the upliftment of the poor. Reforms need to embrace all aspects of socio-economic and political life of our society, including the creation of robust social, physical and institutional infrastructure, to engender productivity and competitiveness. The challenge thus lies in sustaining high rate of economic growth with equity over many years in order to convert the world's largest pool of economically disadvantaged people into viable consumers, thereby translating development into economic freedom.

FOOD PROCESSING INDUSTRY IN INDIA

The Ministry of Food Processing Industries is looking after the food processing industries in India and implementing policies and plans relating to the sector. The food processing sector includes sub-sectors like grain processing, fruits and vegetable products, milk products, meat and dairy products, fish and fish processing, beverages, aerated drinks, etc. The 10th Five Year Plan (FYP) has identified India's food processing as a sunrise industry which can play a significant role in increasing value addition in agricultural and horticultural produce, diversification and commercialization of agriculture, reduction in wastage of horticulture produce by increasing the processing level, generating new employment and enhancing export earnings.

The Vision 2020 document given by the Planning Commission of India under the chairmanship of Dr. S. P. Gupta observes a number of high employment potential sectors including commercial agriculture, agro-industry and agri-business. The World Bank estimates that *"India will become the fourth largest economy in the world by 2020. India should accept this both as a challenge and opportunity to modernize and diversify its agriculture to meet the increased domestic and international demand for a wide variety of food products"*.

Tapping the full potential of Indian agriculture to meet the rising domestic demand and to take advantage of liberalization of international trade requires greater investment in research and involvement of private sector in providing technology, investment and organizational expertise. The document also emphasizes the development of downstream processing, packaging and distribution activities as India processes less than 2 per cent of its fruits and vegetable products and 15 per cent of milk products, as compared to with 70 to 80 per cent in countries like Brazil, Malaysia and Philippines. The rural workforce hence will have abundant farm and non-farm employment opportunities, which in turn will stimulate demand for consumer goods and services.

A news item appearing in Hindustan Times dated 21st Oct, 2004, quoting a report by the Press Trust of India (PTI), pointed out that the magnitude of wastage of farm products in India is around Rs. 520,000 million each year. This they said was more than the entire fruit consumption of the United Kingdom, hampering the growth of the country's food industry. They observed,

"The cause of this loss is due to lack of storage and logistics infrastructure. But it is a fact that despite the low volumes, the Indian food processing industry still ranks fifth in size in the country, representing 6.3 per cent of the GDP. It accounts for 13 per cent of the country's exports and 6 per cent of the total industrial investment".

India is in the midst of transforming an agrarian economy into a modern multidimensional economic enterprise. The emerging global scenario will open up greater opportunities for countries with a surplus of well educated, highly skilled labour that can provide an attractive commercial environment for the out sourcing of manufacturing and service businesses. As per the 10th FYP, a highly competitive environment is rapidly emerging, driven by economic and social aspirations on the one hand and external conditions predominantly World Trade Organization (WTO) related market forces on the other.

Other important factors emphasizing the need for continuous improvements in productivity and efficiency in the allocation of resources are: consumer demand for enhanced value in terms of cost and quality; consumer tastes and preferences shifting perceptibly in favour of environment-friendly products; and regulatory pressures for sustainable industrial processes and practices based on life cycle analysis of the impact on the environment.

ROLE OF ENTERPRISES IN PARTNERED GROWTH

In the 92nd Annual General Meeting of ITC Limited, Mr. Y. C. Deveshwar*, said that research by Michael Porter contained in the Global Competitiveness Report 2002-2003 places equal importance on both macroeconomic and microeconomic factors in creating conditions for improved national productivity and competitiveness. He further said *"The vitality of companies operating in an economy makes the decisive difference in the capacity of a country to create wealth. It further upgrades the basis of competition from comparative factor advantages to innovative capability that enables the highest order of value capture"*.

While all successful corporate effort creates value, the degree of value retention within our economy is determined by the extent to which value chains are located in India. Location of manufacturing basis outside the country to service the Indian market would imply a much lower order of value capture for the domestic economy specific to that activity as compared to that arising from the larger sections of the value chain being based in the country.

The degree of value retention within India is often a result of strategic choices made by companies. Companies with the mindset of maximizing financial returns to shareholders above all else would source globally from locations where quality and cost are currently most competitive, and manufacture where it is most efficient to do so in servicing target markets to maximize profits. Such an approach carries serious implications for emerging economies. An Indian enterprise should, as its fundamental orientation, favour value chains within India by supporting their competitiveness wherever feasible. Therefore, it is crucial to support the growth and vitality of Indian enterprises that stand out by their approach and commitment to the Indian economy rather than merely by the source of their capital. It is in this context that ITC Ltd. has been chosen to discuss the implications of strategic choices of Indian companies towards the Indian economy.

ITC Limited – Background

ITC is one of India's foremost private sector companies with a turnover of over US $ 5.1 Billion. ITC is rated among the World's Best Big Companies, Asia's 'Fab 50' and the World's Most Reputable Companies by Forbes magazine, among India's Most Respected Companies by Business World and among India's Most Valuable Companies by Business Today. ITC ranks among India's `10 Most Valuable (Company) Brands',

* Yogesh Chander Deveshwar is the Chairman of ITC Ltd. since January 1, 1996. Prior to this he was Chairman and MD, Air India, the national carrier of India.

in a study conducted by Brand Finance and published by the Economic Times. ITC also ranks among Asia's 50 best performing companies compiled by Business Week.

While ITC is an outstanding market leader in its traditional business of cigarettes, success in other diversified businesses like hotels, paperboards, packaging and agro-exports further strengthened the move of diversification into businesses of Branded Apparels, Greeting Gifting & Stationery and Packaged Foods & Confectionery. ITC's diversified status originates from its corporate strategy aimed at creating multiple drivers of growth anchored on its time-tested core competencies, unmatched distribution reach, superior brand building capabilities and effective supply chain management. ITC's independence in diversification is worth noting. Over the past few years, ITC has made the hard choice of going right out of its traditional orbit into totally unfamiliar course and has displayed its vision by not sticking to the comfortable soft option of more vertical than horizontal diversification.

ITC Limited's cigarette business is under a threat from various sides. Growing awareness on the ill effects of smoking and Government imposed ban on tobacco advertisement & use of the product in public places, is leading to stagnation in sales. But with a cash generation close to Rs.16000 million a year, the company has diversified into newer areas like Readymade Garments, Greeting Gifting & Stationery and Foods Businesses that will widen the overall business portfolio and reduce the dependence on the core business of cigarettes. More so it will also enable the company to retain its large customer base.

ITC'S DIVERSIFICATION MOVE - FMCG

Within the varying businesses of ITC, Foods have special emphasis because of the huge growth potential. The Indian market for foods is estimated to be Rs. 5,000,000 million annually. India being an agrarian country has a bright future for the food industry. Furthermore, population growth and improvement in customer's spending ability is also marking its growth. The increasing trend towards nuclear families, single working people, bachelorhood etc. is leading to a high rise in the consumption of packaged food. As the disposable income goes up, standard of life improves and consumers become more and more discerning in terms of quality and hygiene. Besides, packaged foods also ensure hygiene, nutrition and convenience. Since in this category, the share of branded players is small, therefore the scope for better and more value added products is high. Increased media exposure is also ushering in a revolution in consumer behaviour thereby presenting exciting growth opportunities for companies such as ITC. While the FMCG industry in recent times has been dominated by sluggish top line growth, pressure on margins and price-led competition, the broader underlying trends indicate the nature of an opportunity.

First, the composition of India's private final consumption expenditure (PFCE) reflects a secular shift away from basic items of expenditure towards value added products and services. For example, within the foods basket, while the share of basic cereals and pulses is declining, the share of non-staple foods continues to grow, accounting for about 72 per cent of total food consumption. Total expenditure on foods continues to grow, posting real annual increase of 3.9 per cent since 2000.

Secondly, the FMCG sector over the years thrived on expansion of distribution, both in urban and rural markets, leading to fears of saturation. It is estimated that rural markets alone have 3.6 million retail outlets, roughly 1 per 200 people. Yet there is no organized marketing and distribution in 87 per cent of India's villages, which are home to 50 per cent of the rural population. Low population density and poor infrastructure pose daunting 'last mile challenges', rendering costs of customer acquisition prohibitively expensive. This last mile represents a significant opportunity for those who can defray logistics costs efficiently over multiple transactions.

Thirdly, changing demographics indicate an increasingly young consuming class. Six out of ten households have a post-liberalization child and nearly 60 per cent of the population is in the age group 15-59. This trend has significant implications on lifestyle aspirations, consumption capability and consequently for the value propositions of FMCG offers.

Fourthly, the compound annual growth of 3.2 per cent over the last five years in per capita income is unevenly spread across income segments. The bulk of the rural population constituting the bottom of the economic pyramid represents a vast potential consumer base. Leveraging this potential opportunity calls not only for appropriate and urgent agricultural reforms, but also unique business models anchored on low cost demand fulfillment capability.

ITC, with diverse competencies residing in its various businesses, is ideally positioned to leverage the significant growth opportunity inherent in these broader trends. It is the strategic intent of ITC to secure long-term growth competencies to create new engines of growth. ITC's integrated group research and development centre[*] at Bangalore and the state-of-the art Master Design Facility at Gurgaon provide cutting edge capability in product development and innovation thereby creating a franchise in the minds of consumers as providers of world-class value added products. Each category within this Business Segment of ITC also serves to widen and deepen the FMCG trade marketing and distribution capability, which already services about 1.5 million convenience outlets.

Further, the pioneering e-choupal[*] model is engaged in addressing the issues of the last mile in rural India, thereby providing the foundation for unmatched delivery capability that can encompass not only FMCG but also a host of other products and services. Towards this end, the company continues to invest in people systems and proprietary processes and protocols. It is also engaged in creating low cost demand fulfillment capacity by upgrading capabilities across value chains. This business model envisages retaining critical elements of each value chain in-house while manufacture is outsourced largely to small and medium enterprises (SMEs)[**]. Such a model enables ITC to draw upon key

[*] According to a press release in March 2004, ITC claims to have invested Rs. 100 million in the R&D centre located in Bangalore. It may be noted that all operations concerned with the Foods division of the company are undertaken at their Bangalore centre.

[*] ITC is currently executing a trailblazing internet-based intervention, which has the potential to contribute significantly to the transformation of rural India. This unique intervention christened 'e-choupal' carries the potential to address several issues confronting the competitiveness of the Indian agro value chain. 'e-choupal' delivers to the smallest of farmers, real-time information and customized knowledge in the local language to improve their decision making ability. It thereby facilitates the alignment of farm output to market demands.

[**] It may be noted that ITC has ruled out the possibility of opening its own manufacturing unit in the near future. They have restricted themselves in training the people in the contract-manufacturing unit so that there is a consistent quality production. The Foods division of the company is concentrating mainly on strengthening its distribution network so as to make their products available in all corners of the country.

internal competencies including agro-sourcing skills, cuisine knowledge and services expertise, paperboard and packaging domain knowledge, state-of-the-art IT services capability and the well known trade marketing and distribution strength to enhance the competitiveness of the entire value chain.

This strategic approach enabled ITC to make rapid progress towards establishing market standing in each of the chosen categories. Dramatic shift in key economic indicators over the past 10 years are elaborated in Table 1. It can be seen that the gross turnover has increased 4 times in the last 10 years thereby indicating the growing impact of ITC on the people and market.

Table 1: Key Economic Indicators

Key Economic Indicators	1995-96	2007-08
	Rs. In millions	
Gross Turnover	51150	213560
Market Capitalization	55710	777650*
Profit Before Tax	4520	45720
Profit After Tax	2610	31200
EPS - Basic (Rs.)	7.1	82.9
Net Worth	11210	120580
Book Value per Share (Rs.)	30	320
Capital Employed	18860	128170
ROCE per cent	2.84	3.57

* Market Capitalization as on 31/3/08

DIVERSIFICATION INTO THE FOODS BUSINESS

ITC believes that leadership in Foods business requires a keen understanding of the supply chain for agricultural produce. Claiming to have formed a close business relationship with the farming community in India over the last 90 years, ITC intends to leverage this network in sourcing best quality agricultural produce for its Foods business.

The Foods business is today represented in 4 categories in the market. These are 1) Ready to Eat Foods 2) Staples 3) Confectionery and 4) Snack Foods. ITC made its entry into the branded & packaged Foods business in August 2001 with the launch of the brand 'Kitchens of India'[*]. A more

[*] ITC ventured into the Foods business with the launch of the brand 'Kitchens of India'. These packaged food dishes were targeted at the top end of consumers. Priced initially at Rs. 150/- for a 450 gm tin and subsequently at Rs. 68 for a 285 gm pouch, one is able to manage around four servings with the former and two servings with the latter.

broad-based entry was made in June 2002 with brand launches in Staples, Confectionery and Snack Foods segments. The company claims that all products of its Foods business available in the market today have been crafted based on consumer insights developed through extensive market research. Kitchens of India bring to the Indian consumer exquisite gourmet Indian cuisine, capturing the pedigree and expertise of ITC Hotels' Master Chefs.

AASHIRWAD READY MEALS

'Aashirwad Ready Meals' label was launched in Hyderabad on 25th June 2003. This is a new range of ITC's ready-to-eat meal. Seven products are currently available in this category. Prices start at Rs. 35/- for a 285 gm pouch. Its unique packaging ensures freshness without the use of preservatives. This category of products is available in all grocery stores selling ready-to-eat products.

STAPLES

ITC entered the branded Atta* market with the launch of 'Aashirwad Atta' in Jaipur and Chandigarh on 26th May 2002. The company aims to use the sourcing strength of its e-choupals to deliver the freshly ground Atta to its consumers. Premium quality Atta made from the best wheat in India is also available as 'Ashirvaad Select Atta'. 'Popular Atta', a widely used volume driven category is offered in packs of 5 kg and 10kg priced at Rs. 70/- and Rs. 135/- respectively. The share of branded players is small in this category being around 2 per cent. 'Aashirvaad Atta' is selling around 8,000 tonnes a month and is the leading player in the branded Atta category.

ITC also launched its branded packaged salt under the brand name 'Aashirvaad Salt' on 26th March 2003. This product too is available in grocery stores around the country. The company has also come out with a range of cooking pastes under its ready-to-eat gourmet cuisine brand 'Kitchens of India' and ready meal 'Aashirvaad' brand as well.

CONFECTIONERY

ITC has two brands in the confectionery segment – 'Mint-O' and 'Candyman'. 'Mint-O' was acquired from Candico in March 2002 which is a company dealing in confectionery. ITC relaunched the compressed mint product Mint-O with new and improved product and packaging. Even now, apart from dealing in its brands under the flagship of Candico, the company continues to manufacture Mint-O for ITC.

Mint-O is the first mint in India to be also available in orange and lemon flavours besides the regular mint flavour. The product is available in two sizes – rolls of 20s and 6s. As per Mr. Ravi Naware*, though the market of compressed mint is small (about Rs. 100 crore), ITC has already captured about one third of its share by re-launching Mint-O in three flavours. The company now has recently launched Mint-O Fresh, in two variants viz. Clove and Eucalyptus in cough lozenges segment. Mint-O is currently available in all major markets in India.

Candyman Butterscotch Licks and Orange Licks were launched in December 2003 and are now available in markets across the country. This marked ITC's entry into the deposited candy market. In addition, Candyman éclairs and Candyman hard-boiled candies viz., Wild Banana, Mango Delight, Orange Josh and Pineapple Punch are also available.

SNACK FOOD

ITC made its entry into the snack foods segment with 'Bischips' – thin baked wafers made from wheat, but it did not prove to be a success. Then the company entered into the branded biscuits market on 28th July 2003 with the launch of the 'Sunfeast' range of biscuits in Kolkatta and Hyderabad. The initial range of offerings in the 'Glucose', 'Marie' and 'Cream' segments provides both basic and value added options to the consumers. Two innovations in its initial range of offerings, viz. 'Orange Marie' and 'Butterscotch Cream', have been introduced for the first time in the Indian market after extensive sampling across 14,000 consumers.

ITC has leveraged its proven strength in retailing biscuits especially through the panwallah segment. While the grocery stores were the main part of retail rollout plan, growth to ITC has also come from the neighbourhood convenience stores and panwallahs* who were familiar with the company and its brands. The biscuits now are available across the country even through such outlets. ITC is banking upon the idea that its cigarettes consuming class, which is a loyal base, will try out the new range of biscuits thereby promoting sales of the organization. Much is not being said about it but the company hopes that it will smoothen out the journey towards major market shareholder in this segment.

Under the flagship brand 'Sunfeast', in September 2007, ITC launched a new range of biscuits fortified with vitamins and calcium called the 'Fit Kit'. Endorsed by Sachin Tendulkar, the famous Indian cricketer, these biscuits are a rage with children. Marking the company's forays into the evolving snacks category, ITC came out with its mouth-watering range of potato chips called 'Bingo'. Bingo was strategically timed around the World Cup to leverage the tremendous popularity that such leisure and cocktail snacks would find among cricket lovers in the country.

ITC LIMITED: OPPORTUNITIES AND CHALLENGES

Mr. Naware in a press conference declared that the Foods business intends to break even by the year 2008. It also wished to complete all its range in the Biscuits segment by the year 2005. Once they are able to bring out all the variants in the Foods business under all the brands as their respective competitors, the business would start moving towards establishing a large market share in each category. As of now, ITC in its Foods business is a market leader only in the 'Atta' segment. ITC however is still continuing with bringing out new variants of biscuits targeting different consumer tastes and preferences.

The ready-to-eat market is captured mostly by MTR with 70 per cent market share. Small players like Tasty Bites Eatables Limited (TBEL); a Pune based company also offers some competition. The Rs. 200 million company, (where 80 per cent of its earnings come from exports) has successfully captured a number of markets in the Eastern part of the country. TBEL now intends to launch a number of ready-to-eat ranges in the northern India. Confectionery industry is dominated by Perfetti, with Nutrine, Cadbury, Nestle, Parry's, Ravalgaon etc. being other major

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* Wheat Flour

* Mr. Ravi Naware is CEO, Foods Division of ITC.

* Panwallahs are primarily non-grocery outlets (mostly kiosks) dealing in sale of cigarettes, tobacco and other convenience products like matches, confectionery etc.

players. Perfetti's 'Alpenliebe' and Nestle's 'Polo' are a force to reckon with. ITC's Candyman has a long way to go before it can build its image in the minds of its consumer's vis-à-vis its competitors.

The Biscuits market in India amounts to Rs. 45,000 milion out of which roughly 27,000 million belongs to the organized sector. Mr. Naware at the launch of the 'Sunfeast' range of Biscuits said that the biscuits market had risen from 5 per cent to 12 per cent over the last year. Two major players viz., Britannia and Parle that accounts for over 80 per cent of market currently dominate the organized Biscuit market. ITC hopes to come up with as many Stock Keeping Units (SKUs) as its competitors by March 2005. The company at present is at the third rank and hopes to become market leader by bringing out innovative and value added products for all segments of society.

ITC attributes its success to its distribution network, ability in brand building and identifying quality outsourcing opportunities. The company says that it is currently witnessing a situation of demand outstripping supply of Food items. It is considering the adoption of the partnership route in a big way (as opposed to only contract manufacturing) to augment all-India supplies. Maintaining consistent quality at lower prices while keeping overall investments down is becoming a formidable challenge for the company.

On the other hand, the Indian government is opening up the food-processing sector and has announced a tax holiday for five years and a reduced rate thereafter on fruits and vegetables. Tax incidence on dairy machinery, meat products and other processed foods has also been reduced. This is tempting foreign countries to come invest in this sector.

In the emerging economy of India, with opportunities and challenges waiting for companies big and small alike, to make strategic moves, it is imperative that the choices and decisions of these companies be made after due appraisal of the external and internal environment. Keeping in mind the ever-ongoing threats to their business, ITC is in a dilemma as to what their future line of action should be – short-term as well as long-term. How should ITC develop its future diversification strategy, offer value-added products at reasonable prices and still be able to contribute effectively towards shareholder wealth? How should the organization manage multiple businesses and blend core competencies thus leveraging ITC's umbrella strengths to create new avenues for growth? The Company simultaneously wants to increase its presence in the market and also not compromise on its foremost objective of addressing the needs of rural India as ITC believes that it is imperative to ensure that India's economic growth is inclusive, embracing its villages, so as to free millions of disadvantaged citizens from the indignity of poverty.

EXHIBIT 1: MILESTONES

2001:	Entry into the Foods Business with launch of 'Kitchens of India'
2002:	'Aashirvaad' Atta rolled out, 'mint-o' trademark acquired, re-launched in lemon and mint flavours; 'Candyman' added to confectionery range
2003:	Integrated Group Research & Development Centre established; 'Aashirvaad' salt introduced; 'Candyman' range expanded to deposited candies and éclairs; 'Sunfeast' biscuits launched; 'Aashirvaad ReadyMeals' offered; 'mint-o' in lemon mint flavours
2004:	'Kitchens of India' extended to cooking pastes; Mint-O Fresh launched
2005:	Sunfeast breaks Guinness book of World Records for Simultaneous Plantations
2006:	Shah Rukh Khan and Sachin Tendulkar signed as Brand Ambassadors for Sunfeast biscuits
2007:	ITC launches 'Bingo' chips range. Also, introduce organic spices in the market

EXHIBIT 2: STRATEGY OF ITC TO MANAGE DIVERSITY OF PORTFOLIO

Formal 3-tiered governance structure:

- **Board of Directors :**
- Comprising executive (4) and non-executive directors (11)
- Strategic supervision
- **Corporate Management Committee :**
- Comprising executive directors and senior managers
- Strategic management
- **Divisional Chief Executive & Divisional Management Committee :**
- Executive management

EXHIBIT 3: OPERATING RESULTS 1998 – 2007

(Rs. in Millions)

Year Ending 31st March	1998	1999	2000	2001	2002	2003	2004	2005	2006	**2007**
GROSS INCOME	69237.5	77009.6	80693.7	88271.1	99824.6	111944.7	120399.2	135853.9	165105.1	**198415.4**
Excise Duties etc.	36939.4	40632.5	41338.9	44745.2	47808.6	51591.0	53446.0	57101.3	64339.0	**71357.5**
Net Income	32298.1	36377.1	39354.8	43525.9	52016.0	60353.7	66953.2	78752.6	100766.1	**127057.9**
Cost of Sales	22714.6	24433.0	24754.5	25164.4	31559.6	37120.0	41098.5	48468.9	64631.5	**84128.9**
PBDIT	9583.5	11944.1	14600.3	18361.5	20456.4	23233.7	25854.7	30283.7	36134.6	**42929.0**
PBDT	8773.3	10403.2	13474.8	17402.4	19787.1	22935.3	25606.8	29859.4	36015.3	**42896.2**
Depreciation	858.5	1022.9	1185.3	1399.4	1984.5	2373.4	2416.2	3128.7	3323.4	**3629.2**
PBIT	8725.0	10921.2	13415.0	16962.1	18471.9	20860.3	23438.5	27155.0	32811.2	**39299.8**
PROFIT BEFORE TAX	7914.8	9380.3	12289.5	16003.0	17802.6	20561.9	23190.6	26730.7	32691.9	**39267.0**
Tax	2652.8	3146.1	4365.1	5940.4	5905.4	6848.4	7262.1	8360.0	9888.2	**12267.3**
PROFIT AFTER TAX BEFORE EXCEPTIONAL ITEMS	5262.0	6234.2	7924.4	10062.6	11897.2	13713.5	15928.5	18370.7	22803.7	**26999.7**
EXCEPTIONAL ITEMS (NET OF	-	-	-	-	-	-	-	3543.3	(450.2)	**-**

TAX)										
PROFIT AFTER TAXATION	5262.0	6324.2	7924.4	10062.6	11897.2	13713.5	15928.5	21914.0	22353.5	**26999.7**
Dividends*	1214.8	1498.3	2245.5	2704.5	3341.4	4188.4	5588.3	8817.0	11347.0	**13645.0**
Retained Profits	4047.2	4735.9	5678.9	7358.1	8555.8	9525.1	10340.2	13097.0	11006.5	**13354.7**
Earnings Per Share on profit after tax before exceptional items										
Basic (Rs.)**	14.3	16.9	21.5	27.3	32.0	36.9	42.9	49.1	60.8	**71.9**
Adjusted @ (Rs.)	68.6	81.3	103.3	131.2	155.1	178.8	207.7	239.5	297.3	**352.1**
Earnings Per Share on profit after taxation										
Basic (Rs.)**	14.3	16.9	21.5	27.3	32.3	37.3	42.9	58.5	59.6	**71.9**
Adjusted @ (Rs.)	68.6	81.3	103.3	131.2	155.1	178.8	207.7	285.7	291.5	**352.1**
Dividend Per Share (Rs.)**	03.0	03.7	05.0	06.7	09.0	10.0	13.3	20.7	26.5	**31.0**
Market Capitalization ***	175230	236330	180380	199870	172430	155810	257930	334330	732070	**565830**
Foreign Exchange Earnings	7590.8	6495.5	6877.0	6971.3	9475.7	12940.0	10775.1	12686.5	17935.1	**22832.1**

* Including Income Tax on Dividend (except 2002)
** Includes adjustment for 1:10 Stock split and 1:2 Bonus Issue
*** Based on year-end closing prices, quoted on the Bombay Stock Exchange.
@ Includes adjustment for
- 1992 - 3:5 Bonus Issue
- 1995 - Conversion of warrants and Bonus Issue of 1 : 1 on total shares

- 2003 - 2,09,69,820 Ordinary Shares of Re. 1.00 each, fully paid, issued pursuant to Amalgamation of erstwhile ITC Bhadrachalam Paperboards Limited with the Company.
- 2006 - 1,21,27,470 Ordinary Shares of Re. 1.00 each, fully paid, to be issued pursuant to Amalgamation of erstwhile ITC Hotels Limited and Ansal Hotels Limited with the Company.
- 1:2 Bonus Issue

EXHIBIT 4: CONSOLIDATED BALANCE SHEET

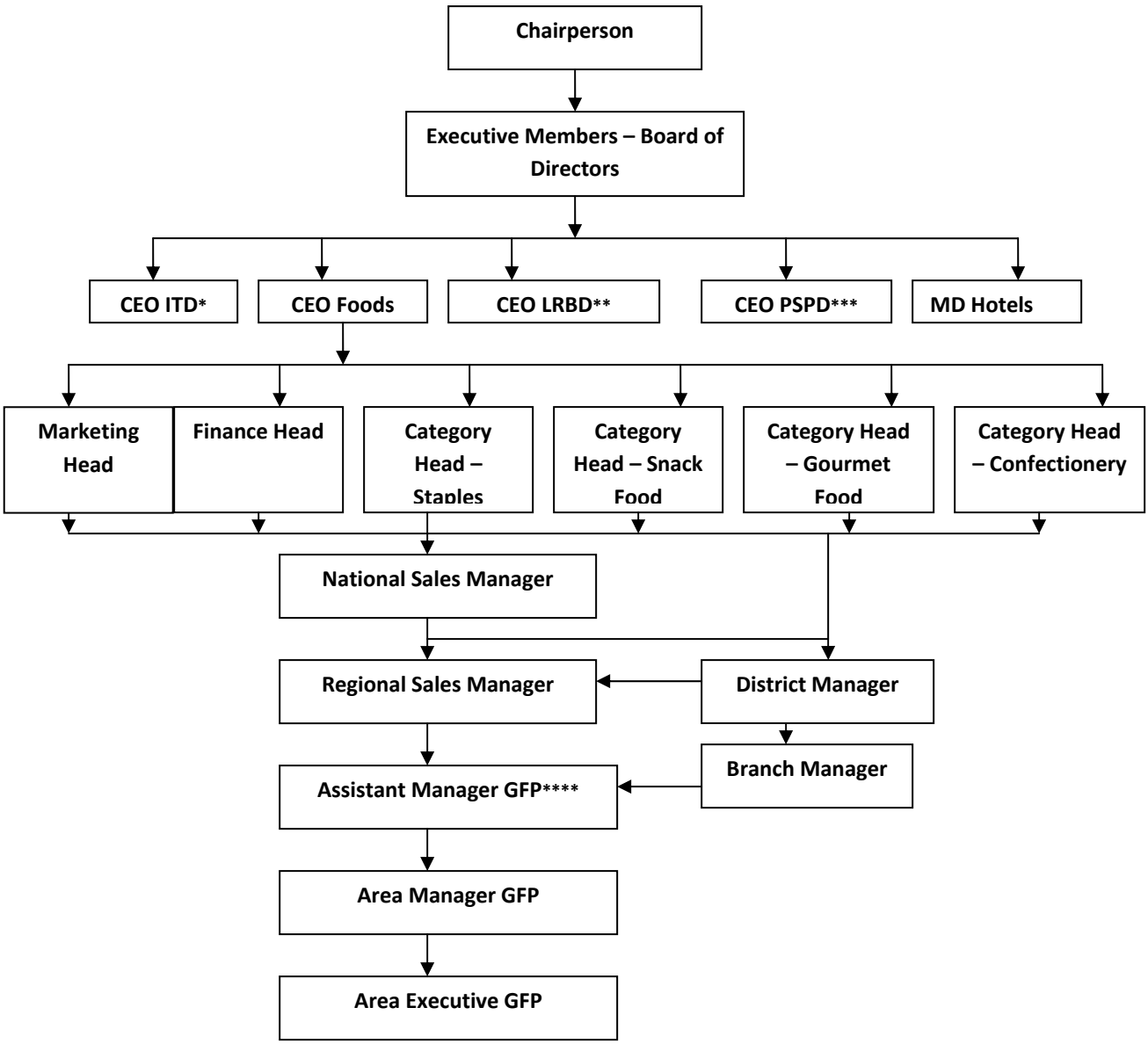
Consolidated Balance Sheet as at 31st March, 2007

	As At 31st March, 2007 (Rs. In Millions)		As At 31st March, 2006 (Rs. In Millions)	
I. SOURCES OF FUNDS				
1. Shareholders' Funds				
a) Capital	3762.2		3755.2	
c) Reserves & Surplus	102703.6	106465.8	88459.4	92214.6
2. Minority Interests		1075.8		817.5
3. Loan Funds				
a) Secured Loans	608.0		528.6	
b) Unsecured Loans	1401.0	2009.0	938.2	1466.8
4. Deferred Tax – Net		4712.7		3255.0
Total		**114263.3**		**97753.9**
II. APPLICATION OF FUNDS				
1. Fixed Assets				
a) Gross Block	77951.7		68625.9	

b) Less: Depreciation	26865.5		23392.8	
c) Net Block	51086.2		45233.1	
d) Capital Work-in-Progress	8760.9		2466.1	
	59847.1		47699.2	
e) Less: Provision for assets given on lease	87.1	59760.0	87.1	47612.1
2. Investments		25058.9		29981.0
3. Current Assets, Loans and Advances				
a) Inventories	39346.7		31154.3	
b) Sundry Debtors	7330.4		6351.9	
c) Cash and Bank Balances	10865.0		9777.7	
d) Other Current Assets	1938.2		1568.5	
e) Loans and Advances	9865.2		7702.7	
	69345.5		56555.1	
Less :				
4. Current Liabilities and Provisions				
a) Liabilities	25486.5		22820.6	
b) Provisions	14419.9		13580.0	
	39906.4		36400.6	
Net Current Assets		29439.1		20154.5
5. Miscellaneous Expenditure		5.3		6.3

(To the extent not written off or adjusted)		
[See Schedule 19 (ix)]		
Total	**114263.3**	**97753.9**

EXHIBIT 5: ORGANIZATIONAL CHART OF ITC LIMITED



*** India Tobacco division of ITC Limited**
**** Lifestyle Retail Business Division**
***** Packaging and Specialty Paper Division**
****** Grocery Focus Products**

LIST OF REFERENCES

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Website: **www.itcportal.com**

MICRO FINANCE: ITS ROLE AND IMPLICATIONS FOR THE SOUTH ASIAN FINANCIAL CRISIS.

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ABSTRACT

This paper examines the impact of global financial crisis on South Asia in terms of trade shocks, effects on financial sector, and external sector. It also studies the growth prospectus, challenges and provides alternative strategies in terms of growth and investment with special reference to microfinance and its role in investment decision making process in this part of the globe. The paper is divided into five sections: Section I studies Impact of Global Financial Crisis on South Asia in terms of trade shocks, Section II studies the Impact on Financial Sector and External Sector, Section III studies the Impact on Growth and Investment, Section IV studies Role of Micro Finance in boosting investment and growth in South Asia in emerging scenario, Section V draws some Conclusions.

KEYWORDS

Global financial crisis, Investment implications, Microfinance, South Asia.

INTRODUCTION

South Asia has been on a rising growth path since 1980, reaching a peak of 8.7 percent in 2006 supported by growth and investment. The region has averaged more than 7.5 percent growth since 2003 allowing it to reduce poverty levels in India, Pakistan and Bangladesh. It has been possible due to opening up of the major economics of South Asia and their gradual integration with rest of the world. In the early nineties, India, biggest economy of South Asia with highest growth rate of 9.2 percent, introduced major financial sector reforms. These reforms transformed the investment scenario particularly securities market substantially both in respect of operation and structure. Entry of foreign institutional investors, emergence of mutual funds, primary dealers along with corporate houses and banks and financial intermediaries together have made the stock market quite sensitive and extensive after these reforms. On functional front, important instruments, certificate of deposits and commercial papers, have been introduced to provide opportunity to corporate houses for mobilising resources in addition to their primary issues and operation in the secondary market. With the entry of new financial investors, both national and international, the stock markets have become vibrant with consequent rapid response of the market to any change in the national and international scenario. Pakistan also followed India in terms of introducing major financial sector and market reforms in early nineties.

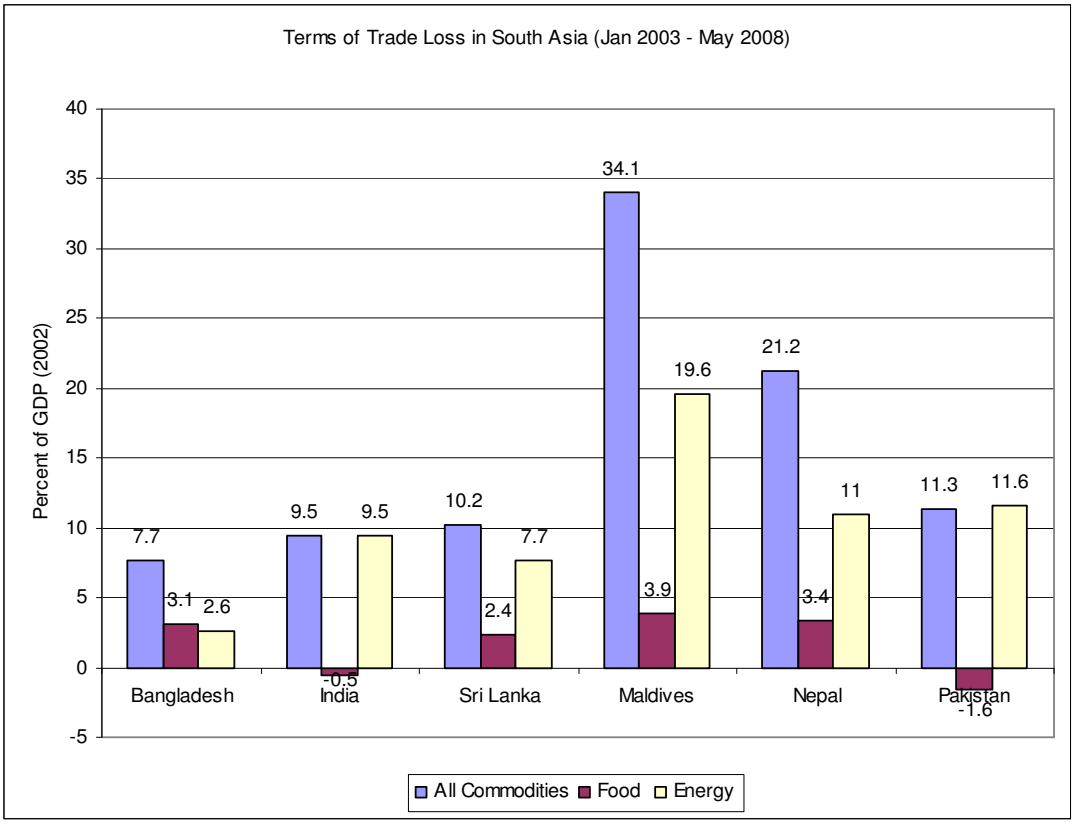
However, in the last five years (2003–2008), price increases of global commodities, especially those of oil, metal and food, took a toll on South Asia (Asian Development Outlook, 2007). Budget deficits widened and trade balances worsened. With this, the growth softened and inflation reached double digits. Before the region could recover from the adverse impact of high commodity prices, the global financial crisis has come knocking. The cascading effects of these crises will present daunting policy challenges to South Asia. The adverse impact has the potential to reverse elements of impressive development gains that.

South Asia has achieved over the past decade and impede its progress towards achieving the Millennium Development Goals (MDGs) (www.un.org/millennium goals). The paper studies the impact of Global Financial Crisis on South Asia in terms of trade shocks, effect on the financial sector, effect on the external sector, growth prospects, policy issues and suggesting alternative measures for banking as well as investment. The paper is divided into five sections: **Section I** studies Impact of Global Financial Crisis on South Asia in terms of trade shocks, **Section II** studies the Impact on Financial Sector and External Sector, **Section III** studies the Impact on Growth and Investment, **Section IV** studies Role of Micro Finance in boosting investment and growth in South Asia in emerging scenario, **Section V** draws some Conclusions.

I.TERMS OF TRADE SHOCKS PREVAILING IN SOUTH ASIA (2003-2008)

Huge Terms of Trade Shock: Between January 2003 and May 2008 South Asia suffered a huge loss of income from a severe terms-of-trade shock owing to the surge in global commodity prices. While Middle East and North Africa (MENA), Latin America and Caribbean (LAC) and Europe and Central Asia (ECA) gained from higher prices on a net basis, South Asia lost substantially from both higher food and petroleum prices. Within South Asia, losses range from 36 percent of GDP for the tiny Island country of Maldives to 8 percent for Bangladesh (Figure 1). Much of the loss came from higher petroleum prices, where all countries lost. On the food account, Bangladesh lost most, followed by Nepal and Sri Lanka. Pakistan and India actually gained, being significant rice exporters. Although reliable data is not available for Afghanistan, losses from the oil and food price crisis are believed to be substantial.

Deterioration in external and fiscal balances: The large loss of income from the terms of trade shock was partially compensated by rising remittances (Maimbo & Ratha, 2005). Nevertheless there has been a negative impact on the external balances of most South Asian countries. Pakistan suffered the most rapid deterioration in the current account balance, which turned from a surplus of around 4 percent of GDP in 2003 to a deficit of over 8 percent in 2008 (Statistics Division, Government of Pakistan). Sri Lanka similarly registered a sharp increase in current account deficit. Even in India, the current account widened sharply from a surplus of more than 2 percent of GDP in 2004 to a deficit of over 3 percent in 2008 (Economic Survey, 2007-08). The current balance in Nepal that was in surplus for a fairly long period finally turned into a deficit in 2008. Only Bangladesh continued to enjoy a surplus in its current balance. These differential effects reflect a number of factors including: the relative magnitude of terms of trade shocks, the differences in compensating growth of remittances, and policy responses. Bangladesh in particular benefitted tremendously from the growth in remittances. Pakistan and Sri Lanka have been facing balance of payments pressures from expansionary fiscal and monetary policies; the terms of trade shocks accelerated the deterioration.



Source: DECPG, The World Bank

Figure 1

Concerning fiscal balance, all countries except Sri Lanka registered sharp deterioration. The fiscal deficit widened most for Pakistan, rising from 2.4 percent of GDP in 2004 to 7.4 percent in 2008 (Hussain, 2005). India had made good progress in reducing fiscal deficit between 2003 and 2007. This progress was reversed in 2008 as sharp increase in fuel subsidies (growing from 1% of GDP in FY 2007 to an estimated 4% of GDP in FY 2009) threatens to wipe off the gains made so painfully over the past few years. Bangladesh also struggled quite a bit.

Budget deficit widened to almost 4 percent in 2008 and is projected to grow further to over 5 percent, mostly due to increases in food and petroleum subsidies. Nepal's fiscal deficit has grown from its low level in 2004 owing mainly due to fuel subsidy. Sri Lanka has long suffered from high fiscal deficits; as a result, it seceded to pass on the global price increases in petroleum to consumers.

Impact on inflation: rising food and fuel prices have been a major source of inflationary pressure in South Asian countries. In Afghanistan, Sri Lanka, Pakistan, Bangladesh and Nepal, food prices made a bigger impact on inflation than fuel. In India, however, the main surge to inflation came from fuel price increases. Afghanistan saw the steepest increase in staple food prices between 2007 and August 2008, with wheat prices more than doubling, due to poor domestic production and export restrictions by Pakistan (Zoellick, 2008).

Other South Asian countries saw staple food price increases ranging from a low of only 12 percent for India to 83 percent for Sri Lanka. Prices of staple food have started to come down in all South Asian countries owing to good harvests in 2008 and falling global prices. The global oil prices have also come down sharply to around $70/barrel level as compared with the spike at $150/barrel (Industrial Information Resource, 2008). The combined effects of lower food and fuel prices along with demand management are reducing inflationary pressure in most South Asian countries except Pakistan.

II.EFFECTS OF THE EMERGING GLOBAL FINANCIAL CRISIS

As noted, the South Asia economies are already limping from the adverse effects of the huge terms of trade shocks of the past 6 years. The reduction in global petroleum and food prices observed over the past few months provides a silver lining for South Asia in an otherwise difficult external environment. Yet this silver lining is now heavily clouded by the emerging global financial crisis that poses tremendous downside risks to South Asia.

These risks can transmit from both the financial sector in terms of volume and price of foreign capital flows as well as from the external sector based on adverse effects of a global slowdown on South Asian exports, possible downward pressure on remittances, and slowdown in private and public investment owing to higher interest rates as well as lower export demand.

Financial sector: South Asia is fortunate to have a broadly resilient financial sector due to a combination of past financial sector reforms and capital controls that insulate these economies to a great extent from the risk of a financial crisis transmitted from abroad. However, individual country risks vary substantially as the macroeconomic performances, financial sector health and exposure to foreign capital markets differ considerably by countries.

The largest economy, **India**, is relatively more exposed to the contagion effects of global financial markets through adverse effects on capital flows from portfolio and direct foreign investments, and also through exposure of domestic financial institutions to troubled international financial institutions and to contracts — including derivatives — that have undergone large value changes. The evidence so far shows significant

losses in the stock market and a reduction in the flow of foreign capital. Yet these risks are countered by a fundamentally strong macro economy including prudent foreign debt management, high savings rate, solid financial sector health, and a pro-active monetary policy management that will likely allow India to ride the crisis without destabilizing the financial sector.

The Central Bank has already responded by letting the exchange rate depreciate to stem the outflow on the current account, by providing extra liquidity to the financial sector, and by raising the limit on private foreign borrowing. The nature and depth of the global financial crisis is still evolving and there is a significant downside risk of further slowing down of net capital flows and a hardening of terms. But these are countered by an overall healthy banking sector with low non-performing loans and a comfortable capital base and a pro-active monetary and exchange rate management. Foreign debt and debt service is low, and reserve cover ($274 billion) is still substantial (RBI, 2008). The high domestic saving rate (34 percent of GDP) provides added cushion (RBI, 2008). The main effects of the global financial crisis will be to reduce the availability of funds leading to higher interest rate and lower public and private investment that will hurt growth.

The second largest economy, **Pakistan**, is much more fragile and faces the most vulnerability in the region. High fiscal and current account deficits, rapid inflation, low reserves, a weak currency, and a declining economy put Pakistan in a very difficult situation to face the global financial crisis. Efforts are now underway to arrest the decline of the macro economy through appropriate demand management including tightening of monetary and fiscal policies (State Bank of Pakistan, 2008). Pakistan's ability to borrow externally is already heavily constrained and bond spreads are very high. The global financial crisis means that non-official foreign capital flows would be even more expensive than now. The contagion effects on domestic financial sector could be substantial, but stress test suggests that the banking sector as a whole is likely to withstand the shocks. This is mainly due to the improved health of the financial sector based on past reforms (Qayyum, 2007).

Sri Lanka suffers from high inflation and large current and fiscal account deficits. To stem the deteriorating macro-balances Sri Lanka has started tightening monetary policy and is also trying to contain the fiscal deficit by passing on the energy price increases to consumers. The performance of the financial sector has improved over time, although there is a slight upward trend in Non-performing loans (NPL) in recent years. The role of foreign capital in Sri Lanka's domestic financial sector is limited. The main downside risk on the financial sector is a reduction in capital flows from outside, including for the government. There is already evidence of a rise in spreads for Sri Lanka bonds. Switching of demand to domestic financing in an environment of high inflation and further tightening of monetary policy would raise interest rates and slowdown economic activity. Financial difficulties in domestic firms could also adversely affect NPLs. Overall, though, there is little risk of a financial collapse.

Bangladesh has maintained generally prudent macroeconomic policies. Balance of payments is in surplus owing to rapidly rising remittances and prudent demand management. Inflation, which reached double digit, is now coming down due to falling food prices. Fiscal deficit has increased to 5–6 percent, but remains manageable in view of falling global oil and food prices from their global peaks last fiscal year. The financial sector is showing signs of improved health from past reforms and is mostly insulated from foreign markets because of very low private capital inflows. External debt is low and reserves are comfortable. In this environment, the effect of the global financial crisis on the financial sector is likely to be negligible. Bangladesh is relatively more exposed from the real economy effects of a possible slowdown in exports, especially garments, and from remittances.

Nepal is emerging from a conflict situation with low growth and the adverse effects of a global food and fuel crisis. Inflation is showing signs of deceleration due to reduction in international food and fuel prices. Its domestic financial sector is very weak in terms of financial indicators with large non-performing loans and low capital adequacy. However, the financial sector is pretty much insulated from global finances due to the negligible amount of foreign private capital flows. The risks to the macro economy come from a potential expansionary budget in an environment of a deteriorating global economy.

The External Sector: The possible downside effects of the financial sector crisis are much more direct and substantial from the real economy implications. These will work through trade, remittances and investments.

Exports: Based on progress on trade reforms, South Asian economies have become much better integrated with the global economy than in the early 1990s. Exports are now over 20 percent of GDP and are a major source of growth stimulus. The recession in OECD countries will almost certainly lower the export prospects for all South Asian countries, but especially India that has done remarkably well in the services sector and now faces a sharp slowdown in demand. South Asia is also a major exporter of textiles and garments that are vulnerable to the recession in the OECD economies. Depending on the magnitude and the period of this recession, the adverse effects on exports can be large.

Imports: One redeeming feature emerging from the import side is the observed downward trend in commodity prices, especially food and fuel. The import bills on these accounts, especially fuel, are already coming. The recession in OECD countries will likely cause a further reduction in commodity prices with positive effects for South Asia.

Remittances: Foreign remittances have grown rapidly in South Asia over the past few years. These have not only provided an offsetting cushion on the balance of payments, but more importantly they have been a huge source of income and safety net for a large number of poor households in South Asia, especially in the poor countries of Afghanistan, Bangladesh and Nepal. Much of these remittances come from low-skilled workers engaged in the oil-rich countries of the Middle East. These earnings do not face an immediate risk as these economies have huge earnings and reserves from the oil price boom and oil prices are still substantially higher than in 2002 in real terms. However, remittances from OECD countries can be adversely affected. India and Pakistan are particularly exposed to this slowdown. On balance the downside risk of substantial lower earnings from remittances appear low.

III.IMPACT ON GROWTH AND INVESTMENT

Since 1980, South Asia has been on a rising growth path, reaching a peak of around 9 percent in 2006. Growth has been on a declining trend since then. In particular, the adjustment to the terms of trade shock brought about a slowdown in growth in 2008 for all South Asian countries, not withstanding the benefits of a strong agriculture recovery. The onset of the global financial crisis suggests a significant slowdown in South Asia's growth prospects for 2009-10 (Figure 2). The slowdown will be particularly notable for India and Pakistan. India's prospects will be hurt by the reduction in capital flows and possible slowdown in the growth of exports. Pakistan's economy is already facing difficulties; the financial crisis will aggravate it.

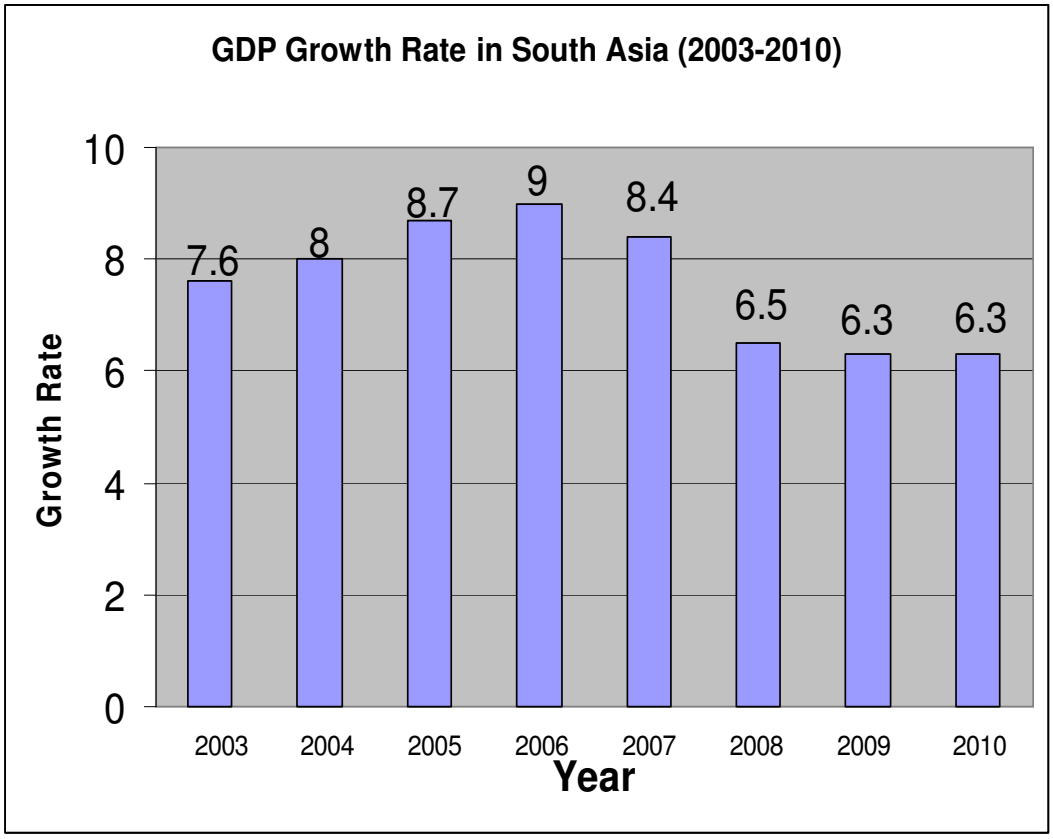


Figure 2

INVESTMENT

The main risk to growth comes from the likely adverse effects on investment of the combined effects of a slowdown of foreign funding and a possible increase in non-performing assets of domestic banks owing to lower profitability of firms producing for export markets. At the same time, higher inflation has required tightening of monetary policy. All of these factors will reduce the availability of domestic financing of private investment. Public investment is already constrained by rising fiscal deficits. Overall, there is likely to be a slowdown in the rate of domestic investment. Improvements in saving rates in South Asian economies have been an important cushion. But inadequate adjustment to the losses from terms of trade combines with a possible slowdown of exports earnings and foreign capital flows will almost certainly reduce investment and growth.

IV.ROLE OF MICRO FINANCE IN SOUTH ASIA

In the emerging investment scenario in South Asia, due to global meltdown the desire source of funds should be less volatile to stock market vagaries. The author has studied the financial intermediaries both traditional commercial banks and micro-financial institutions (Table 1) to highlight why micro-finance may be less exposed to market risks. (Nicolas Krauss and Ingo Walter, 2008).

BUSINESS MODEL OF COMMERCIAL BANKS VERSUS MFIs

	Commercial Banks	Microfinance Institutions
Ownership and Governance	Generally publicly traded companies Domestic and international portfolio investors Highly sensitive to market signals	Virtually all privately held companies Profit and non-profit inv. With long-term strategic interest Less driven by market forces
Client Characteristics	Monthly salary and collateral Higher consumption rate More dependent on imported inputs Exposed to currency devaluations Exposed to imposition of FX controls	Very low and instable income with virtually no collateral Mainly micro-entrepreneurs; higher investment rate Mainly women; better repayment discipline Limited sources of fin. Lead to better repayment discipline Customers move 'down-market' in times of distress

Product Characteristics	larger loans (no effect) lower interest rate (no effect) longer maturity with flexible borrowing rate and 'sticky' lending rate increases systemic risk	smaller loans (no effect) higher interest rate (no effect) shorter maturity
Lending Techniques	Various loan covenants Decrease systemic risk	Lack of collateral Close ties to and knowledge of borrowers and local markets Solid screening and incentive mechanisms to identify and encourage good and strong clients Disadvantages regarding collateral offset with screening and relationship management?
Operating Leverage	Commercial banks tend to be highly dependent on fee-based services More volatile Generate higher fixed costs	MFIs tend to generate mainly interest-based income Less volatile Mainly variable costs
Financial Leverage	Highly leveraged (D/E ratio of approx. 7.5)	Less leveraged (D/E ratio of approx.3) MFIs would need equity beta of ~2 times equity beta of commercial banks to incur same market risk exposure

Source: Partially adopted from Tor Jansson : Microfinance: From Village to Wall Street", Inter-American Development Bank, Washington, D.C., 2001.

At World Economic Forum at Davos 2008, **Bill Gates** put his mouth where he had long ago put his money, calling for a "creative capitalism" in which companies embrace, "a twin mission: making profits and also improving lives for those who don't fully benefit from market forces". India saw a 76 percent increase in microloans from March 2006 to March 2007(Otero, 2008). The growth of Micro Finance Institutions (MFIs) coupled with limited pools of traditional capital is resulting in an unlikely alliance: Stock market and poor micro-entrepreneurs. (Davis and Dubitsky, 2008)

The modern microfinance movement was born in Bangladesh in the 1970s as a response to the prevailing poverty conditions among its vast rural population. Astonishing growth rates in Bangladesh, particularly during the 1990s, created a new dimension for microfinance worldwide as microfinance institutions grew to include millions of clients. For the first time, a substantial proportion of the low-income families of major developing country were served by the activity. The start of the twenty first century reinforced this trend as the Bangladesh numbers continued to grow impressively. In India, a substantial microfinance system based on self-help groups (SHGs) developed. Other countries of the region made slower and later starts but have since established active microfinance sectors.

By 2005, microfinance covered at least 35 million of some 270 families in the region and met around 15 per cent of the overall credit requirements of low-income families. Coverage was particularly impressive in Bangladesh and Sri Lanka, where microfinance services reached more than 60 per cent of the poor. In addition, the focus on engaging women as essential contributors to economic and social well-being has had important spill over effects throughout the region. Even in a socially conservative country such as Afghanistan, microfinance activity has focused on women, thereby according them more explicit recognition as economic agents. In India, the SHGs movement has become the basis for programs promoting empowerment and overall improvement of the status of women in society. In Bangladesh, microfinance has become the basis of micro-enterprise promotion by some of the large microfinance institutions, although it also has been extended to the 'ultra poor' through targeted programs. In both Pakistan and Nepal, the potential of microfinance demonstrated by these experiences has captured the attention of governments that have created specific legal frameworks to facilitate its growth.

The era of organized sector finance in much of South Asia (Bangladesh, India, and Pakistan) is generally acknowledged to have started with the Cooperative Credit Societies Act of 1904. The Act's objectives make it clear that the cooperative movement in South Asia was initiated to reach out to those who were otherwise excluded by the formal financial system–farmers, artisans, and other persons of limited means. The failure of cooperatives to serve this purpose adequately is noteworthy because some seven decades later, in the 1970s, it was still thought necessary to nationalize commercial banks throughout the region, and the first attempts were made to launch microfinance as we know it today.

Although the microfinance movement in South Asia has permanently changed the face of the financial sector through innovation and challenges to conventional thinking, the limits of the microfinance model become evident when it comes to serving many more poor people who are still excluded and to capturing a larger share of the financial service business of the existing clientele. Recent research shows that formal financing channels meet only 15 per cent of the needs of the poor in South Asia, with the proportion ranging from 2 per cent in Afghanistan to 55 per cent in Bangladesh.

Outreach is highly variable across the region. The six countries can be classified into high (Bangladesh and Sri Lanka), medium (Nepal and increasingly India), and low (Pakistan and Afghanistan) coverage levels.

Financing Structures: Micro Financial Institutions (MFI) essentially perform the role of intermediating financial resources and services between investors, banks, donors, and depositors, and the poor. Like any other financial intermediary, MFIs need risk capital that can be leveraged to add to their funding base for operations and on-lending to low-income clients, either through debt finance or by raising additional deposits. Unlike commercial financial institutions, MFIs in South Asia have evolved largely from non-profit entities. Given that the transaction costs of

microfinance delivery are high and account sizes are small, it typically has taken three to seven years for leading MFIs to become financially strong enough to attract commercial risk capital. As a result, donor funding has had to play the key role of "venture capital" in stimulating microfinance investment and promoting microfinance markets.

To the extent that MFIs address market failure and help to develop the financial sector by providing new avenues for low-income clients to access financial services, this role is justified and has a clear "public good" element.

The challenges everywhere are surprisingly similar. MFIs must develop management capacity at every level, which will enable them to run efficient operations to attract commercial finance from equity investors, financial institutions, and voluntary depositors in the long term, thereby enabling microfinance services to reach increasing proportions of the large number of low-income families in the region.

Five countries in South Asia already have national microfinance associations, while Sri Lanka is in the early stages of a second attempt to form a viable national association. All of these associations have taken on the role of industry advocates with various degrees of skill and success. While the associations have emerged out of the NGO-MFIs sector, it is clear that they will have to evolve if they are to keep-up with the changes, increase their value to the industry, and strengthen their ability to influence positive change.

South Asia is a worldwide pioneer in the field of MFI ratings; Micro-Credit Ratings International Limited (M-CRIL), based in India, is one of the first three international microfinance raters. Since then, two corporate rating agencies have entered the microfinance rating business, one in Pakistan and one in India. This puts South Asia in a good position to further facilitate links between MFIs and investors.

V. CONCLUSIONS

During the past 25 years, the microfinance movement has challenged conventional financial sector and government thinking, and, in the process, fundamentally altering the financial landscape. Today, it provides most of the access to financial services available to low-income people in South Asia, but it is still largely a separate part of the financial system, with few examples of direct service provision to the poor by mainstream commercial institutions. Despite the growing discussion about the enthusiasm for developing a seamless and inclusive financial sector, there is little evidence that this has happened yet.

Over the next few years, most of the growth in microfinance will come from a few large, profitable, specialized institutions that might in some ways rival small banks. These institutions will provide a range of diversified and flexible products and will do more to reach out to even poorer people. These dominant institutions will make more use of commercial funding, both debt and equity from commercial banks and the growing number of social investment funds.

Another step in the region's financial liberalization could occur if the wider political and social environment changes to recognize that economies of scale exist in financial service deliver. Cost is inversely proportional to the size of the accounts. Central banks and finance professionals will need to take the lead to urge politicians and media to help change the conservative economic environment relative to the poor. Without such liberalization, the process of microfinance evolution is likely to slow down as it hits the barrier of sustainability, particularly if the formal sector reaches a point at which the marginal return to corporate social responsibility falls below the losses associated with microfinance service providers and low-income clients. That point has not been reached yet, although in India some banks are already testing its limits. As long as engagement with low-income clients in South Asia is largely a matter of social responsibility, financial inclusion will remain a dream.

On the financial front, MFIs must meet the high standards of transparency and operational efficiency required of regulated financial institutions. Clearing this bar is the only route to offering savings accounts to clients and accessing local and international capital markets — all vital sources of funds if microfinance is to fulfil its potential.

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VOLATILITY AND INFORMATION OF UNDERLYING SPOT MARKET ON EXPIRATION - REFERENCE TO S&P CNX NIFTY FUTURE

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ABSTRACT

Indian capital market saw the launching of index futures on BSE on June 9, 2000 and on NSE on June 12, 2000. This launching of derivatives in Indian stock markets was perceived to increase volatility in the stock market by some researchers, at the same time some other researchers anticipated decline in volatility. In reality how was the volatility and information of stock market affected by the Nifty's index future expiration, is the objective of this study. The study has been undertaken with a comprehensive daily data set from June 2000 to May 2007. To measure the volatility GARCH (1, 1) models has been used. The result shows that, increase in volatility over expiration day and expiration week on the underlying spot market. This change in volatility is associated with increase in recent news over expiration day and expiration week. Further, as near moth contract nearing expiration, recent news surge make participants more sensitive towards price changes.

1. INTRODUCTION

In the wake of liberalization and globalization, Indian capital market, particularly the financial sector, has witnessed major transformations and structural changes. The major thrust of these reforms brought in have been, to improve market efficiency, enhancing transparency, checking unfair trade practices, and bringing up the standard of Indian Capital Market to the international level. The reforms have brought in several changes in the operations of the secondary markets, such as, automated on-line trading in exchanges, enabling trading terminals of the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) to be available across the country and making geographical location of an exchange irrelevant, reduction in the settlement period, and opening up of the stock markets to foreign portfolio investors etc. In addition to these developments, the introduction of derivative products on two of its principal existing exchanges viz., BSE and NSE in June 2000 to provide tools for risk management to investors, made India one of the forerunners among the emerging markets in South Asian region as far as stock market derivatives are concerned.

Before the introduction of derivatives, there had been a considerable debate on the question as to whether derivatives should be introduced in India or not. Finally L.C. Gupta Committee on Derivatives, which examined the whole issue in details, recommended in December 1997, the introduction of stock index futures. However the preparation of regulatory framework for the operations of the index futures contracts took another two and a half-year more, as it required not only an amendment in the Securities Contracts (Regulation) Act, 1956 but also the specified regulations for such contracts. Finally, the Indian capital market saw the launching of index futures on June 9, 2000 on BSE and on June 12, 2000 on NSE. A year later, options on index were also introduced on June 4, 2001 for trading on these exchanges.

The spot and futures markets provide investors with an opportunity to trade in the same underlying security. It is quite logical, therefore, to anticipate a trading induced dynamic relationship between the two markets. There are several ways in which opening of the futures trading can increase efficiency and smoothen price variations in a cash market and the interrelatedness of the two markets suggests that speculation in the futures market destabilizes prices in the spot market. In particular, the futures expiration's effect on the underlying spot market volatility on the day when contract expires has been investigated widely. However, the research evidence has been inconclusive. Hence, the present study aims to investigate the impact of Index Futures contract's expiration on the underlying Nifty Index spot market volatility and Information. Towards this purpose, we have used the GARCH (1, 1) models to capture the volatility clustering in financial data series.

2. REVIEW OF LITERATURE

Worldwide many theoretical and empirical studies have been carried out to evaluate the impact of listing of futures and options on the cash market. Out of which, a variety of studies have been conducted to evaluate the impact of derivatives trading on the underlying market mostly in developed countries markets. Studies in developing markets in context to introduction of derivatives are very scanty and very few studies have attempted to know the impact of introduction of derivatives trading in emerging market economies like India. Two Propositions concerning the impact of derivatives trading on the spot market are prevalent in the literature. Proposition of 'destabilizing forces' argue that derivatives trading increases stock market volatility because of the existence of high degree of leverage, expected presence of uninformed traders due to low transactions cost involved to take position in the futures market, and the availability of lower level information of derivatives traders with respect to cash market traders is likely to increase the asset volatility. Stein (1987) in his revolutionary theoretical model concluded that opening up of a futures market improves risk sharing and therefore reduces price volatility and if the speculators observe a noisy but informative signal, the hedgers react to the noise in the speculative trades, producing an increase in volatility. These uninformed traders could destabilize the cash market. Cox (1976), Figlewski (1981) and Chatrath *et al* (1995) found results supporting this proposition. On the other hand, the speculators perform the important role in providing liquidity to the market and rapid processing of information. Derivatives trading can improve the availability of information flow due to low transaction costs than those in the cash market, thereby, transmitting new information more quickly to the futures market. As a consequence, derivatives market provides an additional channel by which information can be transmitted to the cash markets. Frequent arrival and rapid processing of information might lead to increased volatility in the underlying spot market. Antoniou and Holmes (1995) however did not find link between information and volatility.

Dentine (1978), on the other hand argued that the futures market improves market depth and reduces volatility. Proposition of 'market completion' argue that derivatives trading helps in price discovery, improves the overall market depth, enhances market efficiency, supplements market liquidity, reduces asymmetric information and thereby reduces volatility of the cash market (Kumar *et al*, 1995; Antoniou *et al*, 1998). In addition to this, speculative activity may be transferred from the cash market to a more regulated futures market, dampening spot market volatility by reducing amount of noise trading. This also suggests that the introduction of derivatives trading would be accompanied by a decline in trading volume of the underlying market.

In Indian context, studies by Thenmozhi (2002), Nath (2003), Bandivadekar *et al*. (2003), Thenmozhi *et al*. (2004) and Y.P.Singh and Shalini Bhatia (2006) reported decline in volatility while Shenbagaraman (2003), , Pretimaya *et al*.(2007), and Sibani Prasad Sarangi *et al*. (2007) did not find significant impact on market volatility in India.

Another important factor that is affecting the volatility in post derivatives period is their expiration effects proposed by Samuelson (1965), known as the *Samuelson hypothesis* (SH) or the time-to-maturity effect (TTM). Based on the hypothesis the model proposes the rise in the volatility of futures prices as maturity nears. The intuition behind Samuelson's theory is that, as time passes and we approach the maturity date, and our future becomes our present, we become more and more sensitive to information that influence the final level of the futures price. When the maturity date arrives, arbitrage, forces the futures price to equal the actual spot price. The main source of concern regarding expiration-day effects of index derivatives arises from cash settlement. Several authors have tested for unusual volatility in the underlying market on days when derivatives expire. Expiration day effects in the United States have been examined by Stoll an Whaley (1986, 1987, 1991), Edwards (1988), Feinstein and Goetsmann (1988), Herbst and Maberly(1990), and Chen and Williams(1994) found unusual volatility, volume and price effects. From other international index futures markets, Karoyli (1996) for Japan, Stoll and Whaley (1997) for Australia, and Bollen and whaley (1998) for Hong Kong found evidence in support of expiration day effects.

In India, Thenmozhi and M. Sony Thomas (2004), Suchismita Bose and Sumon Kumar Bhaumik (2007), found the results in support of expiration day effect as increased volatility in spot market. Saravanan G and Malabika Deo (2009) identified insignificant expiration day effect on increased volatility in spot market. Whereas Y.P.Singh and Shalini Bhatia (2006) found decline in volatility which is contrary to the experience elsewhere.

The futures expiration's effect on the underlying spot market volatility on the day when contract expires has been investigated widely. However, the research evidence has been inconclusive. Hence, the present study aims to investigate the impact of Index Futures contract's expiration on the underlying Nifty Index spot market volatility and information.

3. METHODOLOGY

Data and Sample

The data for the study consist of daily closing price of the S&P CNX Nifty Index, Nifty Junior Index, and S & P 500. The data span from a period of 12th June 2000 to May 31, 2007. The reason for studying the data upto 2007 is that, derivatives contract on Nifty Junior were introduced on June 2007. Nifty Junior has been used as a control variable for market wide factors. Hence, after introducing derivatives in Nifty Junior, it cannot be used as proxy for market wide factors. Hence, data have been collected upto 31st may 2007. Nifty Junior and S & P 500 have been used as control variables to remove market-wide and international market-wide influence respectively on S&P CNX Nifty. This study is based on National Stock Exchange Data because 95 percent of the total trading in derivatives is done at NSE.

Analysis of Data

The present research is based on the stock index price returns. The daily return based on closing price is computed using the following formula.

$$R_t = \text{Log}\,(P_t / P_{t-1}) \qquad (1)$$

Where, P_t - Log of price at time t, and P_{t-1}- Log of price at time $t-_{1.}$

In order to determine whether the arrival of futures trading has any effect on volatility of the underlying spot market, it is necessary to separate the volatility arising from market wide factors, international wide factors and day of the week effects; those are responsible for other than futures trading. Earlier authors, such as, Antoniuo and Holmes (1995), Kamara, *et al* (1992), and Greoge, *et al.* have not removed the factors which are responsible for market wide and international wide volatility by regressing the spot market returns against a proxy variable for which there was no related futures contract available. For Indian stock market, Nifty Junior Index comprises stocks for which no futures and options contracts were traded until June 1, 2007. Hence, it serves as a control variable for us to isolate market wide factors and S & P 500 have been used as a control variable to remove international market-wide influence and days dummies to remove day of the week effects on S&P CNX Nifty, thereby we can concentrates on the residuals volatility in the Nifty as a direct result of introduction of index futures contracts.

The Ordinary Least Squares Regression (OLS) assumes constant error variance, but heteroskedasticity causes the OLS estimation to be inefficient. In case of financial data large and small errors tend to occur in clusters, i.e. large returns are followed by more large returns, and small returns by more small returns. As volatility clustering is a characteristic of financial data where large changes tend to follow large changes and small changes tend to follow small changes. OLS estimation becomes inefficient to analyze the volatility in the face of such heteroskedasticity. Findings of heteroskedasticity in stock returns are well documented (Mandelbrot 1963, Fama 1965, Bollerslev 1986). The presence of heteroskedasticity in the data calls for the use of ARCH family model to study volatility. Hence, this study makes use of non-linear models like ARCH.

Autoregressive Conditional Hetroscedastic (ARCH) model was first introduced by Engel (1982). And then the ARCH model was generalized by Bollerslev (1986), and it is called GARCH (Generalised Autoregressive Conditional Hetroscadasticity). GARCH models explain variance by two distributed lags: firstly, on past squared residuals to capture high frequency effects or news about volatility from previous period measured as lag of the squared residuals from mean equation, and secondly, on lagged values of variance itself to capture long-term influences. A GARCH (p, q) model is given by the following equation.

$$Y_t = \beta_0 + \beta_1 X_i + \varepsilon_t \quad \varepsilon t / \Psi t_{-1} \sim (0, h_t) \qquad (2)$$

$$h_t = \alpha_0 + \sum_{t=1}^{p} \alpha_1 \varepsilon^2 t_{-1} + \sum_{j=1}^{q} \alpha_2 h_{t-1} + v_t \qquad (3)$$

Equation (2) represents the conditional mean equation (Y_t), is written as a function of constant (β_0), exogenous variable (X_i) and error term (ε_t). Equation 3, represents the conditional variance equation (h_t), is the one period ahead forecast variance. The conditional variance equation is a function of constant (α_0), lagged squared residual from the mean equation- ARCH ($\varepsilon^2 t_{-1}$), lagged values of variance itself (h_{t-1}) - GARCH, and v_t is white noise error term. In variance equation P is the degree of ARCH, and q is the degree of GARCH. The size of the parameters α_1 and α_2 determine the short-term dynamics of the resulting volatility time-series. Large co-efficient of α_2 shows that shocks to conditional variance take a long time to cancel out, so volatility is persistence. To measure the volatility implication of spot market on introduction of futures contract, in our study GARCH (1, 1) is used as mentioned in the following mean and variance equation:

$$R_t = \beta_0 + \beta_1 R_{NiftyJunior,\,t} + \beta_2 R_{S\&P\,500,\,t-1} + \varepsilon t \qquad (4)$$
$$h_t = \alpha_0 + \alpha_1 \varepsilon^2_{t-1} + \alpha_2 h_{t-1} + v_t \qquad (5)$$

Where in equation (4), R_t is daily return on the S&P CNX Nifty, $R_{NiftyJunior,\,t}$ is daily return of Nifty Junior is used to eliminate the effect of market wide factors in India, $R_{S\&P\,500,\,t-1}$ is lagged daily return of S&P 500 to eliminate the effect of international wide factors and thereby variance equation can able to focus only on volatility related derivatives introduction. To study how the futures contract expiration influences cash market, the maturity effect is examined in terms of volatility and information flows on expiration day and expiration week of futures. To check the volatility changes over expiration day and expiration week, the variance equation is augmented with expiration day dummy with the following specification:

$$h_t = \alpha_0 + \alpha_1 \varepsilon^2_{t-1} + \alpha_2 h_{t-1} + \alpha_3 D_{FED} \qquad (6)$$
$$h_t = \alpha_0 + \alpha_1 \varepsilon^2_{t-1} + \alpha_2 h_{t-1} + \alpha_3 D_{FEW} \qquad (7)$$

To study how the futures contract expiration influences the cash market volatility, an expiration day dummy and expiration week dummy are introduced in the conditional variance equation (6) and (7) respectively. The expiration day dummy takes the value '0' for all trading days on which no futures contracts are expiring and it takes the value '1' for the last Thursday of each month when Index futures expire, in post derivatives period. If the last Thursday happens to be a public holiday then the contracts will expire on the previous day, i.e. a Wednesday when the dummy will take the value 1, as this will be the expiration day for that month. Likewise, The expiration week dummy takes the value '0' for all the trading days of non-expiration week on which no futures contracts are expiring and it takes the value '1' for all the trading days of expiration week of each month in post derivatives period. If the coefficients of the expiration day or week dummies are significant then it would imply that the expiration of futures contracts causes abnormal stock price movements on expiration days or week.

Further to check the information flow or recent news changes over expiration day and expiration week of futures contracts, the variance equation (8) and (9) augmented with following specification:

$$h_t = \alpha_0 + \alpha_1 \varepsilon^2_{t-1} + \alpha_2 h_{t-1} + \alpha_3 \varepsilon^2_{t-1} * D_{FED} \qquad (8)$$
$$h_t = \alpha_0 + \alpha_1 \varepsilon^2_{t-1} + \alpha_2 h_{t-1} + \alpha_3 \varepsilon^2_{t-1} * D_{FEW} \qquad (9)$$

To check the recent news changes in spot market over expiration day and expiration week of futures contracts, recent news term ε^2_{t-1} or Arch term in conditional variance equation is interacted with expiration day dummy and week dummy of futures respectively. Arch term is squared residual from mean equation, which explains impact of yesterday or recent news on today's volatility determination. To determine any change or shift in the recent news on expiration day, α_3 co-efficient is considered. If the coefficient of the interactive dummy is significant then it would imply that the expiration of futures contracts causes abnormal recent news movements on expiration days and expiration week respectively. In other word, it can be understood as volatility changes on expiration day in response to change in recent news.

4. EMPIRICAL RESULTS

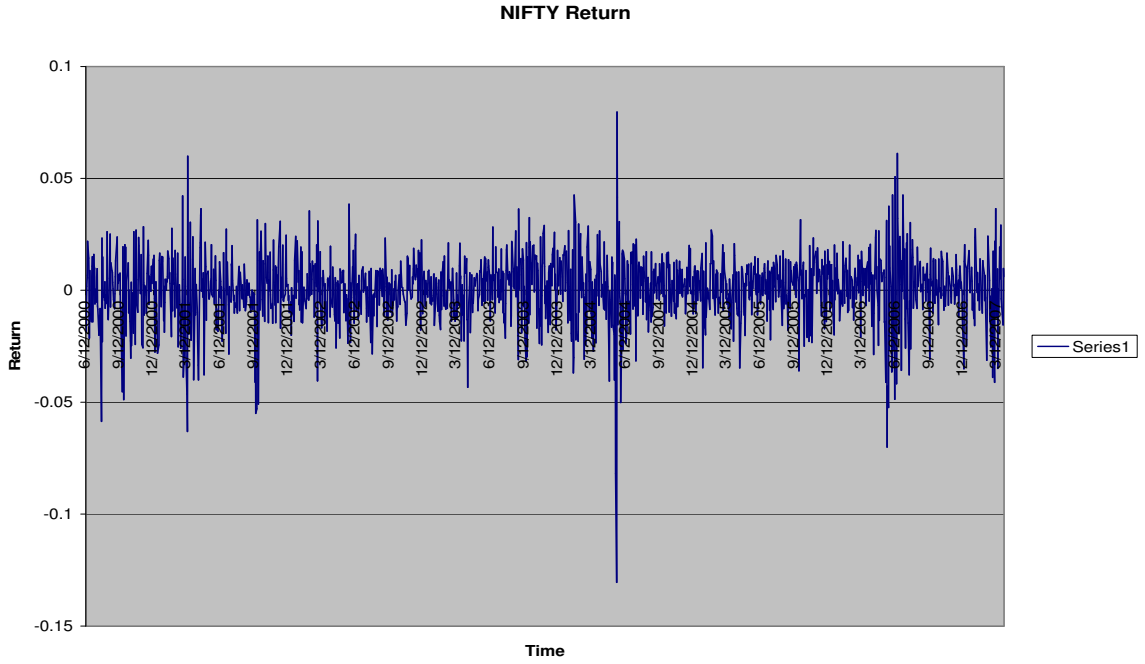
The descriptive statistics in table-1 indicate that the daily mean return on nifty is 0.000681 and the standard deviation is 0.014451. Standard deviation is more than the mean return and indicates that the fluctuation in the market is very high. Skewness of Nifty return is -0.90919 which indicates that the most of the returns are in positive side and there is upward trend of NSE Nifty index.

Table1: Descriptive statistics of S&P CNX NIFTY Returns

Mean	0.000681
Median	0.001639
Maximum	0.079691
Minimum	-0.130539
Std. Dev.	0.014451
Skewness	-0.909199
Kurtosis	10.06939
Jarque-Bera	3387.899
Probability	0

Chart-1 depicts the time series of nifty return. Where it indicates that the some periods are more risky than other i.e. the expected magnitude of error at some times is greater than the others, which indicate that Stock Return is of hetroscedastic nature. These risky returns are not distributed randomly across the data. Instead, there is a degree of auto correlation in the riskiness of financial returns. This characteristic of a time series is known as "Volatility Clustering". The Jarque Bera test for Nifty Return is significant and the series has excess kurtosis as 10.066939. All these results indicate that the Stock Return is of hetroscedastic nature which justifies the use of ARCH model in the present study.

Chart 1: Time series of Daily S&P CNX NIFTY Returns



To study the expiration effect on Spot market volatility, the maturity effect is examined in terms of volatility and information flows on expiration day and expiration week of futures.

Table 2: Future expiration and Spot Market Volatility

Variance Equation				
	Expiration Day		Expiration week	
	Co-efficient	z-Statistic	Co-efficient	z-Statistic
Constant	1.89E-06*	1.977146	4.27E-06**	2.922480
ARCH 1	0.061970**	4.643741	0.090811**	4.611889
GARCH 1	0.889101**	36.25755	0.822774**	23.01202
D_{FED} / D_{FEW}	2.47E-05**	3.762642	4.78E-06**	2.855861
R-squared Log likelihood	0.699239 6024.351		0.699201 6017.800	

**and * statistically significant at 1% and 5% level respectively.

The expiration day dummy in GARCH model has a co-efficient of 2.47E-05, which is positive and statistically significant, implying that the futures contract expiration increases the Volatility in underlying spot index. Further, the expiration week dummy in GARCH model has a co-efficient of 4.78E-06, which is positive and statistically significant. This also implying that the futures contract expiration increases the Volatility in underlying spot index in expiration week, however, when comparing to volatility of expiration day, volatility of expiration week is less, this implies that volatility is increasing as futures contract nearing to expiration, as news coming makes the trader more sensitivity and presence of arbitrage trading activity.

Table 3: Future expiration and Spot Market Information

Variance Equation				
	Expiration Day		Expiration week	
	Co-efficient	z-Statistic	Co-efficient	z-Statistic
Constant	3.40E-06**	3.466704	3.02E-06**	3.342389
ARCH 1	0.063328**	4.350822	0.055308**	4.157282
GARCH 1	0.878409**	33.83608	0.887044**	36.65189
ARCH 1*D_{FED} / ARCH 1*D_{FEW}	0.098546	1.407586	0.044440*	1.995704
R-squared Log likelihood	0.698985 6014.351		0.698988 2.013902	

**and * statistically significant at 1% and 5% level respectively.

To check the recent news changes in spot market over expiration day and expiration week of futures contracts, recent news term ε^2_{t-1} or Arch term in conditional variance equation is interacted with expiration day dummy and week dummy of futures respectively in GARCH model. Table 3, shows the results of information flow over expiration day and week. The interactive dummy (ARCH 1*D_{FED}) has a co-efficient of 0.098546, which is positive and statistically insignificant. This suggest insignificant recent news surge on expiration day.

The interactive dummy (ARCH 1*D_{FEW}) has a co-efficient of 0.044440, which is positive and statistically significant. This suggests presence of significant recent news surge over expiration week than non-expiration weeks. Though, the interactive dummy (ARCH 1*D_{FED}) has insignificant value, but, it has greater value than the interactive dummy of ARCH 1*D_{FEW}. This shows the greater influence of recent news on expiration day over expiration week. These results reveal that the volatility of underlying is increasing as a result of recent news surge in underlying. In other word, recent news makes near month contract holder more sensitive, as a result, volatility of the underlying is increases on maturity.

Overall the results of the study reveal that the volatility of the underlying is increased as a result of increase in recent news on expiration day and expiration week. Further, recent news surge make participants more sensitive towards price changes.

CONCLUSION

In this paper an attempt was made to study the impact of expiration of Index Futures on the underlying stock market volatility. The results estimated using GARCH model revealed significant increase in volatility over expiration day and expiration week on the underlying spot market. This change in volatility is associated with increase in recent news over expiration day and expiration week. Further, as near moth contract nearing expiration, recent news surge make participants more sensitive towards price changes.

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A TREND ANALYSIS OF LIQUIDITY MANAGEMENT EFFICIENCY IN SELECTED PRIVATE SECTOR INDIAN STEEL INDUSTRY

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ABSTRACT

Since privatisation, to ensure swift economic development it was deemed essential that a sound steel production program on a formidable basis must be formulated. Accordingly, the private sector has set up many more integrated steel plants and enhanced the existing plants to increase current production capacity. To some extent the priority given by the country failed to flourish due to poor capacity, under-utilisation and poor consumption. Working capital is accountable for poor capacity, under-utilisation and poor consumption. The competence of the working capital in terms of short-term liquidity is of foremost significance in the case where we examine performs and guiding principle presently overcoming in an industry with a view to finding out whether they are reasonable or require enhancement. Keeping this in view, a study of liquidity trend analysis of the selected private sector steel companies is undertaken in the present work.

KEY WORDS

Liquidity Management, Working Capital Components, Trend Analysis, Private Sector Indian Steel Industry.

1.1 INTRODUCTION

The Government of India has been extending its helping hands to regulate the inadequate resources with a view to drawing up a unified and well co-ordinate industrial infrastructure for achieving a balanced and speedy economic growth in the country, since independence. Indian economic growth increased on an average from 3.6 per cent to 6 per cent during the pre-liberalisation period. After economic reforms these rate of growth increased from 6 per cent to 8.1 per cent [1]. Since privatisation policy (July 1991), the Government of India has opened up the floodgates for multinationals to participate in the domestic market of the country.

In such a changed economic environment, the private sector investment was automatically increased. But the production capacity and growth rate in the private sector did not increase promptly due to under-utilisation and poor financial management. Improper management of working capital in terms of liquidity, solvency, operating efficiency and profitability is accountable for inadequate financial performances.

Management of working capital has profitability and liquidity implications. Hence, working capital proposes a familiar front for profitability and liquidity management. The principal objective of the present paper is to conduct a study on the overall efficiency of the management of working capital with special reference to short-term liquidity. Liquidity refers to the ability of a concern to meet its short-term obligations as and when they become due. Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. Shortfall in liquidity results in bad credit ratings, and finally it may result in the closure of the company. At the same time a very high degree of liquidity is also bad, as idle assets earn nothing.

After some investigation, steel Industry has been singled out for research in the present study. This is definitely the backbone of economic growth in any industrial country. A thick relationship has been found between the level of economic growth and the quantum of steel consumption in developed as well as developing countries. Since privatisation, to ensure swift economic development it was deemed essential that a sound steel production program on a formidable basis must be formulated. Accordingly, the private sector has set up many more integrated steel plants and enhanced the existing plants to increase current production capacity. To some extent the priority given by the country failed to flourish due to poor capacity, utilisation and consumption. The per capita steel consumption in India is about 30 kg, which is very low compared to the other countries like; China where per capita consumption has already exceeded 180 kg whereas world average is over 400 kg in the developed countries [2].

According to the industry experts' current available resource and production capacity is under untilised as demonstrated by per capita consumption. This call for a full diagnosis of the malady, that is identification, analysis and quantification of the interfering constraints in achieving full utilisation of the capacities, thus opens a vast field for research and enquiry. In the present study, therefore; an attempt has been made to examine and evaluate the management of short-term liquidity of the private sector companies as a factor accountable for poor performance in the steel Industry in India.

1.2 OBJECTIVES OF THE STUDY

More specifically it seeks to dwells upon mainly the following issues:

- To observe the liquidity position and area of weaknesses, if any, of the selected companies under the study;
- To examine the trends of working capital as well as test of competency of the working capital;
- To make some suggestions and specific recommendations for improvement of the liquidity management.

1.3 METHODOLOGY OF THE STUDY

We select two private sector steel companies operating in India in the present study i.e., (i) Tata Steel Ltd. (ii) Lloyds Steel Industries Ltd. The study relates to a period of 9 years, starting from 1997-98 and ending on 2005-06. For the purpose of study only secondary data have been

used. The study is based on the secondary data obtained from the audited balance sheets and profit & loss accounts and also the annual reports of the respective companies. Besides, the facts, figures and findings advanced in similar earlier studies and the government publications are also used to supplement the secondary data. In the course of analysis in this study, various accounting and statistical tools and techniques have been used. Accounting techniques includes ratio analysis, while among statistical techniques the A.M., S.D., C.V, test of significance (chi-square test), trend indices, time series analysis. The use of all these techniques at different places has been made in the light of requirement of analysis.

1.4 MEANING OF LIQUIDITY

The term 'Liquidity' means the debt-paying ability of a concern when it becomes due. Liquidity may be defined as "The ability to realise value in money - the most liquid among all assets. It has two dimensions – (a) the time required to convert the assets into money and (b) the certainty of the realised price[1]". Corporate liquidity covers the quantum of current/liquid assets, their structure, the circular flow of these assets and technical solvency in the sense of measuring the extent of current assets as cover over short-term obligations.

1.5 LIQUIDITY TRENDS

In working capital analysis, the direction of change over a period of a year is of crucial importance. Trend analysis of ratios indicates the direction of change. The term 'trend' is very commonly used in day to day conversation. Trend is the basic tendency of production, sales, income, current assets, and current liabilities etc., to grow or decline over a given period of time. In accounting, trend is generally computed trend ratios or by trend percentages. Trend ratios are the basic tool for trend analysis of an enterprise.

The analysis of a series of trend ratios provides only a view regarding increase and decrease or rate of increase and decrease. It does not depict that increase or decrease is favourable or adverse. To make a view that a trend of liquidity is satisfactory or not it is better to compare it with trend values. To find out the trend values of working capital components, straight-line trend under least square method of time series data should be calculated and analysis of trend should be made after a comparative study of both trend ratios and trend values as base.

1.6 FINDINGS OF THE STUDY

With a view to investigating analysis liquidity trend, we explore net working capital trend followed by current assets trend and current liabilities trend. All of them under the period of study are given one by one in the paragraphs that follow.

1.6.1 Net Working Capital Trend

Net working capital trend is one of the devices for measuring liquidity. As a measuring rod of efficiency or otherwise of the trend analysis of liquidity, net working capital trend analysis is highly relevant as it presents the composite reflection of the trend analysis of current assets and current liabilities. The direction of change in working capital position over the period of time is an indication of the effectiveness or ineffectiveness of the working capital management. The working capital trend of the companies under the study is analysed in the sub-sections as below.

TATA STEEL LTD.

Net working capital, its indices and trend values of net working capital of Tata Steel Ltd. are presented in Table 1.

Table 1: Actual Working Capital, Indices of Working Capital and Trend Values of Working Capital of Tata Steel Ltd.

Year	Actual Working Capital	Indices	Trend Values (Y_c)*	Difference
1997-98	1735.03	100.00	1253.91	481.12
1998-99	917.59	52.89	949.67	-32.08
1999-00	431.53	24.87	645.43	-213.90
2000-01	251.78	14.51	341.19	-89.41
2001-02	1089.24	62.78	36.95	1052.29
2002-03	494.22	28.49	267.29	-226.93
2003-04	1477.30	85.15	571.53	-905.77
2004-05	1161.29	66.93	875.77	-285.52
2005-06	959.83	55.32	1180.01	220.18

Source: CMIE database

* Y_c stands for computed values of working capital based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 1558.15-304.24X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

From the very beginning to the year 2000-01, the net working capital decreased continuously, it was increased significantly during the year 2001-02 and thereafter it decreased significantly in terms as negative up to the year 2005-06. As a result, the working capital indices are 52.89 in 1998-99, 24.87 in 1999-00 and 14.51 in 2000-01 that is less than 100 (taking base year indices) as well as its previous year as compared to the base year, 1997-98 as due to considerable decrease in working capital components. However, the indices of working capital significantly decreased to (-) 24.89 in 2002-03, (-) 85.15 in 2003-04, (-) 66.93 in 2004-05 and (-) 55.32 in 2005-06 in comparison to 1997-98, the base year. This is due to noteworthy decreased in the working capital of Tata Steel Ltd.

The linear least squares trend values of net working capital are shown in Table 1. Yearly Rs. 31.03 crore decreases net working capital. The trend values of net working capital were more than actual values of working capital throughout the period under study except 1997-98, 2001-02 and 2005-06. In 2001-02 and 2003-04 the difference between trend value and actual value is too high. The negative deviations were significant due to a decrease in current assets and also a simultaneous increase in current liabilities.

To test the significance between the differences of the actual values and trend values of working capital in the company, χ^2-test has also been applied. It can be observed that the tabulated value of χ^2 is 15.50 at 5% level of significance with 8 degrees of freedom, while the calculated

value of χ^2 is 28485.60. As the calculated value of χ^2 is more than the tabulated value of χ^2, it shows that the difference between the actual values and trend values of working capital is noteworthy.

LLOYDS STEEL INDUSTRIES LTD.

Net working capital, its indices and trend values of net working capital of Lloyds Steel Industries Ltd. are presented in Table 2.

Table 2: Actual Working Capital, Indices of Working Capital and Trend Values of Working Capital of Lloyds Steel Industries Ltd.

Year	Actual Working Capital	Indices	Trend Values (Y_c)*	Difference
1997-98	391.39	100.00	47.19	344.20
1998-99	138.32	35.34	16.16	122.16
1999-00	6.22	1.59	- 14.87	21.09
2000-01	- 95.80	- 24.48	- 45.90	- 49.90
2001-02	- 136.01	- 34.75	- 76.93	- 59.08
2002-03	- 142.58	- 36.43	- 107.96	- 34.62
2003-04	- 160.91	- 41.11	- 138.99	- 21.92
2004-05	- 99.38	- 25.39	- 170.02	70.64
2005-06	- 241.16	- 61.62	- 201.05	- 40.11

Source: CMIE database

* Y_c stands for computed values of working capital based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 78.22 – 31.03X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

Table 2 shows that the net working capital registers a decreasing trend through out the study period. The net working capital indices from 1998-99 to 2005-06 are 35.34, 1.59, (-) 24.48, (-) 34.75, (-) 36.43, (-) 41.11, (-) 25.39 and (-) 61.62 respectively in comparison to 1997-98, the base year. The indices of net working capital decreased due to decrease in inventories and a remarkable increase in current liabilities.

The linear least squares trend values of working capital are shown in Table 2. Working capital is decrease by yearly Rs. 31.03 crore. The trend values of net working capital were negative except first two years. The negative figure indicates net working capital decreased significantly. The trend values of net working capital were less than actual values of net working capital in the year 1997-98, 1998-99, 1999-00 and 2004-05 due to a decrease in current assets and also a simultaneous increase in current liabilities.

To test the significance between the differences of the actual values and trend values of working capital in the company, χ^2-test has also been applied. It can be observed that the tabulated value of χ^2 is 15.50 at 5% level of significance with 8 degrees of freedom, while the calculated value of χ^2 is 3252.59. As the calculated value of χ^2 is more than the tabulated value of χ^2-test, it shows that the difference between the actual values and trend values of working capital is significant.

1.6.2 TREND OF CURRENT ASSETS

As already discussed, a change in trend over a period of time is of crucial importance. Therefore, an analysis has been made to know about the trend in current assets of various private sectors steel companies under the study. In addition to this, the existing current assets' position has also been examined.

TATA STEEL LTD.

Current assets, current assets indices and trend values of current assets of Tata Steel Ltd. are portrayed in Table 3.

Table 3: Actual Current Assets, Current Assets Indices and Trend Values of Current Assets of Tata Steel Ltd.

Year	**Actual Current Assets**	**Indices**	Trend Values (Y_c)*	**Difference**
1997-98	3451.06	100.00	3057.36	393.70
1998-99	3264.99	94.61	3158.22	106.77
1999-00	3069.95	88.96	3259.08	-189.19
2000-01	3246.05	94.06	3359.94	-113.89
2001-02	3130.43	90.71	3460.80	-330.37
2002-03	3679.66	106.62	3561.66	118.00
2003-04	2868.08	83.11	3662.52	-794.44
2004-05	4127.31	119.60	3763.38	363.93
2005-06	4309.68	124.88	3864.24	445.44

Source: CMIE database

* Y_c stands for computed values of current assets based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 2956.50 + 100.86X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

The current assets mark a fluctuating and poor trend throughout the period under study from 1997-98 to 2005-06. The indices of current assets were less than the base year in 1998-99 to 2001-02 and also in 2003-04 and the last two years indices were 119.60 and 124.88. Inventories and receivables cause the increase or decrease in indices of current assets.

The linear least squares trend values are also presented in Table 3. The yearly increase in current assets comes to Rs. 100.86 crore. The differences between actual values and trend values are significant only in 2003-04 of the study period. However, the differences are negative in the years 1999-00 to 2001-02 and 2003-04 while in the remaining years the differences is positive. The negative deviation of the years 2001-02 and 2003-04 is comparatively higher in the period under study and it is due to a decrease in the level of inventory and receivables by the company. All deviations of current assets are mainly due to fluctuations in the inventories and receivables. So, it is observed that inventories and receivables have played a crucial role in the fluctuations of current assets as compared to its trend values.

χ^2-test has been helpful to test the significance of differences between actual values and trend values of current assets. The calculated value of χ^2 comes to 363.46, while the tabulated value of χ^2 is 15.50 at 5% level of significance with 8 degrees of freedom, which shows that the differences between the actual and trend values of current assets in the company are significant. This is the indication of well management of working capital for the payment of immediate matured obligations.

LLOYDS STEEL INDUSTRIES LTD.

Current assets, current assets indices and trend values of current assets of Lloyds Steel Industries Ltd. are portrayed in Table 4.

It is clear from Table 4 that current assets marked a decreasing trend throughout the study period. The indices of current assets were very low compare to the base year and they were less than 100 in all year. The indices of current assets were 82.84, 72.66, 74.31, 65.78, 61.30, 61.13, 49.57 and 51.48 respectively from 1998-99 to 2005-06. Inventories and receivables cause the increase or decrease in indices of current assets.

The linear least squares trend values are also presented in Table 4. The yearly decrease in current assets comes to Rs. 65.21 crore. The differences between actual values and trend values are not significant in any year. However, the differences are negative in the years 1998-99 to 2002-03 while in the remaining years the differences are positive. The positive deviation is highest in the year 2005-06 during the period under study and it is due to an increase in the level of inventory and receivables by the company. All deviations of current assets are mainly due to fluctuations in the inventories and receivables. So, it is observed that inventories and receivables have played a crucial role in the fluctuations of current assets as compared to its trend values.

Table 4: Actual Current Assets, Current Assets Indices and Trend Values of Current Assets of Lloyds Steel Industries ltd.

Year	**Actual Current Assets**	**Indices**	Trend Values (Y_c)*	**Difference**
1997-98	882.76	100.00	868.06	14.70
1998-99	731.28	82.84	802.85	- 71.57
1999-00	641.40	72.66	737.64	- 96.24
2000-01	656.01	74.31	672.43	- 16.42
2001-02	580.70	65.78	607.22	- 26.52
2002-03	541.12	61.30	542.01	- 0.89
2003-04	539.64	61.13	476.80	62.84
2004-05	437.58	49.57	411.59	25.99
2005-06	454.46	51.48	346.38	108.08

Source: CMIE database

* Y_c stands for computed values of current assets based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 933.27 – 65.21X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

To test the significance of differences between actual values and trend values of current assets, χ^2-test has been applied. The calculated value of χ^2 comes to 64.39, while the tabulated value of χ^2 is 15.50 at 5% level of significance with 8 degrees of freedom, which shows that the differences between the actual and trend values of current assets in the company are significant.

1.6.3 TREND OF CURRENT LIABILITIES

An analysis has been designed to know the changes of current liabilities of the various private sectors Iron and Steel enterprises in India under the study from 1997-98 to 2005-06 in the following sub-sections.

TATA STEEL LTD.

Current liabilities, indices of current liabilities and trend values of current liabilities of Tata Steel Ltd. are portrayed in Table 5.

It is clear from the Table 5 that current liabilities holds a increasing except 2001-02 and 2005-06 as compare to the previous year. The in dices of current liabilities are increases from 136.79 in 1998-99 to 307.08 in 2005-06, as compare to 1997-98, as base year. It happened due to increase in current liabilities.

Table 5: Actual Current Liabilities, Indices Current Liabilities and Trend Values of Current Liabilities of Tata Steel Ltd.

Year	Actual CL & Prov.	**Indices**	Trend Values (Y_c)*	Difference
1997-98	1716.03	100.00	1581.76	134.27
1998-99	2347.40	136.79	2042.27	305.15
1999-00	2638.42	153.75	2502.78	135.64
2000-01	2994.27	174.49	2963.29	30.98
2001-02	2041.19	118.95	3423.80	- 1382.61
2002-03	4173.38	243.20	3884.31	289.07
2003-04	4345.38	253.22	4344.82	0.56
2004-05	5288.60	308.19	4805.33	483.27
2005-06	5269.51	307.08	5265.84	3.67

Source: CMIE database

* Y_c stands for computed values of current liabilities based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 1121.25 + 460.51X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

Table 5 shows the linear least squares trend values of current liabilities of the company and it is yearly increase by Rs. 460.51 crore. The trend values of current liabilities are not significant in 2001-02 of the study period. The differences are negative only in the year 2001-02 while the differences are positive in the remaining years. It was due to increases in current liabilities in this period. χ^2-test has been applied to test the significance of differences between actual values and trend values of current liabilities. The calculated value of χ^2 is 693.11 while the tabulated

value comes to 15.50 at 5% level of significance with 8 degrees of freedom, which shows that, the difference between actual and trend values is significant. This shows that current liabilities available in the business not suit the business conditions.

LLOYDS STEEL INDUSTRIES LTD.

Current liabilities, indices of current liabilities and trend values of current liabilities of Lloyds Steel Industries Ltd. are portrayed in Table 6.

Table 6: Actual Current Liabilities, Indices Current Liabilities and Trend Values of Current Liabilities of Lloyds Steel Industries Ltd.

Year	Actual CL & Prov.	**Indices**	Trend Values (Y_c)*	Difference
1997-98	491.37	100.00	597.57	- 106.17
1998-99	592.96	120.67	609.40	- 16.44
1999-00	635.18	129.27	621.26	13.92
2000-01	751.81	153.00	633.12	118.69
2001-02	716.71	145.86	644.98	71.73
2002-03	683.70	139.14	656.84	26.86
2003-04	700.55	142.57	668.70	31.85
2004-05	536.96	109.28	680.56	- 143.60
2005-06	695.62	141.57	692.42	3.20

Source: CMIE database

* Y_c stands for computed values of current liabilities based on the least squares equation in the form of $Y_c = a + bX$, where the equation comes to $Y_c = 585.68 + 11.86X$ with origin at the year 1997-98; X unit = 1 year and Y unit = rupees in crore.

The current liabilities show an increasing trend up to 2001-02 and thereafter a fluctuating trend up to the year 2005-06. Indices of current liabilities are higher than the base year in all year and these are 120.67, 129.27, 153.00, 145.86, 139.14, 142.57, 109.28 and 141.57 from 1998-99 to 2005-06. It happened due to fluctuation and increase in current liabilities.

The linear least squares trend values of current liabilities in the company are shown in Table 6. The current liabilities yearly increase by Rs. 11.86 crore. The difference of actual and trend values of current liabilities are not significant throughout the period under study. The differences are negative in the years 1997-98, 1998-99 and 2004-05, while the differences are positive in the remaining years.

χ^2-test has been applied to test the significance of differences between actual values and trend values of current liabilities. The calculated value of χ^2 is 82.77 while the tabulated value comes to 15.50 at 5% level of significance with 8 degrees of freedom, which shows that, the difference between actual and trend values is significant.

1.7 SUGGESTIONS AND RECOMMENDATIONS OF THE STUDY

This is the ultimate stage in which several proposals and suggestions have been offer; to overcome the noticeable problems in the study.

Actual values of working capital must have to be increased by making additional investment specifically in the form of raw materials for solution to the problem of raw materials inventory in case of all the selected companies under the study except TSL and LSIL.

Overall inventory management is required to be progressed in case of all the selected steel companies by way of proper application of inventory control system, such as, EOQ, JIT, ABC analysis, etc. and improvement of their sales management so as to reduce stock piling of finished goods.

Proper composition of net current assets should be sustained by means of the indexes of the Indian steel companies.

On the whole, receivable management is not good enough in case of the entire selected companies under the study. Solution to the enormous problem of receivables management, an effective professional co-ordination between sales, production and finance departments is called for. On time billing, timely reminders to defaulting customers and immediate action should be ensured. The investment in loans and advances should be minimised to the extent possible.

Suitable awareness should be pre-arranged with careful examination of payment policy for the improvement of the management of payables in case of the entire companies. It should be made by way of prompt payment policy, keeping no idle cash in hand or investment, finance from long-term source and taking short-term loan with lower interest. However, it should repay in one accounting year, otherwise harm profitability.

Proper administration of net current assets should be indispensable for smooth running of business. At the same time, maximisation of assets as well as minimisation of liabilities should be preserved.

Appropriate symphony of working capital components should always be maintained in which profitability are not affected. It should be prepared through global steel indexes.

1.8 LIMITATIONS OF THE STUDY

The study endures from certain limitations. In spite of our best efforts, we could not avoid them because of many practical constraints. Hence, we could not but accept the possibility of a certain degree of error.

Study solely depends on the published financial data, so it is subject to all limitations that are inherent in the condensed published financial statements. We have selected operating two private sector steel companies but not considered all the operating units as sample, which may leave some grounds of error.

Again, our study is based on the data and information relating to the year 1999-00 to 2007-08, that is, nine years period. But, even these data and information do not appear widespread. We are fully conscious that many more data and information would have made our study more exhaustive.

Inflation could not be taken into contemplation in the present study. It was not possible to convert the relevant financial data into their present values because of non-availability of sufficient information required for the purpose.

Study is purely based on private sector steel companies, we could not compare with the data and information of efficiently managed public sector companies for testing of liquidity position and its efficiency.

Special ratios used in the study are taken from CMIE data base.

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PAYMENTS IN INDIA GOING 'E-WAY' - AN ANALYTICAL STUDY

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ABSTRACT

The electronic payment system evolution can be traced back to the 1950s 'with the introduction of ERMA (Electronic record method of accounting) and MICR based on cheque -clearing systems in the USA. Over the last two decades, in India, post implementation of MICR based clearing in 1986, other payments systems like card based payment systems, ECS, EFT, RTGS, and NEFT have come up and they offer a different set of capabilities for the wholesale and retail customers. As a result of the technological development, the proportions of electronic transactions, both in terms of volume and value, have increased sharply. It is indeed heartening to note that electronic payment in India has seen a huge growth and this augurs well for the corporate sector and the economy. The main purpose of the study is to analyze and examine whether electronic payment systems have been growing and effective in India during the period of study. Furthermore, this study reveals that all electronic modes of payments have shown huge growth than the physical paper- based payments like cheques or drafts. Card based payments contribute better to the total payments in terms of both value and number whereas physical cheque- based clearing continues to slowdown. The study also shows that customers prefer electronic mode of transaction to paper based instruments. It can result in reduced printing of notes, cheques, less transaction cost and less tax evasion, and promotes banking habits of the people and paperless e-banking environment in India. The study is based on secondary sources of information collected from various sources.

KEY WORDS

Credit card, Debit card, E-payments, E-commerce, ECS, Internet banking, Mobile banking, MICR, NEFT.

1. INTRODUCTION

The primary goal of any national payment system is to ensure smooth circulation of money in the economy. It is recognized world wide that an efficient and secure payment system is an enabler of economic activity. The establishment of safe, secure, sound and "efficient payment and settlement system" is crucial for any country. Payment systems are important for economic growth and they are evolving--- largely driven by innovation, convenience and economic benefits. Efficiency in payment systems in general and electronic payment systems in particular, benefits both customer and country's economic growth. There are diverse payment systems functioning in the country, ranging from the paper based systems where the instruments are physically exchanged and settlements worked out manually to the most sophisticated electronic fund transfer systems which are fully secured and transactions settled on a gross, real time basis. They cater to both low value retail payments and large value payments relating to inter-bank, money market, Government securities and forex transactions. The retail payment systems in the country comprise of both paper based as well as electronic based systems. They typically handle transactions which are low in value, but very large in number, relating to individuals, firms and corporates. These transactions relate mainly to settlement of obligations arising from purchase of goods and services. More recently, with the proliferation of electronic payment mechanisms, the increase in the number of players in the financial area and the payment crises in quite a few countries and regions in the 1990s, have focused attention on policy and security issues relating to the organization and operation of payment systems. Three main areas of public policy have guided payments systems, development and reform namely 1) protecting the rights of users of payment systems,2) enhancing efficiency and competition, and 3)ensuring a safe, secure and sound payment system[13].

Electronic commerce (E-Commerce) and finance are growing rapidly. New payments mechanisms designed to aid e-commerce have become routine. Predictions are made about the capabilities of the information and communication technology to bring forth new tools for conducting e-commerce and e-payments. We are in the midst of a wave of innovation and change. In a dynamic economy, markets need to play a key role in the development of infrastructure, including mechanisms like e-payments systems. This means that innovation and competition will be central to the future development of the payments system - as they are in other areas of the economy.

Nowadays, in the electronic payment market, people make payments using different devices. The concept that is used for such devices is electronic channels**.** Electronic funds transfer (EFT) refers to the computer-based system used to perform financial transactions electronically. In addition to this, inside an electronic payment system, there are many complex financial circuits. A financial circuit is the way the digital money arrives from the payer to the payee, using intermediaries like banks, financial institutions, payment organizations etc.,

Electronic Payment (E-Payment) takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic cheques) that is backed by a bank or an intermediary, or by a legal tender. The various reasons that have led the financial institutions to make use of electronic payments are: reduced technology cost, reduced

operational and processing cost, and increasing business volume. There are many problems with the traditional payment systems like lack of Convenience, Security, Coverage, Eligibility, and lack of support for micro-transactions.

An e-commerce payment system facilitates the acceptance of electronic payment for online transactions. Also known as Electronic Data Interchange (EDI), e-commerce payment systems have become increasingly popular due to the widespread use of the internet-based shopping and banking. In the early years of B2C transactions, many consumers were apprehensive of using their credit and debit cards over the internet because of the fear of misuse of their cards by hackers. Recent research shows that 30 per cent of people in the United Kingdom still do not shop online because they do not trust online payment systems. However, 54 per cent do believe that it is safe to shop online which is an increase from 26 per cent in 2006.There are different payments systems available for online merchants. These include the traditional credit, debit and charge card but also new technologies such as digital wallets, e-cash, mobile payment and e- cheques. Another form of payment system is allowing a 3rd party to complete the online transaction for us. These companies are called Payment Service Providers (PSP), a good example is Paypal or World Pay.

2. CHARACTERISTICS OF E-PAYMENT SYSTEMS

A successful payment system should be one that satisfies all parties to the transaction. As the payment services are promoted using different electronic channels and as they are based on different procedures and financial circuits we can make a synthesis of the requirements that such a system must have

***Acceptability:** All parties to a transaction (payer, payee, financial institutions, private companies that own payment servers, recently mobile network operators) should accept the payment system.

***Security:** The system must have security systems both at the device level (Special materials and signs, cards that uniquely identify the user) and at the soft level (Cryptographic and authentication algorithms). It must also comply with the local laws and international standards. In addition, all the transactions must be auditable (registered in the accounting system)

***Cost:** The transaction cost should be very low. It should not depend on the value of the transaction, but on the number of transactions being made. Eliminating intermediaries and direct funds transfer between the parties (e.g. peer-to-peer) should substantially reduce the cost.

***Anonymity:** Researches show that customers using the electronic payment systems, especially the ones making purchases, want to stay anonymous. This will be practically impossible in conventional banking. But the problem with an anonymous payment system is that it is not standard-based and it is non-auditing.

***Universality:** The system must capable of making all types of transactions – P2P (Person to Person), B2B (Business to Business), B2C (Business to Customer), P2G(Person to Government), B2G (Business to Government), with domestic, regional and international coverage, low-value and high value payment and currency conversion.

***Usability:** The system must have a user friendly interface and the learning curve must be close to zero. The customer must be able to personalize the payment service by integrating his daily activities and financial needs.

***Interoperability:** The system should be combined with other payment systems, no matter the kind of device being used or the financial circuit.

***Attractive:** The payment system should have loyalty applications implemented through which customers should get benefits (decreasing the bill value, getting rewards such as goods or some other additional services) by using a specific payment system regularly. Loyalty applications are based on loyalty points, which can be converted into above benefits.

***Speed**: Transaction clearing/settlement must be completed promptly/speedily.

***Cross border payments: T**he e-payment application must be available globally.

3. COMPONENTS OF E-PAYMENT SYSTEMS

The four broad tenets of the mission relate to the Safety, Security, and Soundness and Efficiency. It is called the 'Triple-S + E' principle in short. Each of the principles, which have a synergistic inter-relationship, would specifically address the following:

Safety will relate to addressing risk, so as to make the systems risk free or with minimal risk. Security will address the issues relating to confidence, with specific reference to the users of these systems. Soundness will aim at ensuring that the systems are built on strong edifices and that they stand the test of time. Efficiency will represent the measures aimed at reduction in costs so as to provide optimal and cost effective solutions.[13]

There are various types of electronic clearing systems functioning in the retail payments area in the country. Electronic Clearing System (ECS), both for Credit and Debit operations, functions in 86 places (15 managed by Reserve Bank, 33 by the State Bank of India and 13 by Punjab National bank and the rest by other public sector banks)[16]. The ECS is the Indian version of the Automated Clearing Houses (ACH) for catering to bulk payments. The Electronic Funds Transfer (EFT) System is operated by the Reserve Bank at 15 places. This is typically for individual / single payments. These systems are governed by individual bank's own rules. A variant of the EFT, called the Special Electronic Funds Transfer (SEFT) System is also operated by the Reserve Bank to provide nation-wide coverage for EFT. All these electronic fund transfer systems operate on "deferred net settlement basis"[17].

4. ISSUES AND CHALLENGES

Although electronic money can provide many benefits—such as convenience and privacy, increased efficiency of transactions, lower transaction fees, and new business opportunities with the expansion of economic activities on the Internet—there are many potential issues with the use of e-money. The transfer of digital currencies raises local issues such as how to levy taxes or the possible use of money laundering. There are also potential macro-economic effects such as exchange rate instabilities and shortage of money supplies (total amount of electronic money versus the total amount of real money available, basically the possibility that digital cash could exceed the real cash available). Another issue is related to computer crime, in which computer criminals may actually alter computer databases to steal electronic money or by reducing an account's balance of electronic money. One way to resolve these issues is by implementing cyberspace regulations or laws that regulate the transactions and watch for signs of fraud or deceit[21].

Banks as well as consumers view the security threat as perhaps the most serious threat. Denny (2000) observes that the security of Internet access to client account is the biggest challenge facing banks. For success in the increasingly competitive financial services market, banks are

realizing that a comprehensive online banking strategy is essential which also satisfies essential security requirements. Security policy should include management commitment, technological support and effective disseminations of the policy and the security awareness by all users.

5. EMERGING E-PAYMENT OPTIONS IN INDIA

The traditional aspects of cash management focus on paper-based instruments and making them more efficient. They are lock box, cash pooling, concentrated banking, and slow disbursal. These methods are losing significance today because of emerging EP options. The EP options can be classified generally into two categories: those that just replicate the physical process but do it electronically and somewhat faster than physical, and the other category of new EP processes. Electronic options in India have evolved over a period of time. Significant improvement has come in post reform in 1991[2]. The important events in the evolution of new age payment system in India are:

Arrival of card based payment –debit card, credit card-late 1980's and 1990.

Introduction of Electronic Clearing service (ECS) in late 1990's.

Introduction of Electronic Fund Transfer (EFT) in the early 2000's.

Introduction of Real Time Gross Settlement (RTGS) 1st March, 2004.

Introduction of NEFT as replacement for EFT/SEFT in 2005/2006.

Implementation of cheque truncation system in New Delhi in 2007.

These apart, implementation of core banking system by many banks in India and proliferation of internet and mobile banking services provide many opportunities for Indian firms and customers.

6. CURRENT STATUS OF E-PAYMENTS SYSTEM IN INDIA

Indian banks are quickly upgrading their payment systems, largely driven by the need to modernize and meet regulatory requirements. For modernizing the payment and settlement systems in India, Reserve Bank of India (RBI) is strengthening the computerized cheque clearing and expanding the reach of Electronic Clearing Services (ECS) and Electronic Funds Transfer (EFT). The critical elements of RBI strategy involve opening of new clearing houses, interconnection of clearing houses through the Indian Financial Network (INFINET), development of RTGS system, Centralized Funds Management System (CFMS), Negotiated Dealing System (NDS) and the Structured Financial Messaging System (SFMS) and introduction of Cheque Truncation System.

The discussion till now largely focused on the use of e-payments between businesses and individuals. However, banks also need to make payments to each other to settle the accounts arising of the transaction carried out for their customers, and also for transactions initiated by themselves (for borrowing or repayments, investments, sale and purchase of various assets etc.). These payments have to be effected in central bank money (through their accounts maintained with the RBI). Such inter-bank payments carry a settlement risk if done on a deferred net settlement (DNS) basis. The introduction of the Real Time Gross Settlement (RTGS) System by many countries has not only resulted in compliance with the Core principles for Systematically Important Payment Systems enumerated by the Bank for International Settlements (BIS), Basel, but has also paved the way for risk-free, credit push-based fund transfers settled on a real time basis and in the central bank money. RTGS facility is available in India as many as 62,000 branches of 94 banks as at the end of November, 2009. As on 14 Jan 2010 NEFT was set to cover all banks which were participating in the Special EFT/NEFT clearing is conducted by Reserve Bank of India (RBI) and presently Reserve Bank of India has designated as many as 69395 branches as on July13, 2010. The minimum transaction value for RTGS is Rs. 1, 00,000, whereas there is no minimum value for NEFT and it is used mainly to transfer funds below Rs. 1, 00,000.

The NEFT system went live with effect from 21 November 2005. NEFT was set to cover all banks which were participating in the Special Electronic Fund Transfer (SEFT) clearing. NEFT was made on the Structured Financial Messaging Solution (SFMS) platform and is Public Key Infrastructure (PKI) enabled. RBI made it mandatory for all the SEFT banks migrate to NEFT by 15 December 2005. As NEFT would be serving all the bank customers using SEFT, the SEFT system was discontinued from 1 January 2006. Banks which fulfill the eligibility criteria for participation in RTGS were invited by RBI to participate in the NEFT.

Mobile banking (M-banking) in India is set to explode - approximately 43 million urban Indians used their mobile phones to access banking services during quarter ending August, 2009, a reach of 15 per cent among urban Indian mobile phone user. Checking account balances is the most popular banking service used by urban Indians with almost 40 million users followed by checking last three transactions, 28 million and status of cheques with 21 million users. Mobile banking is popular among the Rs.1 to 5 lakhs per year income group with almost 60 per cent of mobile banking users falling in the income bracket, an indicator of adoption of this service by younger generation. ICICI bank maintains its position as country biggest private lender on mobile screen as well with 17.75 million users. HDFC accounts for second most subscribers with 9.1 million subscribers followed by State Bank of India with 6.13 million subscribers.

Presently, banks are permitted to offer M- banking facility to their customers subject to a daily cap of Rs. 5000/- per customer for funds transfer and Rs.10, 000/- per customer for transactions involving purchase of goods/services. The services shall be restricted only to customers of banks and/or holders of debit/credit cards. Only banks who have implemented core banking solutions would be permitted to provide mobile banking services. Mobile banking is the next big step for banks and it will change the nature of banking in India. Financial inclusion cannot be achieved without inclusive growth and every initiative should be directed at the rural poor. "If merchants, bank and operator can come together, they can develop a platform for mobile banking," trying to set up new platforms for the new generation.

The e-payments business is a reliable revenue generator for banks. Global payment revenues were at $805 billion in 2008, up from $654 billion in 2006, and are forecast to reach $1.4 trillion by 2016. In the US, credit card growth has slowed thanks to the sub-prime crisis. Debit cards are realizing double-digit revenue growth. It is expected that banks will continue to increase debit card issuance and also the usage of the card at every point of sale. Mobile banking is a part of successful growth strategy for banks in the US. Here, the mobile phone becomes an extension of online banking.

7. REVIEW OF LITERATURE

Ashok singh (2010), in his article "Mobile banking –Evolution and Business Strategy for Banks" will pave the way for the formulation of wider business strategies covering each segment of economic development and social activities for Indian banking systems. Several aspects of M-banking such as its scope, business model, transaction types, application technologies, security in wireless transactions are discussed. Business strategies for Indian banking such as enabling financial inclusion, e-payments to a larger segment of users and enabler for e- money. M-banking

can be a powerful tool to bank the unbanked. As customer confidence about mobile transaction security increases, it is expected that mobile phones will be the most preferred and convenient device for conducting banking transactions and will emerge as one of the major payment channels in India.

Linda Eagle (2010) in her report, as more bank customers begin to use electronic banking solutions, hackers and money launderers are becoming more creative in their fraud tactics. Simply put, EFTs is subject to high risk and exposure to fraudulent activities, and fraudulent activity is damaging to a financial institution's relationship with its customers. To counter this, financial institutions must proactively invest in AML training to better prepare their employees to identify the risks that may occur in ETF transactions, and to educate their customers on how to protect themselves from threats to the security of their funds. Specialized training from an accredited training provider should be considered by all management of financial institutions to manage the risks and meet demand as this banking trend continues to grow.

Sumanjeet (2009) in his study concluding remarks first is that despite the existence of variety of e-commerce payment systems, credit cards are the most dominant payment system. This is consequences of advantageous characteristics, most importantly the long established networks and very wide user's base. Second, alternative e-commerce payment systems are some countries are debit cards. In fact, like many other studies, present study also reveals that the smart card based e-commerce payment system is best and it is expected that in the future smart cards will eventually replace the other electronic payment systems. Third, given the limited users bases, e-cash is not a feasible payment option. Thus, there are number of factors which affect the usage of e-commerce payment systems. Among all these user base is most important. Added to this, success of e-commerce payment systems also depends on consumer preferences, ease of use, cost, industry agreement, authorization, security, authentication, non-refutability, accessibility and reliability and anonymity and public policy.

Raja *et al.*, (2008) in their study **t**he success of electronic commerce depends upon effective electronic payment systems. The Internet and on-line businesses are growing exponentially. Due to this explosive growth, electronic commerce on the Internet uses various electronic payment mechanisms that can cater for much diversity of applications. This paper discusses the evolution and the growth of electronic technologies, which can provide more advanced technical supports for electronic payment systems. The focus of this paper is to identify and explain the different methods of e-payment the authors analyses the challenges of electronic payments from different perspective and provide preliminary security countermeasures for each of the issues. Finally a number of solutions have been proposed based on the problem and discussed on the prospect of electronic payment system.

Banknet India (2008) in their report that the findings of the "bank customer survey on payment systems." According to the survey findings, Debit cards have become very popular in India. But, as of date, ATM/Debit cards have still their primary usage for cash withdrawal from the ATM machines, while credit cards are more popular in making payments online. Interestingly, many customers have been unable to use internet banking due to the non availability of site or connectivity problems. As far as mobile banking is concerned, its popularity is limited mainly due to the charges for sending SMS's are not justified.

Balakrishnan(2007) in his article published the adoption of new age electronic payments systems and use of new practices in inventory and production management help the companies achieve long-term reduction in working capital management requirement. It was further stated that moving customers to electronic clearing service (ECS) would provide the firms cost benefit in terms of collecting these payments quicker, give them regularity in payment and provide the much needed visibility to payments.

Shrivastva *et al.* (2004) in their article explains the concept of marketing has not changed in essence as a result of using the Internet as a new marketing channel but Internet offers an unlimited opportunity for business.

Denny (2000) observes that the security of Internet access to client account is the biggest challenge facing banks. For success in the increasingly competitive financial services market, banks are finding that a comprehensive online banking strategy is essential which also provides the essential security requirements. Security policy should include management commitment, technological support and effective disseminations of the policy and the security awareness of all users.

Furst *et al.* (1998) in their U.S. based study found out a significant shift by consumers and businesses to electronic payments. The gains from technological advancements in banking and payments are likely to be substantial both from the point of view of individual financial institutions and economy. In this environment, banks should review and, if necessary, adjust their risk management practices in tandem with upgrading their technology activities.

Crocin (1998) observes that the implementation of SET, the standard for secure electronic transactions on the Internet and its widespread adoption including security measures like encryption, digital authentication, and verification of on-line identity increase consumer confidence. To compete in a market transformed by globalization and technological revolution, banks have been forced to seek alliance and establish joint ventures to maintain their competitiveness and efficiency[6].

8. METHODOLOGY

The study covers the secondary sources of information's collected through reference from books, IBA journal, RBI Bulletin, Published Articles and related banks Websites. The study covers during the financial year (FY) ending 31st March 2003-04 to 2009-10. The tool for analyses is percentage.

9. ANALYSIS AND DISCUSSION

As a result of the technological development, the proportions of electronic transactions both in terms of volume and value have increased sharply. It is indeed heartening to note that e-payment in India has seen a huge growth and that augurs well for the companies and the economy.

The tables 1&2 capture through -put of various electronic payments channels in India during the financial year ending on 31st march 2003-04 to 2009-10 both in terms of value and volume. This data clearly indicate that all the EPs are growing at phenomenal rate in India in volume and in value. During the year ending 2008-09, Electronic Clearing Service (ECS) debit has increased by an incredible 36.86 per cent by value and 25.91 per cent by volume. ECS credit down to -87.54 per cent by value and grew up 12.80 per cent by volume of transactions. The EFT/NEFT grew by 79.55 per cent by value and 141.61 per cent by volume, debit cards grew by 48.13 per cent by value and 44.56 per cent by volume, and Credit cards grew by 12.76 per cent by value and about 13.74 per cent by volume of transactions. The paper-based transaction did not grow up alternatively these have negatively grown up in India for -4.42 per cent by volume and -6.92 per cent by value of transaction.

In recent years, the use of electronic payments has witnessed manifold increase, partly reflecting increased adoption of technology. The growth volume of transaction directed through electronic payment method, decelerated from 41.35 to 24.75 per cent by volume and 342.10 per cent to-51. 98 per cent by value during FY 2007-08 to 2008-09. More strikingly, the value and volume of transactions directed through e-payment method declined sharply during 2008-09. The entire decline (-87.54%) is due to fall in value of transaction in respect of ECS – credit. It is noteworthy in this regard that the sharp rise in ECS credit value during 2007-08 was mainly due to the refund of the over subscription amount of IPOs floated by companies using electronic mode as mandated by the Stock Exchange (cf: RBI Report 2008-09). Therefore, the decline in value in ECS credit transactions during 2008-09 may be interpreted more as returning to normal trend rather than a matter of concern. The volume of ECS credit and more significantly ECS debit continued to show an increasing trend during 2008-09 in line with the trend witnessed during past few years.

Further, the data clearly indicates that during the year ending 2009-10, ECS credit incredible of 20.64 per cent by value and 11.02 per cent by volume of payments. The NEFT also grew up by 62.53 per cent by value and 106.27 per cent by volume. Due to the notification issued by the RBI allowing free use of ATM-debit card in all the banks throughout the country would increase further by value and volume of e-payments. During the year 2009-10, the paper based transaction was continuing to slow down further in value (16.51%) and in volume also. The total EPs would increase further by value (37.10%) and volume (7.53%). It reveals that during the financial year from 2003-04 to 2009-10, the paper based transaction did not grow much but e-payments transaction has grown up around twelve (12) time in value and three (3) time in volume. It is concluded that customers prefers electronic mode of transaction than paper based instruments which is healthy for Indian economic growth. These are clear indications that corporate India is aware of these options and are beginning to use them. The banks in India are also aggressive in promoting e-payments options as part of their cash management options as they also benefit from the migration of paper based payments instruments (that are inherently costly) to EP options which are more cost effective. The EP options also allow the companies to track the receipts in a more transparent manner and manage payments and liquidity more efficiently. Corporate customers have greater awareness of the usage of e- payments than individual customers.

Recently, the RBI working group on e-payments has suggested a number of measures to accelerate the adoption of e-payments in India. These include providing incentives to electronic transactions by either not having any charges (RBI has implemented this from April 1, 2009, customers were allowed to use their ATM cards free of charge to withdraw cash from Automated Teller Machine of any commercial banks across the country) or keeping them lower than the charges for paper based instruments and expanding NEFT enabled branches. Therefore, Indian firms are well advised to quickly adopt electronic payments options to ensure that their financial transactions costs do not increase. Moving customers to ECS would provide the firms cost benefit in terms of collecting these payments quicker, give them regularity in payment and provide the much needed visibility to payments. All these help in better cash management by the organization. The focus of RBI and all banks in India in promoting EPs is quite evident from the increasing number of branches covered for EPs and the huge growth that we are witnessing the EPs options in the last few years in India. If organizations indeed focus on moving to EPs, they stand to gain-and so does the Indian economy. That would also make Indian industries more competitive in nature and the Indian growth story can continue.

Although the e-payments systems in India have evolved, a lot remains to be done to increase the usage of e- payments. According to RBI estimates, cheque and draft still account for more than 80 per cent in terms of volume of payments in India. During the past century, usage of cheque and draft become the preferred mode of payment for all economic activities, and their volumes kept growing. It is despite the fact that a majority of the Indian population still uses cash for retail payments. Financial exclusion and illiteracy are the two major reasons for the use of cash for payments by consumers. Other reasons for use of cash for payments are largely driven by tax evasion and other illegal activities. But recent years, paper based payment did not grow up. Alternatively, these have negatively grown up in India. Migration from paper -based payment mechanism (other than cash and cheque) has become a necessity on account of cost of printing notes, large volumes, costs of physical handling and storage, delays in realization and finality of payment.

10. CONCLUSIONS AND IMPLICATIONS

In concluding that as the new capabilities and technologies are incorporated into our financial services environment, the RBI will continue to develop/upgrade e-Payment infrastructures, encourage and extend support for such innovations that are both value adding and profitable. However, keeping in mind the safety and soundness of e-payments and banking systems, Reserve Bank of India will continue to monitor applications and development in the field of both e-payments and e-banking in the country. Raja et.al, also concluded that with the advent of modern technologies in telecommunications, infrastructure and protocols, future payments will be made through e-payments by Business to Business, Business to Customer, and Customer to Government. Furthermore, lots of challenges are to be overcome for a successful implementation of e- payments to be widely accepted as a mode of payment. Businesses, merchants and consumers have to come forward and make value-producing investments. A regulatory framework and widely accepted standards will be the pillars on which e- payment applications will be built.

Payments and settlement systems constitute the backbone of the financial sector and enables settlement of financial contracts. The country has made phenomenal progress in enhancing the reach and improving the efficiency of the e-payment system. Payments Cards, Electronic Bill Presentment and Payments (EBPP), Internet banking, Mobile payments are some of the e-payment mechanism that are likely to replace paper based payment. Easy access to internet, innovation, incentives, security risks, simplified e-payment infrastructure, creating customers' awareness and reducing resistance to change, convenience and legal framework are the critical factors that will decide the future of e-payments systems and its usage growth in India. But as things stand now, a judiciously designed system of incentives is definitely required further to promote e-payments as the currency of the future in our country. Thus, the e-payments are as good as cash as they carry the real value. They have cut across distance, space and even time. This study has number of limitations that must be acknowledged. Data on Internet banking and Mobile banking were not available. Therefore, these results of this study are not applicable to the full extent of entire e- payments in India. This is the future scope for the further research.

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APPENDIX-1

TABLE 1.
Value of Transaction through Electronic and Paper based Payment Methods from 2003-04 to 2009-10
(Rs. in crore)

Year	EFT/ NEFT	ECS (Credit)	ECS (Debit)	Credit cards	Debit cards	Cheques/ DD*	EP (Total)
2003-04	17,125	10,228	2,254	17,663	4,874	1,15,95,960	52,143
2004-05	54,601	20,180	2,921	25,686	5,361	1,04,58,895	1,08,750
2005-06	61,288	32,324	12,987	33,886	5,897	1,13,29,134	1,46,383
2006-07	77,446	83,273	25,440	41,361	8,172	1,20,42,426	2,35,693
2007-08	1,40,326	7,82,222	48,937	57,959	12,521	1,33,96,066	10,41,992
2008-09	2,51,956	97,487	66,976	65,356	18,547	1,24,69,135	5,00,322
2009-10	4,09,507	1,17,613	69524	62,882	26,418	1,04,09,942	6,85,944
Growth(%) 2007-08	81.19	839.35	92.36	40.13	53.22	11.24	342.10
Growth(%) 2008-09	79.55	-87.54	36.86	12.76	48.13	-06.92	-51.98
Growth (%) 2009-10	62.53	20.64	-03.80	-03.79	42.44	**-16.51**	**37.10**

Source: RBI, Money and Banking - Monthly Bulletin (June, 2010).

EPs-Electronic Payments, ECS-Electronic Clearing Service, EFT-Electronic Fund Transfer, NEFT-National Electronic Transfer.

TABLE 2.
Volume of Transaction through Electronic and Paper based Payment Methods from 2003-04 to 2009-10
(Rs in lakh)

Year	EFT/ NEFT	ECS (Credit)	ECS (Debit)	Credit Cards**	Debit Cards***	Cheques/ DD*	EP (Total)
2003-04	08.19	203.00	79.00	1,001.79	377.57	10,228	1,670
2004-05	25.49	400.51	153.00	1,294.72	415.32	11,669	2,289
2005-06	30.67	442.16	359.58	1,560.86	456.86	12,868	2,850
2006-07	47.76	690.19	752.02	1,695.36	601.77	13,673	3,787
2007-08	133.15	783.65	1,271.20	2,282.03	883.06	14,606	5,353
2008-09	321.61	883.94	1,600.55	2,595.61	1,276.54	13,974	6,678
2009-10	663.38	981.33	1,492.81	2,341.91	1,701.70	13,803	7,181
Growth(%) 2007-08	178.78	13.57	69.04	34.60	46.74	06.82	41.35
Growth (%) 2008-09	141.61	12.80	25.91	13.74	44.56	-04.42	24.75
Growth(%) 2009-10	106.27	11.02	-06.73	-09.77	33.31	**-01.22**	**07.53**

Source: RBI, Money and Banking - Monthly Bulletin (June, 2010).

**More than 80 per cent of the cheques by volume got cleared in Magnetic Ink Character Recognition* (MICR) - Automated Cheque Processing Centres.

** Card payments figures pertain only to Point of Sale (POS) transactions.

*** Debit card figures for 2003- 04 and 2004-05 are estimated based on 2005-06 figures.

APPENDICES-2

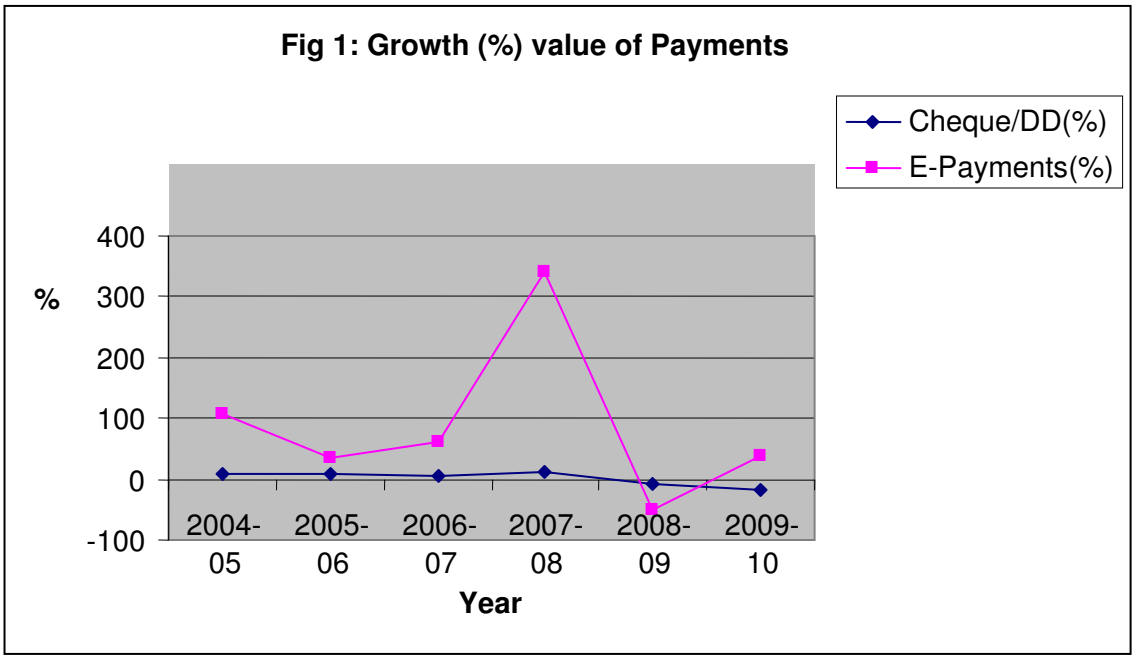
Fig 1: Growth (%) value of Payments
Cheque/DD(%)
E-Payments(%)
%
400
300
200
100
0
-100
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
Year

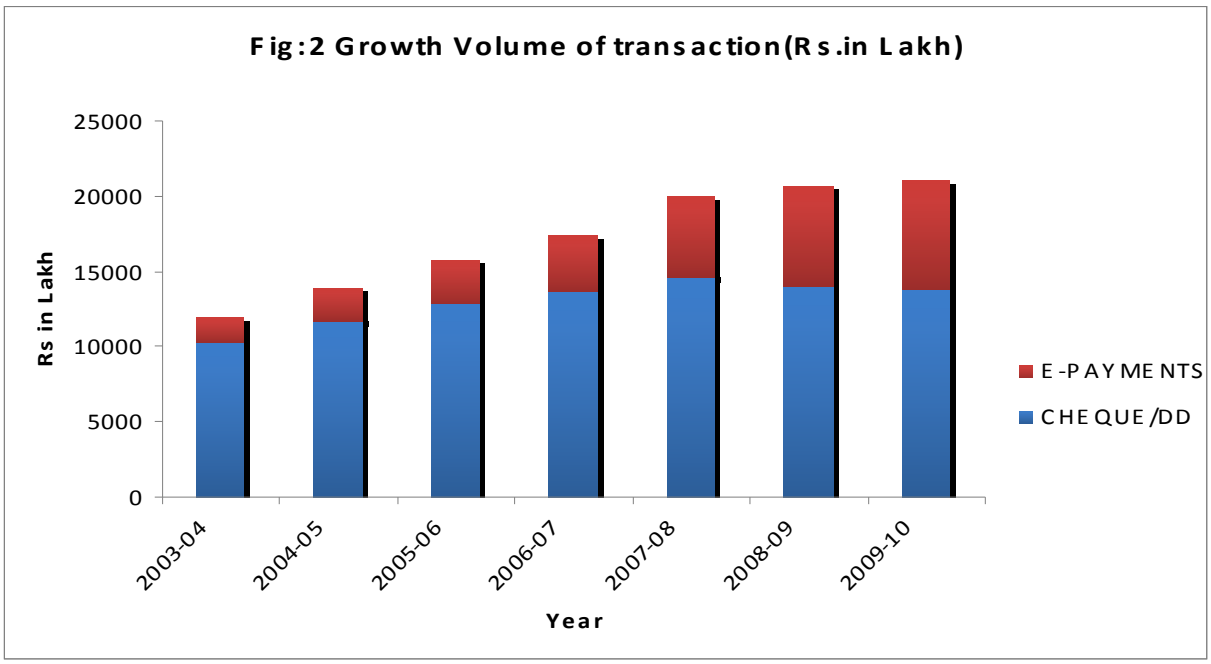
Fig:2 Growth Volume of transaction(Rs.in Lakh)
Rs in Lakh
25000
20000
15000
10000
5000
0
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
Year
E-PAYMENTS
CHEQUE/DD

NPAs IN BANKS: A SYNDROME PROBING REMEDY

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ABSTRACT

The financial quarter is undergoing a phase of makeover & convergence and there has been an escalating blur of boundaries amidst the role of banks and financial institutions, which is likely to set up spirited pressures in the prospecting future. Non Performing Assets (NPAs) as a syndrome are not new but are casting adverse impact on financial spine of banking structure during the recent past years and are cause for concern. Past researchers have emphasized that for any credit system to sustain its operations on a viable basis, it is necessary to enforce strong credit discipline among its clients. This paper is an exploration on Non-Performing Assets (NPAs) of public & private sector banks in India and it tries to discover the relationship between NPAs and financial health of banks in grin of rating agencies.

KEY WORDS

Bank Rating Agencies, CAMEL's Rating, NPAs, Spearman's Correlation

(I) INTRODUCTION

Subsequent to nationalization, the preliminary assent that banks were specified was to swell their branch network, increase the savings rate and extend credit to the rural and SSI sectors. This term of office has been attained commendably. Since the early 90's the spotlight has budged towards improving quality of assets and better risk management. Pressing issue today under the quality of asset is amplifying NPAs in banks. Increasing in NPAs is putting their bad effect so Reserve Bank of India in its analytical report stated that reduction in NPAs should be treated as a national priority. RBI has fixed the standards of NPAs level for the banks so that banks could perform well. As far as financial institutions are concerned it is necessary to update their risk management practices with prevalent legislation & regulatory environment. By keeping these aspects in mind the Basel committee on banking supervision published the Basel accord in 1988. It defined the parameters of risk management and capital adequacy for FSPs like Bank. As soon as it noticed the growth of banking sector, the need felt to update the accord & in 1999 Basel II was proposed. To evaluate the banks globally these rating agencies will incorporate the new accord Basel II and it will result in establishing a more competitive and safer banking system.

The banking environment is continuously changing. The rules and regulation which were formulated in past are vanishing resulting in rising risk within banking system. There are certain credit rating agencies such as CRISIL, ICRA, CAMELS, FITCH, CRAMEL etc. which rate the banks according to their performance, profitability, NPA status and ratio structure. From investors point of view it is very necessary for a bank to get good rating because the source of funds for banks are deposits so ultimately it establishes direct relationship. In case if a bank losses its credibility investors starts withdrawing their money to avoid future losses. So this study entails the impact of NPAs on profitability of banks. In this research correlation of banks is established with profitability and credit rating agencies as these agencies play a very important role by assessing credit viability of depositors as well as lenders in banks.

(II) PSYCHIATRY OF NPAs

The NPAs are considered as an important parameter to judge the performance and financial health of banks. The level of NPA is one of the drivers of financial stability and growth of the banking sector. NPA is like a credit facility in respect of which the interest has remained due for past two quarters or more. This research aims to find out the fundamental factors which impact NPAs. In view of past researchers Flannery MJ (1998)[1] and Gilbert RA & MD Vaughn (1998)[2], two factors are responsible for this – macroeconomic factors and Bank specific parameters. In macroeconomic factors like GDP and excise duty are included. Banks parameters are Credit deposit ratio (CDR), Capital Adequacy ratio (CAR), Loan exposure to priority sector and liquidity risk. Movement of NPAs for banking sector can be explained by these parameters.

ARCIL[3] expressed in its report that all Indian banks have maintained their NPAs less then 3%.Among various factors it is experienced that there are fairly conflicting views among all respondents. Bankers feel that lack of entrepreneurship and improper evaluation of credit worthiness of customer are the most significant reasons for the generation of NPAs. Many difficulties can be observed with increase in NPAs of banks. Owners do not receive a market return on their capital. In the worst case, if the bank fails, owners lose their assets. In modern times, this may affect a broad pool of shareholders. Depositors do not receive a market return on savings. In the worst case if the bank fails, depositors lose their assets or uninsured balance. Banks also reallocate losses to other borrowers by imposing higher interest rates. Lower deposit rates and higher lending rates bottle up savings and financial markets, which obstructs economic augmentation. Non performing loans symbolize bad investment. They misallocate credit from superior projects, which do not obtain funding, to abortive or challenged projects. Bad investment ends up in misallocation of capital and, by extension, labor and natural resources. The economy performs underneath its production potential.

Non performing loans may overrun the banking system and squeezes the money stock, which may lead to economic abbreviation. This run over effect can channelize through illiquidity or bank collapse; (a) when many borrowers fail to recompense interest, banks may experience liquidity shortages. These shortages can squash payments athwart the country, (b) illiquidity constraints bank in paying depositors e.g. cashing their paychecks. Banking fright follows. A run on banks by depositors as part of the national money stock breaks down. The money stock squeezes and economic contraction follows (c) undercapitalized banks surpasses the banks capital base. Lending by banks has been highly politicized. It is widespread that loans are given to various industrial houses not on commercial concerns and feasibility of project but on political considerations; some politician would ask the bank to extend the loan to a particular corporate and the bank would coerce. In normal circumstances banks, before sanctioning any loan, would make a scrupulous study of the definite need of the party concerned, the diagnosis of the business in which it is engaged, its trail, the eminence of management and so on. Since this is not focused judiciously, many of the loans

become NPAs. The loans for the weaker sections of the society and the relinquishment of the loans to farmers are another dimension of the politicization of bank lending. Most of the depositor's money has been dribbled away by the banks at the instance of politicians, while the same depositors are being made to pay through taxes to cover the losses of the bank. Due to all these problems stumbling up in banking system NPAs have become blazing issue in banks and calls for further exploration.[1]

[2](III) ARCHITECTURE OF CRISIL RATING

There are different credit rating agencies which provide ratings for banks like Camels, Crisil, ICRA and Fitch. In this paper rating given by Crisil is taken to establish the correlation of rating agencies with NPAs and profitability figures as Crisil incorporates all the major parameters essential to rate Indian banks following CRAMELs architecture. The objective of Crisil's analysis is to form an opinion on the types of risk that may affect the relative ability of banks and financial institutions to service the interest and principal payments on rated instruments in a timely manner. This exercise incorporates a review of overall economy, the financial sector and the banking industry. Crisil factors in the size of an entity in the financial sector and looks at its positioning in the industry. It rates financial institutions on basis of six major parameters of CRAMELs model. C in the model stands for Capital Adequacy, R for resource raising ability, A for asset quality, M for management and systems evaluation, E for earnings potential, L for liquidity/ Asset Liability management[4].

CRISIL BANK LOAN RATING

A CRISIL BLR is CRISIL's judgment on the virtual degree of risk connected with timely disbursement of interest and repayment of principal on a specified bank facility. CRISIL assigns BLRs on the same long-term and short-term rating scales as it does its other credit ratings. BLRs can be used by banks to determine risk weights for their loan exposures, in keeping with the RBIs April 2007 Guidelines for implementation of New Capital Adequacy scaffold.

BENEFITS OF A CRISIL BANK LOAN RATING

The new guiding principle from RBI crafts an inducement for banks to use BLRs, by giving noteworthy reprieve in the capital that banks must clutch against their corporate loan exposures. The maximum relief of 80 per cent is offered for 'AAA' and 'P1+' rated exposures, but there is considerable relief for exposures that are rated below the highest category as well.

A CRISIL BLR will facilitate borrowers to attain more specific risk-based pricing on bank loans. Borrowers may also profit when the capital stashes that the banks enjoy are reflected in loan pricing. In the long run, as many subordinate borrowers obtain BLRs, and the market comprehends the risk allied with such lower ratings, access to markets for lower rated corporates is likely to pick up radically.

BLRs will help build up a secondary market for loans, and will grant a uniform scale for evaluating credit risk of bank loans. Over time, they will have a say incalculably to the growth of a Credit Default Swap market, where ratings on the underlying reference commitments are obligatory.

SYMBOLS FOR BLRS

CRISIL BLRs are assigned on a scale that is analogous to CRISIL's rating scale for long-term and short-term debt ratings. The scale ranges from 'AAA' to 'D' for a long-term rating (with maturity over 365 days), and from 'P1+' to 'P5' for a short-term rating (maturity of up to 365 days). CRISIL may apply '+' (plus) or '-' (minus) signs for ratings from 'AA' to 'C' on the long-term scale, and from 'P1' to 'P3' on the short-term scale, to reflect comparative standing within the category. Additionally, CRISIL may assign rating outlooks for BLRs from 'AAA' to 'B'. Ratings on 'Rating Watch' will not carry outlooks. A rating outlook indicates the direction in which a rating may move over a medium-term horizon of one-to-two years. A rating outlook can be 'Positive', 'Stable', or 'Negative'. A 'Positive' or a 'Negative' outlook is not necessarily a precursor to a rating change.[5] CRISIL's principle for conveying BLRs integrates all the features of the functional standards for rating bonds and debentures.

(IV) LITERATURE REVIEW

A synoptic review of the literature brings to the fore insights into the determinants of NPL across countries. As per the recent study undertaken by K.Subramanian (2010), In the Indian situation, the adoption of the market based model to administer NPAs has weakened the links of banks to economic growth. It is unclear from where the extra-ordinary push for promoting economic growth will come. Till then we have to live years of low growth and lamentation. Study undertaken by Bharati Ram (2009) states that according to an April 2009 report by Crisil, the specialized credit rating organization focused on microfinance in India, it is estimated that the Gross Non-Performing Assets (GNPA) of the banking sector are likely to touch 5 per cent by the end of March 2011 from a level of 2.3 per cent in end-March 2008 [2]. Crisil estimates that 'most' of the NPAs would come from the corporate sector which includes the small and medium enterprises. Reasons given by Crisil for the rise in NPAs include the slowdown in demand and lack of funding of lengthy working capital cycles. Interestingly, the Indian Finance Ministry has disagreed with the rating agency's forecasts. Another considered view is that banks' lending policy could have crucial influence on nonperforming loans (Reddy, 2004). He critically examined various issues pertaining to terms of credit of Indian banks. In this context, it was viewed that 'the

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[1] Flannery, M.J. 1998. "Using Market Information in Prudential Bank Supervision: A Review of the U.S. Empirical Evidence." *Journal of Money, Credit and Banking* 30, pp. 273-305.

[2] Gilbert, R.A., and M.D. Vaughn. 1998. "Does the Publication of Enforcement Actions Enhance Market Discipline?" Manuscript, Research Department, Federal Reserve Bank of St. Louis.

[3] Asset Reconstruction Company India Limited (2009).

[4] Crisil Rating: Rating Criteria for Banks and Financial Institutions

[5] http://www.crisil.com/credit-ratings-risk-assessment/bank-loan-ratings.jsp#symbols

element of power has no bearing on the illegal activity. A default is not entirely an irrational decision. Rather a defaulter takes into account probabilistic assessment of various costs and benefits of his decision'.Mohan (2003) conceptualized 'lazy banking' while critically reflecting on banks' investment portfolio and lending policy. The Indian viewpoint alluding to the concepts of 'credit culture' owing to Reddy (2004) and 'lazy banking' owing to Mohan (2003a) has an international perspective since several studies in the banking literature agree that *banks' lending policy is a major driver of non-performing loans* (McGoven, 1993, Christine 1995, Sergio, 1996, Bloem and Gorters, 2001). Furthermore, in the context of NPAs on account of priority sector lending, it was pointed out that the statistics may or may not confirm this.There may be only a marginal difference in the NPAs of banks' lending to priority sector and the bank's lending to private corporate sector. Against this background, the study suggests that given the deficiencies in these areas, it is imperative that banks need to be guided by fairness based on economic and financial decisions rather than system of conventions, if reform has to serve the meaningful purpose. Experience shows that policies of liberalisation, deregulation and enabling environment of comfortable liquidity at a reasonable price do not automatically translate themselves into enhanced credit flow. Although public sector banks have recorded improvements in profitability, efficiency (in terms of intermediation costs) and asset quality in the 1990s, they continue to have higher interest rate spreads but at the same time earn lower rates of return, reflecting higher operating costs (Mohan, 2004). Bhattacharya (2001) rightly points to the fact that in an increasing rate regime, quality borrowers would switch over to other avenues such as capital markets, internal accruals for their requirement of funds. Under such circumstances, banks would have no option but to dilute the quality of borrowers thereby increasing the probability of generation of NPAs. In another study, Mohan (2003) observed that lending rates of banks have not come down as much as deposit rates and interest rates on Government bonds. While banks have reduced their prime lending rates (PLRs) to some extent and are also extending sub-PLR loans, effective lending rates continue to remain high. This development has adverse systemic implications, especially in a country like India where interest cost as a proportion of sales of corporates are much higher as compared to many emerging economies. The problem of NPAs is related to several internal and external factors confronting the borrowers (Muniappan, 2002). The internal factors are diversion of funds for expansion/ diversification/ modernisation, taking up new projects, helping/promoting associate concerns, time/cost overruns during the project implementation stage, business (product, marketing, *etc.*) failure, inefficient management, strained labour relations, inappropriate technology/technical problems, product obsolescence, etc., while external factors are recession, non-payment in other countries, inputs/power shortage, price escalation, accidents and natural calamities. In the Indian context, Rajaraman and Vasishtha (2002) in an empirical study provided an evidence of significant bivariate relationship between an operating inefficiency indicator and the problem loans of public sector banks. In a similar manner, largely from lenders' perspective, Das and Ghosh (2003) empirically examined non-performing loans of India's public sector banks in terms of various indicators such as asset size, credit growth and macroeconomic condition, and operating efficiency indicators. Sergio (1996) in a study of non-performing loans in Italy found evidence that, an increase in the riskiness of loan assets is rooted in a bank's lending policy adducing to relatively unselective and inadequate assessment of sectoral prospects. Interestingly, *this study refuted that business cycle could be a primary reason for banks' NPLs*. The study emphasised that increase in bad debts as a consequence of recession alone is not empirically demonstrated. It was viewed that the bank-firm relationship will thus, prove effective not so much because it overcomes informational asymmetry but because it recoups certain canons of appraisal. In a study of loan losess of US banks, McGoven (1993) argued that 'character' has historically been a paramount factor of credit and a major determinant in the decision to lend money. Banks have suffered loan losses through relaxed lending standards, unguaranteed credits, the influence of the 1980s culture, and the borrowers' perceptions. It was suggested that bankers should make a fairly accurate personality-morale profile assessment of prospective and current borrowers and guarantors. Besides considering personal interaction, the banker should:

(i) try to draw some conclusions about staff morale and loyalty,

(ii) study the person's personal credit report,

(iii) do trade-credit reference checking,

(iv) check references from present and former bankers, and

(v) determine how the borrower handles stress. In addition, banks can minimise risks by securing the borrower's guarantee, using Government guaranteed loan programs, and requiring conservative loan-to-value ratios. Bloem and Gorter (2001) suggested that a more or less predictable level of non-performing loans, though it may vary slightly from year to year, is caused by an inevitable number of '*wrong economicdecisions* by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, *etc.*). Under such circumstances, the holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Enterprises may well be able to pass a large portion of these costs to customers in the form of higher prices. For instance, the interest margin applied by financial institutions will include a premium for the risk of nonperformance on granted loans. At this time, banks' non-performing loans increase, profits decline and substantial losses to capital may become apparent. Eventually, the economy reaches a trough and turns towards a new expansionary phase, as a result the risk of future losses reaches a low point, even though banks may still appear relatively unhealthy at this stage in the cycle. Gupta's study (1983) on a sample of Indian companies financed by ICICI concludes that certain cash flows coverage ratios are better indicators of corporate sickness. Bhatia (1988) and Sahoo, Mishra and Soothpathy (1996) examine the predictive power of accounting ratios on a sample of sick and non-sick companies by applying the multi discriminant analysis techniques. In both the studies, the selected accounting ratios are effective in predicting industrial sickness with a high degree of precision.

Literature reviews mentioned in this paper are having some Gaps due to which issue of NPAs require further investigation. Past researchers emphasized on the macro economic factors, lending policies and judgment criteria for the NPAs of Banks but they failed to describe about the impact on profitability of banks and about credit rating agencies which rate the Bank and the interlinkage with NPA & profitability. Hence this study is an effort to study the interlinkage between all these variables collectively.

(V) RESEARCH METHODOLOGY

THE PURPOSE OF STUDY

The study covers period from March 2008 to March 2009. This time period was chosen because last year a dramatically low performance of banks was seen due to the economic slowdown which was percolated to the entire world due to set back of US economy which again was the outcome of large NPAs in banks. Even Indian economy has witnessed the ripple jerks of this dreadful setback. Hence it becomes all the more important for Indian banks to treat NPAs with great caution of caution. The study focuses on impact of NPAs on profitability of banks and correlation of both these factors with rating agencies so as to find out the feasibility of both these factors in the decision making process pertaining to investment in banks by public and credit rating institutions.

RESEARCH DESIGN

Research undertaken is exploratory in nature and covers five banks under sample (two private and three public banks) - ICICI Bank, HDFC Bank, IDBI Bank, SBI Bank and BOB. Judgmental sampling is used for selecting the banks for which primary data is collected through structured questionnaire. In all 150 respondents of Ajmer, Jaipur and Delhi (50 respondents from each city) were surveyed to find out their preference level w.r.t. banks.

Data pertaining to NPAs, Profitability figures, Public and Institutional rating is collected through secondary sources: Books, Journals and websites. Spearman's rank correlation coefficient is used as hypothesis testing tool.

EMPIRICAL ANALYSIS

A) ANALYSIS OF THE QUESTIONNAIRE

Out of 150 respondents surveyed, 33 respondents were investing in ICICI Bank, 27 in HDFC Bank, 18 in IDBI Bank, 36 in SBI Bank, 18 in BOB and 15 in others. 66% (99) investors replied that they took investment decision on the basis of profitability of bank. NPAs were rarely used for bank selection purpose as only 6% (9) investors considered NPAs while making bank choice. As per the analysis it is inferred that hardly anybody considered rating given by rating agencies while selecting bank as only 4% (6) investors replied that they considered ratings of rating agencies for bank selection. 108 (72%) respondents were found to be satisfied with the services provided by their banks and major factors responsible for their satisfaction were Goodwill and Customer Care services of their bank.

Reference: Annexure 5

B) TESTING OF HYPOTHESIS

Ho1:- There is no impact of increase in NPAs on profitability of Banks.

1) Ranking of Banks according to NPAs

s. no	Name of Banks	NPA (2008) (In Cr.)	NPA (2009) (In Cr.)	NPA Valuation (%)	Ranking
1	ICICI	3490.55	4553.94	30.46	4
2	HDFC	298.52	627.62	110.24	5
3	IDBI	1082.91	949	-12.37	1
4	SBI	7424.33	9552.02	28.66	3
5	BOB	493.55	451.15	-8.6	2

Source-http://www.icicibank.com/Pfsuser/aboutus/resultsann/2009_04_FY2009_PR2.pdf
http://www.hdfcbank.com/common/pdf/corporate/HDFC_Bank_Annual_Report_0809_I.pdf
http://www.bankofbaroda.com/download/Bob-AR-http://www.statebankofindia.com/webfiles/uploads/files/AR0809/108-160.pdf
http://www.idbibank.com/idbi/fin_april_09.asp

S. No.	Name of Bank	NPA ranking	Profitability Ranking	Rank difference (di)	$(di)^2$
1	ICICI	4	5	-1	1
2	HDFC	5	2	3	9
3	IDBI	1	4	-3	9
4	SBI	3	3	0	0
5	BOB	2	1	1	1
				$\sum(di)^2$	20

Reference: Annexure 1 & 2

Spearman's rank correlation coefficient[3] :

$1- [6* 20/ 5 (5^2-1)]$

$1 – [120/120]$

CV = 0

Table Value [4]

TV = ± 0.90

Interpretation: Calculated value r = 0 is inside the limit of the acceptance region, null hypothesis is accepted. So by this it can be inferred that it's not always necessary that when NPA increases / decreases, Profitability also fluctuates in the same proportion. As per the study undertaken profitability of Banks is least affected by NPAs.

[3] Spearman's Rank Correlation Coefficient (**r**) **= 1 - [6 ∑(di)² / n (n² – 1)]**

[4] Table value at 5% significance level for n =5 seen in Spearman's rank correlation coefficient table.

Ho2:- Rating agencies have no interlinkage with NPAs of Banks.

(a) Public rating & NPAs correlation

S. No.	Name of Bank	Public Rating	NPA Ranking	Rank difference (di)	(di)2
1	ICICI	2	4	-2	4
2	HDFC	3	5	-2	4
3	IDBI	4	1	3	9
4	SBI	1	3	-2	4
5	BOB	5	2	3	9
				$\sum(di)^2$	30

Reference: Annexure 1 & 3

Spearman's rank correlation coefficient[6]

1- [6* 30/ 5 (5^2-1)]

1 – [180 / 120]

CV= **- 0.5**

Table value[7]

TV = ± 0.90

Interpretation: Calculated value r = - 0.5 is inside the limit of the acceptance region, null hypothesis is accepted. So it can be inferred from the foregoing analysis that public rating is not based on NPAs of banks and is based on other factors.

(b) CRISIL rating & NPAs correlation

S. No.	Name of Bank	CRISIL Rating	NPA Ranking	Rank difference (di)	(di)2
1	ICICI	5	4	1	1
2	HDFC	1	5	-4	16
3	IDBI	4	1	3	9
4	SBI	1.5	3	-1.5	2.25
5	BOB	1.5	2	-0.5	0.25
				$\sum(di)^2$	28.50

Reference: Annexure 1 & 4

Spearman's rank correlation coefficient[6]

1- [6* 28.50/ 5 (5^2-1)]

1 – [171 / 120]

CV= **- 0.425**

Table value[7]

TV = ± 0.90

Interpretation: Calculated value r = - 0.425 is inside the limit of the acceptance region, therefore null hypothesis is accepted. From the analysis undertaken It can be inferred that CRISIL rating and NPAs of banks are not interlinked hence parameters taken by Rating agencies are other than NPAs.

Ho3:- Banks rating by external agencies is not affected by its financial strength (Profitability)

(a) Public rating & Profitability correlation

S. No.	Name of Bank	Public Rating	Profitability Ranking	Rank difference (di)	(di)2
1	ICICI	2	5	-3	9
2	HDFC	3	2	1	1
3	IDBI	4	4	0	0
4	SBI	1	3	-2	4
5	BOB	5	1	4	16
				$\sum(di)^2$	30

Reference: Annexure 2& 3

Spearman's rank correlation coefficient[6]

1- [6* 30/ 5 (5^2-1)]

1 – [180 / 120]

CV= - **0.5**

Table value[7]

TV = ± 0.90

Interpretation: Calculated value r = - 0.5 is inside the limit of the acceptance region; So null hypothesis is accepted on the ground that rating agencies do not rate on the basis of profitability only, they may take other parameters as capital base for rating banks.

(b) CRISIL rating & Profitability correlation

S. No.	Name of Bank	CRISIL Rating	Profitability Ranking	Rank difference (di)	(di)2
1	ICICI	5	5	0	0

2	HDFC	1	2	-1	1
3	IDBI	4	4	0	0
4	SBI	1.5	3	-1.5	2.25
5	BOB	1.5	1	0.5	0.25
				$\sum(di)^2$	3.50

Reference: Annexure 2 & 4
Spearman's rank correlation coefficient[6]
1- [6* 3.50 / 5 (5^2-1)]
1 – [21 / 120]
CV= 0.825
Table value[7]
TV = ± 0.90
Interpretation: Calculated value r = 0.825 is inside the limit of the acceptance region; Hence null hypothesis is accepted. From the foregoing analysis it becomes apparent that even Crisil does not rate banks on the basis of profitability figures only. It's not always necessary that if profitability of banks is more then its rating will be high.

Ho4:- Public Rating is not based on rating given by external agencies.
Public Rating & Crisil Rating correlation

S. No.	Name of Bank	Public Rating	Crisil Rating	Rank difference (di)	(di)2
1	ICICI	2	5	-3	9
2	HDFC	3	1	2	4
3	IDBI	4	4	0	0
4	SBI	1	1.5	-.5	.25
5	BOB	5	1.5	3.5	12.25
				$\sum(di)^2$	25.5

Reference: Annexure 3 & 4
Spearman's rank correlation coefficient[6]
1- [6* 25.5/ 5 (5^2-1)]
1 – [153 / 120]
CV= - **0.275**
Table value[7]
TV = ± 0.90
Interpretation: Calculated value r = - 0.275 is within the acceptance region; therefore null hypothesis is accepted that public rating is not based on the rating given by credit rating agencies. There are other factors also which are stressed upon by public while giving their preference w.r.t. banks.

(VI) CONCLUSION

In conclusion it can be inferred that only lower profitability or higher NPAs taken in isolation do not reflect the performance and future direction of success or failure of a bank in real and absolute terms. Public do not rate banks on the basis of any one factor such as NPAs or Profitability or rating given by credit rating agencies solely. For public Goodwill and Customer care services provided by banks pay a pivotal role while choosing bank for investment. Performance of banks is gauged by various factors in conjunction which again is reflected in rating given for banks by rating agencies. It's not always necessary that increase in NPAs will reduce profits of banks. It is quite possible that other factors affecting profitability are favorable during the period of lofty NPAs. But NPAs are like termites of banking system which slowly-slowly erode away the profit figures of banks if not controlled judiciously. Therefore proper and timely cure of this syndrome is fundamental requisite for sound health of banks.

Rating agencies take many other factors for rating banks apart from NPAs and Profitability figures. A prudent investor does not take the decision of choosing a bank only on the basis of any single parameter. Eventually it can be inferred that importance of these two factors cannot be overlooked but instituting investment decision in banks only on their basis can be a misnomer and can produce disingenuous and vague outcome. Therefore all the factors including level of NPAs, Profitability figures and rating given by rating agencies taken collectively charts out a best investment strategy in banks.

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ANNEXURES

Appendix # 1

1) Ranking of Banks according to NPAs

s. no	Name of Banks	NPA (2008) (In Cr.)	NPA (2009) (In Cr.)	NPA Valuation (%)	Ranking
1	ICICI	3490.55	4553.94	30.46	4
2	HDFC	298.52	627.62	110.24	5
3	IDBI	1082.91	949	-12.37	1
4	SBI	7424.33	9552.02	28.66	3
5	BOB	493.55	451.15	-8.6	2

Source-http://www.icicibank.com/Pfsuser/aboutus/resultsann/2009_04_FY2009_PR2.pdf
http://www.hdfcbank.com/common/pdf/corporate/HDFC_Bank_Annual_Report_0809_I.pdf
http://www.bankofbaroda.com/download/Bob-AR-http://www.statebankofindia.com/webfiles/uploads/files/AR0809/108-160.pdf
http://www.idbibank.com/idbi/fin_april_09.asp

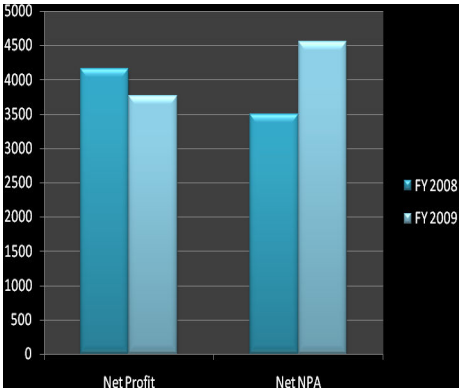
Appendix # 2

2. Ranking of Banks according to Profitability

A) ICICI BANK

	ICICI BANK	Fig. in cr.
	FY 2008	FY 2009
Net Profit	4157.73	3758.13
Net NPA	3490.55	4553.94

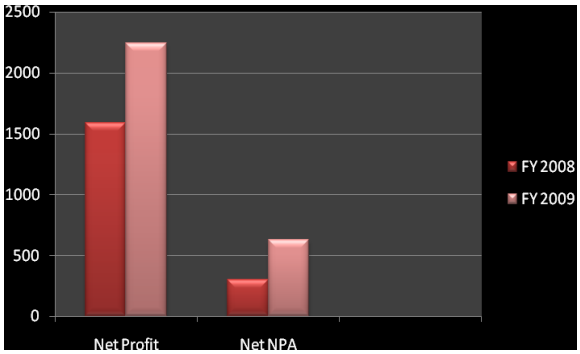
Source – http://www.icicibank.com/Pfsuser/aboutus/resultsann/2009_04_FY2009_PR2.pdf
http://www.icicibank.com/Pfsuser/aboutus/resultsann/2008-01-Q3-FY2008-PR-2.pdf



B HDFC BANK

		Fig. In Cr.
	FY 2008	**FY 2009**
Net Profit	**1590.18**	**2244.94**
Net NPA	**298.52**	**627.62**

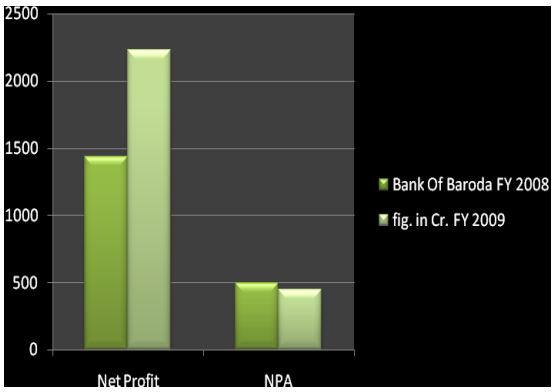
Source – http://www.hdfcbank.com/common/pdf/corporate/annual_report_07_08.pdf
http://www.hdfcbank.com/common/pdf/corporate/HDFC_Bank_Annual_Report_0809_I.pdf



C BANK OF BARODA

	Bank Of Baroda	Fig. in Cr.
	FY 2008	**FY 2009**
Net Profit	**1435.52**	**2227.2**
NPA	**493.55**	**451.15**

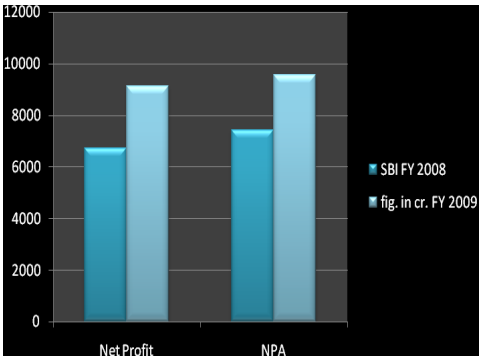
Source - http://www.bankofbaroda.com/download/Bob-AR-08062009.pdf
http://bob.myiris.com/newsCentre/bobNews.php?dir=2009/11/13/20091113163022200.htm



D STATE BANK OF INDIA

	SBI	Fig. in cr.
	FY 2008	FY 2009
Net Profit	6729.12	9121.22
NPA	7424.33	9552.02

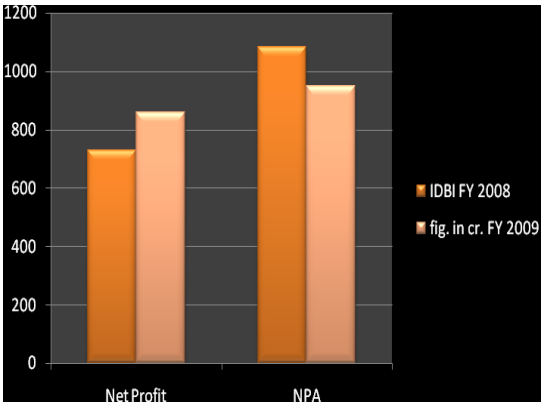
Source - http://crpd.sbi.co.in/uploads/forms/Main_Account_20080610.pdf
http://www.statebankofindia.com/webfiles/uploads/files/AR0809/108-160.pdf



E IDBI Bank

	IDBI	Fig. in cr.
	FY 2008	FY 2009
Net Profit	729.46	859
NPA	1082.91	949

Source – http://www.idbibank.com/idbi/fin_mar_08.asp
http://www.idbibank.com/idbi/fin_april_09.asp



	Name of Banks	Net Profit 08(In Cr.)	Net Profit 09(In Cr.)	Profitability (%)	Ranking
1	ICICI	4157.73	3758.13	-9.61	5
2	HDFC	1590.18	2244.94	41.17	2
3	IDBI	729.46	859	17.76	4
4	SBI	6729.12	9121.22	35.55	3
5	BOB	1435.52	2227.2	55.15	1

Appendix # 3

3 Ranking of Banks according to online Public rating by rating agencies Banking System - Top Banks In India

Abn Amro Bank | Allahabad Bank | American Express Bank | Andhra Bank | Bank Of India | Canara Bank | Central Bank Of India | Citibank | Corporation Bank | HDFC Bank | HSBC Bank | ICICI Bank | Indian Overseas Bank | Oriental Bank Of Commerce | Punjab National Bank | State Bank Of India (SBI) | Standard Chartered Bank | IDBI | United Bank Of India | Axis bank

http://finance.indiamart.com/investment_in_india/top_banks_india.html

Five Indian banks listed among top 1,000 world banks ranking (July 3, 2009)

The trade magazine 'The Banker' a part of the Financial Times group that has been carrying the rankings since 1970, has compiled a list of the world's top 1,000 banks for the year 2009; the five Indian banks have been able to make their position in the list. Banks capital is the core measure to know about bank's financial strength that includes largely of shareholders' capital. The two of Indian banks – State Bank of India is positioned at 64th position and ICICI Bank Ltd is figured at 81st position among the top 100 by tier I capital. While Punjab National Bank, HDFC Bank Ltd and Bank of India are positioned at 239, 242 and 263, respectively in the list to be published in the July issue of 'The Banker'. http://finance.indiamart.com/investment_in_india/top_banks_india.html

S. No.	Name of Banks	Public Rating	Ranking
1	ICICI	12	2
2	HDFC	10	1
3	IDBI	18	4
4	SBI	16	3
5	BOB	N.A.	5

http://finance.indiamart.com/investment_in_india/top_banks_india.html

Appendix # 4

4 Ranking of Banks according to rating by rating agencies (Crisil)

S. No.	Name of Banks	Crisil Rating	Ranking
1	ICICI	AAA/Negative/Reaffirmed	5
2	HDFC	AAA/stable/Reaffirmed	1
3	IDBI	AA/Stable	4
4	SBI	AAA/Stable	1.5
5	BOB	AAA/Stable	1.5

Sources: http://www.crisil.com/Ratings/RatingList/RatingDocs/icici-bank-1_16jul09.htm
http://www.crisil.com/Ratings/RatingList/RatingDocs/hdfc-bank_24oct08.htm
http://bob.myiris.com/newsCentre/bobNews.php?dir=2009/11/13/20091113163022200.htm
http://www.crisil.com/Ratings/RatingList/RatingDocs/state-bank-india_04aug09.htm
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Appendix # 5

Questionnaire

Q1) In which bank do you invest?
Q2) Have you taken bank's profitability into consideration while selecting your bank?
Yes/ No
Q3) Did you focus on the level of Non Performing Assets of bank while choosing your bank?
Yes/ No
Q4) Was Rating given by bank rating agencies considered by you during bank selection?
Yes/No
Q5) Are you satisfied with services provided by your bank?
Yes/ No
Q6) State any two factors for your satisfaction w.r.t. your bank.

COMPARATIVE ANALYSIS OF CAR LOANS PROVIDED BY PNB AND HDFC BANK

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ABSTRACT

The present study reveals that despite of its high rate of interest as compared to Punjab National Bank people go for HDFC bank to get their cars financed due to its attractive car loan schemes,speedy procedure, flexible repayment options, hassle free documentation, and other lucrative schemes as well as due to Less formalities and paper work, less margin on security and better services

KEYWORDS
car loans, descriptive research design, random sampling, regression

MEANING AND DEFINITION
The concise oxford dictionary has defined a bank as "Establishment for custody of money which it pays out on customers order". In fact this is the function which the bank performed when banking originated. In the words of H. Wills & J. Bogan Banking in the most general sense, is meant the business of receiving, conserving & utilizing the funds of community or of a special section of it. Bank is an institution that deals in money and its substitutes and provides crucial financial services. The principal type of baking in the modern industrial world is commercial banking & central banking. Banking means "Accepting Deposits for the purpose of lending or investment of deposits of money from the public, repayable on demand or otherwise and withdraw by cheque, draft or otherwise".

ORIGIN OF BANKING
Its origin in the simplest form can be traced to the origin of authentic history. After recognizing the benefit of money as a medium of exchange, the importance of banking was developed as it provides the safer place to store the money. This safe place ultimately evolved in to financial institutions that accepts deposits and make loans i.e., modern commercial banks.

HISTORICAL PERSPECTIVE
Bank of Hindustan, set up in 1870, was the earliest Indian Bank. Banking in India on modern lines started with the establishment of three presidency banks under Presidency Bank's act 1876 i.e. Bank of Calcutta, Bank of Bombay and Bank of Madras. In 1921, all presidency banks were amalgamated to form the Imperial Bank of India. Imperial bank carried out limited central banking functions also prior to establishment of RBI. It engaged in all types of commercial banking business except dealing in foreign exchange.
Reserve Bank of India Act was passed in 1934 & Reserve Bank of India (RBI) was constituted as an apex bank without major government ownership. Banking Regulations Act was passed in 1949. This regulation brought Reserve Bank of India under government control. Under the act, RBI got wide ranging powers for supervision & control of banks. The Act also vested licensing powers & the authority to conduct inspections in RBI. In 1955, RBI acquired control of the Imperial Bank of India, which was renamed as State Bank of India. In 1959, SBI took over control of eight private banks floated in the erstwhile princely states, making them as its 100% subsidiaries. RBI was empowered in 1960, to force compulsory merger of weak banks with the strong ones. The total number of banks was thus reduced from 566 in 1951 to 85 in 1969. In July 1969, government nationalised 14 banks having deposits of Rs.50 crores & above. In 1980, government acquired 6 more banks with deposits of more than Rs.200 crores. Nationalisation of banks was to make them play the role of catalytic agents for economic growth. The Narsimham Committee report suggested wide ranging reforms for the banking sector in 1992 to introduce internationally accepted banking practices.

HDFC
The housing development finance corporation limited (HDFC) was amongst the firs to receive an "in-principle" approval from the reserve bank of India (RBI) to set up a bank in the private sector, as part of RBI liberalization of Indian banking industry in 1994. The bank was in corporate in Aug. 1994 in the name of HDFC Bank Ltd. With its registered office in Mumbai, India, HDFC Bank commenced operations as scheduled commercial bank in January 1995.

PNB
Established in **1895 at Lahore**, undivided India, Punjab National Bank (PNB) has the distinction of being the first Indian bank to have been started solely with Indian capital. The bank was **nationalized in July 1969** along with 13 other banks. From its modest beginning, the bank has grown in size and stature to become a front line banking institution in India at present.

PROBLEM STATEMENT
The study entitled "Comparative Analysis Of Car Loans Provided By PNB And HDFC Bank" is focused on analyzing a comparison between car loans provided by a public sector bank i.e., PNB and a private sector bank i.e., HDFC

NATURE OF STUDY

The research study entitled "Comparative Analysis Of Car Loans Provided By PNB And HDFC Bank" is based on descriptive and analytical research. While the descriptive study relies on fact-findings, inquiries of different kind, the analytical research uses the facts and information to make critical evaluation of the material.

OBJECTIVES OF THE STUDY

To **review the car financing system** in terms of origin, growth and rationale of car financing institutions.
To evaluate the financial performance of HDFC bank car finance sector in INDIA for improvement in their financial structure for the better financial health of car financing industry.
To have a **comparative study of operational efficiency of Private bank's car finance with public banks** and provide the bank with suggestions to improve its financial performance.
To **recommend the car financing sector** to overcome the problems and to increase the efficiency in terms of providing the finance on the effective terms.
To **evaluate the operational efficiency of Public and private banks** to improve their operational efficiency of car finance industry.

RESEARCH DESIGN

The present study is descriptive in nature, as it seeks to describe ideas and insight and to bring out new relationships. Research design is flexible enough to provide opportunity for considering different aspects of problems under study. It helps in bringing into focus some inherent weakness in enterprise regarding which in depth study can be conducted by management.

SAMPLE & SAMPLING DESIGN

All items in any field of inquiry constitute a 'Universe' or 'Population'. A complete enumeration of all items in the population is known as census inquiry. But where census inquiry is not feasible due to time, money and efforts constraint sample survey is conducted. Keeping in view the objectives and resource limitations of the study, sample of 100 was taken. This sample was selected on the basis of **random sampling**.

DATA COLLECTION

The data for the study is comprised both primary as well as secondary.
Primary data has been collected from executives of HDFC Bank, other banks and customers, through the questionnaire comprising the various questions related to the study, by discussions, meeting with the executives at different levels, copy of questionnaire is enclosed in the annexure. **Secondary data** has been collected through the annual reports, data from magazines, journals, newspapers and online information.

SIGNIFICANCE OF THE STUDY

The importance of the study can be defined as under:-
Beneficial for the customers (Car loan takers). They can easily know the competitive rates of the banks.
Banks can **improve their performance** by seeing the improvements as well as performance of other banks.
Beneficial to **car companies**.
Customers' choice can increase.
If the **terms and conditions** of a bank are seems to be better then the car companies will tie up those banks for providing car loans to their customers.
Beneficial for competitors point of view also.

STATISTICAL TOOL

Here we use Regression statistical tool to define the relationships of dependence between loans and profits (of past five years) of the company. So, before using the tool we should have the knowledge about that statistical tool. Therefore this tool is defined as under:-
REGRESSION:
Regression Analysis is basically used to determine the dependence of one variable on the other. Regression is the measure of the average relationship between two or more variables. It is a statistical method of studying the nature of relationship between two or more variables and to make predictions. The study of regression is very useful and important in statistical analysis, which is clear by the following points:-
Regression analysis explains the nature of relationship between two variables.
The mutual relationship between two or more variables can be measured easily by regression analysis.
By regression analysis, the value of a dependent variable can be predicted on the basis of the value of an independent variable. For example, if loan of a bank is rises, what will be the probable rise in profits; this can be predicted by regression.
It is very useful in business and economic research. With the help of regression, business and economic policies can be formulated.
Regression of Profits on Loans of HDFC:-

Year	Loans (00,000 Rs.) (X)	x (X-A)	x^2	Profits (00,000 Rs.) (Y)	y (Y-B)	y^2	xy
2004	72	-6.6	43.56	85	-5	25	33
2005	75	-3.6	12.96	87	-3	9	10.8
2006	79	0.4	0.16	90	0	0	0
2007	82	3.4	11.56	92	2	4	6.8
2008	85	6.4	40.96	96	6	36	38.4
	∑X=393	∑x=0	$\sum x^2$=109.2	∑Y=450	∑y=0	$\sum y^2$=74	∑xy=89

A = ∑X/N = 393/5 = 78.6; **B** = ∑Y/N = 450/5 = 90
byx = 0.81, bxy = 1.2; r = 0.98

Regression of Profits on Loans of PNB:-

Year	Loans (00,000 Rs.) (X)	x (X-A)	x^2	Profits (00,000 Rs.) (Y)	y (Y-B)	y^2	xy
2004	56	-6	36	67	-7	49	42
2005	59	-3	9	71	-3	9	9
2006	61	-1	1	73	-1	1	1
2007	66	4	16	77	3	9	12
2008	68	6	36	82	8	64	48
	∑X=310	∑x=0	$\sum x^2=98$	∑Y=370	∑y=0	$\sum y^2=132$	∑xy=112

A = ∑X/N = 310/5 = 62; **B** = ∑Y/N = 370/5 = 74

byx = 1.14, bxy = 0.84; r = 0.97

FINDINGS

My study reveals that HDFC bank is playing a significant role in car financing and its performance is up to the standard of satisfaction.
HDFC bank is using a premium pricing policy and people are getting better value for their money as compared to other commercial banks.
The analysis of the data shows that **professional salaried class people preferred financing of their cars through banks**. As it provides them with **less anxiety** related to money matters and they found it convenient to repay installment as compared to other modes of payment.
To fulfill their dreams they prefer HDFC bank as compared to Punjab National Bank.
The rate of interest on loan is satisfactory and attractive.

SUGGESTIONS

Here are certain suggestions, which may prove helpful in improving the performance of banks as regards to car financing.
The banks should make arrangements to provide regular and efficient services to all its customers.
The banks should provide for making regular and frequent calls to their profitable customers to retain clientele and to make their clients feel more comfortable and attached with the bank.
The banks should make arrangements for creating a customer grievance cell at the branch level, which would ensure handling all customers' complaints and their grievances.
Facilitating the clients by more reliable opportunities like less time in providing finance, more time for re-payment etc.
The banks should make available various broachers related to car loans to their customers.
It is necessary for banks to give information on new schemes offered by them from time to time.
The banks should grant loans on a less rate of interest as compared to other banks.
The banks should also aim to penetrate into rural areas so that people living in these areas can also enjoy the benefits of these banks.
The banks should offer other attractive schemes for large cars so that more and more people can own large cars.
The banks should use television as a source of advertisement so that more people are aware of these schemes and can utilize the same.
The banks should collect feedback regarding the schemes and services provided by them from their consumers and try to implement suggestions given by them.
The branches of the respective banks should aim at proactively selling the third party products to the consumers.
The banks should also aim at infrastructure improvements and better system of trading in the government securities and foreign exchange market.
The banks should go for greater liberalization in the foreign ownership.

CONCLUSION

The overall study shows that inspite of its high rate of interest as compared to public sector bank (Punjab National Bank) people go for HDFC bank to get their cars financed due to its Attractive car loan schemes, Speedy procedure, Flexible repayment options, Hassle free documentation, and other lucrative schemes as well as due to Less formalities and paper work, less margin on security and better services

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RELATIONSHIP OF ENVIRONMENTAL DISCLOSURES AND OTHER INDEPENDENT VARIABLES IN THE DIFFERENT TYPE OF INDUSTRIES - A CASE STUDY OF INDIAN BSE-200 COMPANIES

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ABSTRACT

Environment has become one of the hottest issues in the world. The main cause of pollution is the industrial growth. In order to know that how much each industry is contributing to control the pollution, this study has been conducted. In this study the analysis is done to know the level of environmental disclosures in the annual reports of the companies of various industries(BSE 200).Also it has been found the behaviour of other dependent variables like age of the companies, its share capital, net fixed assets and net profit and their relationship with the environmental disclosures in different type of industries.

INTRODUCTION

Environment has become one of the hottest issues in the world. All the political parties, NGO's, environmentalists and even the common people are thinking about the cleaner environment. Like all other countries in the world, India is also facing the polluted environment. The presence of Uranium and heavy metals in the natural water resources of Punjab has just shaken up the society. The various manufacturing and other business related industries are throwing their wasted polluted water into the natural resources of water used for human consumption and irrigation purposes. Similar is the condition in all other states of India.

In order to know the behaviour of different industries with the environmental issues this study has been conducted. In this paper the level of environmental disclosures by the different industries are studied vis a vis the relationship of net fixed assets, net profits, age of the companies within that particular industry and its share capital with the environmental disclosures have also been analysed.

This study has been divided into four sections. The first section gives the brief account of introduction, the next section highlights the research methodology, the third section presents the analysis of data and the final section presents the concluding remarks.

RESEARCH METHODOLOGY

The annual reports ninety- two companies of the year 2005-6 are collected by various means. All these companies are from BSE-200. A work sheet is prepared by consulting with environmentalists and chartered accountants covering all the possible elements of environmental accounting and reporting that can be disclosed by the companies. The annual reports are scanned thoroughly to find out the extent of environmental disclosures by each and every company.

The objectives of this paper are, first to study the level of environmental disclosures in the different types of industries and second is to find the relationship between independent variables (characteristics) like age, net sales, net fixed assets and net profit with the environmental disclosures within that industry.

The sample of the companies is divided according their type of industries. The relationship is found as according to the above said objectives. The industries having lesser number of companies are grouped together to find out the relationship.

SCORING OF ITEMS

The score 3 is given if the information provided is in monetary terms, the score 2 is assigned if the information given is in quantitative terms and the score 1 is assigned if the item is disclosed only in descriptive terms. The score zero is assigned if the concerned item is not disclosed in any of the said forms.

STATISTICAL TOOLS

The tables are constructed to study the primary changes in the related variables. To examine the effects and relationships of different factors on the total scores of environment, different regression forms are test fitted for all, viz.

a. Linear : $Y = a + bX_i + v_i$

b. Exponential: $Y = a.b^{X_i} e^{v_i}$

c. Power : $Y = a.X_i^b.e^{vi}$

where, Y is a dependent variable, the total scores

and X_i are the independent variables

where X_1 =Age of the companies

X_2 =Net Sales

X_3 =Net Fixed Assets

X_4 =Net Profit

and v_i is random term normally distributed with zero mean and constant variance.

The t-value of the estimates is worked out to test the statistical significance of these estimates at (n-k-1) degrees of freedom. The t-value of the regression coefficients (b_i) are computed out as under:

t(n-k-1)= b_i /S.E.(b_i)

Where S.E. is the standard error of the coefficients of (b_i)

The coefficients of determination (R^2) is worked out to estimate the extent of total variation in the total score (Environmental) as explained by the explanatory variables included in the model. Statistical significance of (R^2), which shows the goodness of fit of the function is tested by working out (F-ratio) as follows

$$F = \frac{R^2}{(1-R^2)} * \frac{(n-K)}{(K-1)}$$

Where, (R^2) is the value of the multiple correlation coefficient, (k) is the number of parameters and (n) is the number of observations. The significance of F-value is tested at one and five percent levels at (n-1) and (n-k) degrees of freedom on numerator and denominator scales respectively.

TEST FOR AUTO CORRELATION

To study the problem of auto correlation, the Durbin-Waston test is used. To test the null hypothesis of auto correlation, the Durbin Waston is used as follows

$$d^* = \frac{\sum_{t=2}^{n}(e_t - e_{t-1})^2}{\sum_{t=1}^{n} e_t^{\,2}}, r_{ij,} R_y$$

Where e_t = least square residual at 't' year

e_{t-1} =least square residual lagged by one year

t = time subscript

n= number of observations

The empirical (d^*) is compared with the theoretical values of d (at n degrees of freedom and k number of parameters estimated) that is, the values of d which defines the critical region of the test. Finally, the null hypothesis is accepted that there is no problem of auto correlation in the function.

TEST FOR MULTICOLLINEARITY

Klein Test is tried to test the magnitude of multi co linearity. All the possible simple correlation coefficients r_{ij}, and the multiple correlation coefficients, R_y are compared. Since all $r_{ij} < R_y$, then it is ensured that there is no linear relationship between any independent variables are observed.

ANALYSIS OF THE DATA

This section of the study analyses the relationship of independent variables and the total environmental score in different types of industries. All the companies in the sample are divided according to their industry. The study covers a total of 19 industries. Due to lesser number of

companies in some industries, a combined table of those industries was produced. The multiple regressions are applied between the selected independent variable and total environmental score within different types of industries. In all, 11 tables have been prepared to present the data pertaining to different industries. These tables indicate the behaviour of independent variable with the dependent variable.

The Telecom and Information Technology (IT) Industry

Table 1 highlights the relationship of selected independent variables with the total environmental score in the Telecom industry and Information Technology industry collectively. In the linear function, the selected variables explain 95 per cent of the variations in the dependent variable. The coefficients of age of the company and net profit are negatively related with the total score; and the t-values of all the four selected independent variables turn out to be highly significant. In the exponential function, the selected independent variables explain 22 per cent of the variations in the dependent variable; and the coefficients of net sales and net fixed assets show a positive relationship with the dependent variable. The t-value of the variable net fixed assets turns out to be highly significant. In the case of power function, the coefficients of all the variables except net profit show a positive relationship with the dependent variable and the t - values of age the company and net sales turn out to be highly significant. The F-values of linear and power functions turn out to be highly significant.

Table 1

Factors Affecting Environmental Disclosures of Company Characteristics in the Telecom and Information Technology (IT) Industry

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	11.50(4.83)***	2.93 (0.49)*	1.28 (3.06)***
X1(Age of the company)	-7.85 (6.01)***	-0.197 (0.059)*	0.176 (3.71)***
X2 (Net Profit)	0.501 (7.72)***	0.0053 (0.358)*	0.997 (2.95)***
X3 (Net Sales)	0.15 (6.52)***	0.172 (3.58)***	1.365 (0.29)*
X4 (Net Fixed Assets)	-0.201(6.663)***	-0.907 (1.18)*	-0.187 (0.18)*
R^2	0.950	0.229	0.660
Adjusted R^2	0.900	0.540	0.400
F-value	19.240	2.300	5.360
Significance	H.S.	N.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

THE DIVERSIFIED INDUSTRY

Table 2 shows the relationship of dependent and independent variables in the companies belonging to diversified industry.

Table 2

Factors Affecting Environmental Disclosures of Company Characteristics in the Diversified Industry

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	19.26(2.69)*	5.46 (6.62)***	7.66 (5.62)***
X1(Age of the company)	-0.154 (1.193)*	0.34 (1.34)*	0.28 (3.34)***
X2 (Net Profit)	-0.134 (4.027)***	-0.231 (2.528)**	-0.026 (3.51)***
X3 (Net Sales)	-0.152 (5.79)***	-0.181 (5.54)***	0.189 (3.89)***
X4 (Net Fixed Assets)	0.0912 (8.23)***	0.221 (16.52)***	0.001 (0.77)*
R^2	0.961	0.990	0.660
Adjusted R^2	0.920	0.990	0.640

F-value	25.000	381.690	38.110
Significance	H.S.	H.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)
Note: The figures given in parentheses indicate the t-values.

The values of R^2 in the linear, exponential and power functions reflect that the selected independent variables explain 96 per cent, 99 per cent and 66 per cent of the variations respectively in the total environmental score. The coefficients of all the independent variables except net profit show a negative relationship with the dependent variable; and the t-values of all the variables except age of the company turn out to be highly significant. In the case of exponential function, the coefficients of age of the company and net profit show a positive relationship; and the t-values of net fixed assets and net profit turn out to be highly significant and of the net sales turns out to be significant. The coefficients of all the variables except net sales show a positive relationship; and the t-values of all the variables except net profit turn out to be highly significant. The F-values of all the functions turn out to be highly significant.

THE METAL, MINING & CHEMICAL AND PETRO-CHEMICAL INDUSTRIES

Table 3 shows the relationship of environmental disclosure with the selected independent variables in Metal, Mining & Chemical and the Petro-Chemical industry. The independent variables explain 49 per cent, 55 per cent and 67 per cent of the variations in the dependent variable in linear, exponential and power functions respectively. The coefficients show that all the variables are negatively related except net fixed assets in the linear function; and the t-value of net fixed assets turns out to be significant. In the exponential function the coefficient shows that age of the company and net fixed assets are positively related; and the t-values of age of companies, net fixed assets and net profit turn out to be highly significant and that of net sales is significant. In the power function, the coefficients of net sales and net fixed assets are positively related; and the t-values of net sales and net fixed assets turn out to be highly significant. The F- value comes out to be significant in linear and exponential functions and highly significant in the power function

Table 3

Factors Affecting Environmental Disclosures of Company Characteristics in Metal, Mining & Chemical and Petro-Chemical Industries

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	14.94(1.77)*	2.18 (3.82)***	10.16 (3.19)***
X1(Age of the company)	-0.818 (1.209)*	0.591 (3.191)***	-0.817 (2.77)**
X2 (Net Profit)	-0.33 (1.33)*	-0.241 (2.27)**	0.147 (3.99)***
X3 (Net Sales)	0.751 (2.77)**	0.551 (3.58)***	0.007 (3.03)***
X4 (Net Fixed Assets)	-0.181 (0.141)*	-0.353 (3.34)***	-0.535 (1.58)*
R^2	0.498	0.550	0.670
Adjusted R^2	0.123	0.106	0.620
F-value	3.350	3.240	7.990
Significance	S.	S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)
Note: The figures given in parentheses indicate the t-values.

THE FINANCE & HOUSING RELATED INDUSTRY

It is quite evident from Table 4 that the selected independent variables explain 89 per cent, 56 per cent and 62 per cent of the variations in linear, exponential and power functions respectively. The coefficients of net fixed assets and net profit are positively related with the total environmental score in the linear function; and the t-value of net profit turns out to be highly significant. In the exponential function, the coefficients of net fixed assets and net profit indicate that these are positively related with the dependent variable; and the t-values of age of the company and net sales turn out to be highly significant. Further, the coefficients of net fixed assets and net profit explain that these variables are positively related in the power function also; and the t-values of these two variables come out to be highly significant. The F-values indicate that it is highly significant in linear and power functions and is significant in the exponential function

Table 4

Factors Affecting Environmental Disclosures of Company Characteristics in Finance & Housing Industry

Variable	**Linear**	**Exponential**	**Power**

	Equation 1	Equation 2	Equation 3
Constant	4.85(1.35)*	1.60 (2.41)**	3.85 (3.35)***
X1(Age of the company)	-0.32 (2.84)**	-0.173 (3.25)***	-0.66 (2.89)**
X2 (Net Profit)	-0.162 (1.63)*	-0.788 (3.64)***	-0.671 (0.91)*
X3 (Net Sales)	0.092 (2.77)**	0.117 (2.73)**	0.006 (3.77)***
X4 (Net Fixed Assets)	0.0621 (2.98)***	0.138 (1.173)*	0.167 (4.98)***
R^2	0.892	0.560	0.620
Adjusted R^2	0.785	0.380	0.600
F-value	8.300	3.300	4.160
Significance	H.S.	S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

THE HEALTH CARE INDUSTRY

Table 5 highlights the relationship between dependent and independent variables in the health care industry.

Table 5

Factors Affecting Environmental Disclosures of Company Characteristics in the Health Care Industry

	Linear	Exponential	Power
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	2.25(0.39)*	3.03 (0.52)*	3.26 (3.19)***
X1(Age of the company)	0.33 (3.04)***	-0.09 (3.58)***	-0.078 (2.96)***
X2 (Net Profit)	0.25 (1.98)*	0.030 (2.81)**	0.067 (3.18)***
X3 (Net Sales)	-0.23 (3.13)***	-0.35 (1.44)*	0.679 (3.56)***
X4 (Net Fixed Assets)	-0.47 (2.32)**	-0.91 (0.43)*	0.007 (1.56)*
R^2	0.580	0.320	0.280
Adjusted R^2	0.250	0.200	0.220
F-value	2.790	1.610	3.990
Significance	N.S.	N.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

The value of R^2 indicates that 58 per cent, 32 per cent and 28 per cent of the variation in the dependent variable is explained by the selected independent variables in the linear, exponential and power functions respectively. The values of coefficient of the age of company and net sales point out that these variables are positively related with the total environmental score in the linear equation; and the t-values of the age of company and net fixed assets turn out to be highly significant. The coefficients of all the variables except net sales in the exponential function indicate that these are negatively related with the dependent variable in the exponential function; and the t-value of the age of company comes out to be highly significant. In the case of power function, the coefficients of all the selected independent variables except the age of company show a positive relationship with the dependent variable; and the t-values of all the variables except net profit appear to be highly significant. The F-value of the power function comes out to be highly significant.

THE CONSUMER DURABLES, TRANSPORT, TEXTILE, AGRICULTURE AND TOURISM INDUSTRIES

Table 6 shows that the selected independent variables explain 68 per cent, 52 per cent and 48 per cent of the variations in the dependent variable in linear, exponential and power functions respectively. The coefficients of net sales and net profit show a positive relationship with the dependent variable in the linear function; and the t-value of net sales turns out to be highly significant. In the exponential function, the coefficients of net sales and net profit show a positive relationship with the dependent variable; and the t-value of net sales turns out to be highly significant. However, in the case of power function, the coefficients of net sales and net profit show a positive relationship with the dependent variable; and the t-values of age of the companies, net fixed assets and net profit turn out to be highly significant. The F-value of power function turns out to be highly significant.

Table 6

Factors Affecting Environmental Disclosures of Company Characteristics in the Consumer Durables, Transport, Textile, Agriculture and Tourism Industries

Variable	Linear Equation 1	Exponential Equation 2	Power Equation 3
Constant	10.42(2.92)***	0.670 (0.127)*	5.41 (4.47)***
X1(Age of the company)	-0.95 (1.53)*	-0.971 (2.05)**	-0.678 (3.11)***
X2 (Net Profit)	0.359 (3.21)***	0.351 (3.49)***	0.356 (1.90)*
X3 (Net Sales)	-0.765 (2.89)**	-0.671 (2.65)**	-0.067 (3.89)***
X4 (Net Fixed Assets)	0.010 (1.15)*	0.171 (1.33)*	0.077 (3.33)***
R^2	0.680	0.520	0.480
Adjusted R^2	0.360	0.480	0.460
F-value	2.150	1.120	5.570
Significance	N.S.	N.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

THE CAPITAL GOODS INDUSTRY

The values of R^2 given in Table 7 indicate that the selected independent variables explain 89 per cent, 27 per cent and 67 per cent of the variations in the dependent variable in the linear, exponential and power functions respectively. The coefficients of net fixed assets and net profit show that both dependent and independent variables are positively related; and the t-values of all the variables except age of the company turn out to be highly significant in exponential function. The coefficients of the net fixed assets and net profit reflect that these two variables are positively related; and the t-values of all the variables except age of the company turn out to be highly significant. The coefficients of all the variables except age of the companies indicate that these are positively related; and the t-values of these variables also turn out to be highly significant. The F-values of linear and power functions turn out to be highly significant and significant respectively.

Table 7

Factors Affecting Environmental Disclosures of Company Characteristics in the Capital Goods Industry

Variable	Linear Equation 1	Exponential Equation 2	Power Equation 3
Constant	2.89(1.57)*	1.06 (2.49)**	5.11 (2.42)*
X1(Age of the company)	-0.34 (2.02)*	-0.27 (3.63)***	0.56 (2.15)*
X2 (Net Profit)	-0.69 (5.33)***	-0.33 (2.15)*	-0.279 (5.96)***
X3 (Net Sales)	0.56 (5.65)***	0.27 (1.23)*	0.489 (3.81)***
X4 (Net Fixed Assets)	0.30 (4.98)***	0.014 (3.05)***	0.015 (3.11)***
R^2	0.890	0.270	0.670

Adjusted R^2	0.810	0.110	0.610
F-value	10.900	1.470	3.470
Significance	H.S.	N.S.	S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)
Note: The figures given in parentheses indicate the t-values.

THE TRANSPORT EQUIPMENT INDUSTRY

Table 8 evidently shows that the selected independent variables under the linear function explain 29 per cent of the variations in the dependent variable and the coefficients of age of the companies; and the net fixed assets show a positive relationship with the dependent variable. The t - value of the age of companies turns out to be highly significant; and that of net sales is significant. The coefficients of all the variables except net sales show a positive relationship with the total environmental score in the exponential function; and the t-values of net fixed assets and net profit turn out to be highly significant; and the rest of the two variables come out to be significant. The coefficients of all the variables except age of the companies come out to be positively related with the dependent variable and the t-value of the net sales turns out to be highly significant. The F-value of the exponential function turns out to be highly significant and that of linear and power functions is significant.

Table 8
Factors Affecting Environmental Disclosures of Company Characteristics in Transport Equipment Industry

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	2.14(0.64)*	4.64 (3.15)***	3.14 (2.79)**
X1(Age of the company)	0.75 (3.94)***	0.13 (2.78)**	-0.17 (2.92)**
X2 (Net Profit)	-0.19 (2.53)**	-0.13 (2.89)**	0.076 (3.59)***
X3 (Net Sales)	0.17 (1.67)*	0.004 (2.92)***	0.0291 (1.56)*
X4 (Net Fixed Assets)	-0.082 (0.12)*	0.98 (3.59)***	0.01 (0.11)*
R^2	0.291	0.470	0.580
Adjusted R^2	0.260	0.330	0.470
F-value	3.520	4.160	3.110
Significance	S.	H.S.	S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)
Note: The figures given in parentheses indicate the t-values.

THE POWER AND FMCG INDUSTRIES

The values of given in table 9 indicate that the selected independent variables explain 93 per cent, 87 per cent and 81 per cent of the variations in dependent variable in linear, exponential and power functions respectively. The coefficients of age of the company and net profit show a positive relationship with the dependent function in the linear function; and the t-values of all the variables except net sales turn out to be highly significant. In exponential function, the coefficients of age of the company and net profit indicate a positive relationship between the two variables; and the t-value of net fixed assets turns out to be highly significant. In power function, the coefficients of age of the company and net profit come out to be positive; and the t-values of age of the companies and net profit turn out to be highly significant. The F-values of all the three functions turn out to be highly significant.

Table 9
Factors Affecting Environmental Disclosures of Company Characteristics in the Power and FMCG Industries

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	1.81(0.57)*	0.82 (3.53)***	0.11 (3.09)***

X1(Age of the company)	0.21 (3.29)***	0.151 (2.19)*	0.56 (3.87)***
X2 (Net Profit)	-0.16 (1.82)*	-0.271 (2.81)**	-0.007 (1.81)*
X3 (Net Sales)	-0.17 (3.40)***	-0.161 (3.14)***	-0.006 (2.14)*
X4 (Net Fixed Assets)	0.171 (3.33)***	0.116 (2.16)*	0.716 (8.16)***
R^2	0.930	0.870	0.810
Adjusted R^2	0.860	0.750	0.760
F-value	13.490	7.250	4.560
Significance	H.S.	H.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

THE OIL AND GAS INDUSTRY

Table 10 exhibits the relationship of different variables in the Oil and Gas industry. The values of indicate that the selected variables explain 80 per cent, 24 per cent and 78 per cent of the variations in the dependent variable in the linear, exponential and power functions respectively. The coefficients of all the variables except net sales show a positive relationship with the dependent variable in the linear function; and the t-values of net sales and net fixed assets turn out to be highly significant. In exponential function, the coefficients of all the variables come out to be positively related with the dependent variable; and the t-value of age of company turns out to be highly significant. The coefficients of all the variables in the power function also come out to be positive; and the t-values of net sales and net profit turn out to be highly significant. The F-values turn out to be highly significant in linear and power functions, and significant in exponential function.

Table 10

Factors Affecting Environmental Disclosures of Company Characteristics in the Oil and Gas Industry

	Linear	**Exponential**	**Power**
Variable	**Equation 1**	**Equation 2**	**Equation 3**
Constant	3.36(0.931)*	5.10 (1.11)*	4.56 (3.11)***
X1(Age of the company)	0.116 (0.786)*	0.98 (3.52)***	0.107 (0.799)*
X2 (Net Profit)	-0.801 (2.99)***	0.107 (0.152)*	2.170 (3.99)***
X3 (Net Sales)	0.431 (3.22)***	0.371 (2.18)*	0.817 (1.99)*
X4 (Net Fixed Assets)	0.07 (1.57)*	0.195 (0.32)*	0.079 (4.56)***
R^2	0.80	0.24	0.78
Adjusted R^2	0.67	0.12	0.72
F-value	6.30	3.12	7.96
Significance	H.S.	S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

OVERALL BEHAVIOUR OF INDEPENDENT VARIABLES WITH TOTAL ENVIRONMENTAL DISCLOSURE SCORE

This part of the study shows the overall behaviour of selected independent variables with the total environmental score. Multiple regression is applied over the age of company, net sales, net fixed assets, net profit and the dependent variable with the total environmental score. The following table is compiled to know the results of the relationship of both the independent and dependent variables.

Table 11

Factors Affecting Environmental Disclosures of Company Characteristics

Variable	Linear Equation 1	Exponential Equation 2	Power Equation 3
Constant	3.72 (2.36)**	1.186 (7.16)***	4.51 (3.16)***
X1(Age of the company)	0.07 (3.25)***	0.072 (3.00)***	0.076 (4.11)***
X2 (Net Profit)	-0.046 (3.94)***	0.160 (2.009)*	0.767 (3.99)***
X3 (Net Sales)	0.002 (1.54)*	0.036 (1.97)*	-0.031 (3.06)***
X4 (Net Fixed Assets)	0.112 (2.75)**	0.012 (3.07)***	0.466 (0.50)*
R^2	0.890	0.860	0.920
Adjusted R^2	0.660	0.590	0.870
F-value	5.370	4.410	5.990
Significance	H.S.	H.S.	H.S.

*** Highly Significant (H.S.) ** Significant (S.) * Non-significant (N.S.)

Note: The figures given in parentheses indicate the t-values.

Table 11 shows that the selected independent variables explain 89 per cent, 86 per cent and 92 per cent of the variations in the dependent variable in linear, exponential and power functions respectively. The coefficient of the variable age of the company is showing a positive relationship with the total environmental score; and its t-value turns out to be highly significant in all the three equations. This means that as the company grows older the more will be its total environmental disclosures. The coefficient of net sales of the company is showing a positive relationship with the total environment score in all the three equations except in the linear function. Its t-values turn out to be highly significant in linear and power functions. The coefficient of the variable net fixed assets is showing a positive relationship in linear and exponential functions but negative in the power function; and its t-value comes out to be highly significant in power function. The coefficient of net profit is, again, showing a positive relationship in all the three functions; and its t-value turns out to be significant in linear function and highly significant in the case of power function. This means that the companies earning more profits disclose more environmental related items. The F-values come out to be highly significant in all the three functions.

So, it can be said that all the selected independent variables have mostly shown a positive relationship with the total environmental score. As the age of company, its net sales, net fixed assets and net profits increase the total environmental disclosures also increase.

CONCLUSION

In Metal, Mining & Chemical and Petrochemical industries, the net fixed assets are showing positive relationship with the total environmental score. Similarly in Finance and Housing Related industries the net fixed assets and net profits are showing positive relationship with environmental total score.

In the Health Care industry the net sales are showing positive relationship with the environmental disclosures. In Consumer Durables, Transport, Textile and Agriculture & Tourism Industries, the net profits and net sales are showing positive relationship with the environmental disclosures while the net fixed assets are showing the negative relationship.The industry of Capital Goods, the net fixed assets and net profits are showing positive relationship, while the net sale is showing negative relationship with environmental score. In the industry of Transport Equipment, the net fixed asset is showing positive relationship with the environmental disclosure. The age of the companies and the net profits are showing positive relationship while the net sales and the net fixed assets are showing negative relationship environmental score. In the industry of Oil and Gas, the age of the companies, net fixed assets and net profits are showing positive relationship with the environmental disclosure. This is the only industry in which maximum number of variables are showing the relationship with the environmental disclosure and that all are positively related. In overall, if all the industries are taken together, all the four variables i.e. the age of the companies, net sales, net fixed assets and net profits are showing positive relationship with the environmental disclosure.

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SIX SIGMA - A BREAKTHROUGH IMPROVEMENT STRATEGY FOR BUSINESS IMPROVEMENT- AN OVERVIEW

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ABSTRACT

In the present era of globalization, where the competition to survive in market gets tougher, the organizations need to become more productive and efficient. Manufacturing including service organizations need to improve quality, while reducing cost and enhancing quality & productivity with limited resources. Brilliant and innovative approaches and ideas are replacing the conventional techniques to survive in the global competitive market. Six Sigma quality management approach can directly fulfill these requirements, if implemented properly. Six Sigma improvement drive is the latest and most effective technique in the quality engineering and management spectrum.

It is a highly disciplined process that helps to focus on developing and delivering quality products & services. It is the most effective breakthrough strategy ever devised. Many organizations have earlier tried Downsizing, Outsourcing, Activity based costing, Business process reengineering, Just in time, Kaizen & TQM for improving quality and business results. While all these quality improvement drives are useful in their own ways, they often fail to make breakthrough improvements in bottom line and quality.

The Six Sigma concept gains more and more importance because of its successful implementation in the companies. Six Sigma is a powerful business strategy that employs a disciplined approach to tackle process variability using the application of statistical and non-statistical tools and techniques in a rigorous manner. Six Sigma is a methodology that improves quality and productivity by analyzing data with analytical and statistical tools to find root cause of production problems and to implement controls .It is a business strategy that focuses on improving customer requirement understanding, business system productivity and financial performance.

This paper is an attempt to introduce Six Sigma as a breakthrough improvement strategy for industries. An attempt is made to make some critical examinations relating to Six Sigma. The purpose is basically to capture the varied perspectives of Six Sigma and to provide a direction for integrating them into the planning, design and implementation framework to enhance the effectiveness of Six Sigma.

KEY WORDS

Breakthrough Improvement, Six Sigma, Six Sigma Quality, Six Sigma Roadmap.

INTRODUCTION

Quality Management

During the last decades, quality management has been put forward by a numbers of its promoters as a new management theory. Quality management can be described as a management revolution, a revolutionary philosophy of management, a new way of thinking about the management of organizations, a paradigm shift, a comprehensive way to improve total organizational performance, an alternative to management by control or as a framework for competitive management (Foley, 2004). Despite the high aims of promoters of quality management, the failures of organizations trying to implement a successful quality management programme have been well documented (Brown et al. 1994; Eskildson (1994), Harari 1997; Cao et al. 2000; Nwabueze 2001.

Quality Management Concepts

Concepts that have been presented and promoted are, for instance, Total Quality Management (TQM), Lean Manufacturing, Just-in-Time (JIT) Management, Kaizen, Business Process Reengineering (BPR), Business Excellence, Six Sigma etc.

Most of the quality management approaches fall into three major categories:

(A) Management systems – based on a set of consensus or regulatory requirements such as ISO 9000 & ISO 14000.

(B) Business process improvement strategies – emphasizing analytical, statistical and managerial tools to improve and control product, process and service quality, such as TQM, Lean management, SPC, JIT manufacturing, TPM, BPR, MBO, Quality Circles, Zero Defects, Six Sigma and so on.

(C) Performance excellence models – involving a regional or national set of award criteria used to evaluate a quality management system and the resulting business performance, Malcolm Baldrige National Quality Inter Award, European Quality Award, the Deming Prizes, The Golden Peacock National Quality Award, Rajiv Gandhi National Quality Award, European Quality Award, Korean National Quality Grand Prize etc. are few examples.

Organizations must determine which of these approaches will best fit their business model & provide the greatest return on investment.

Six Sigma

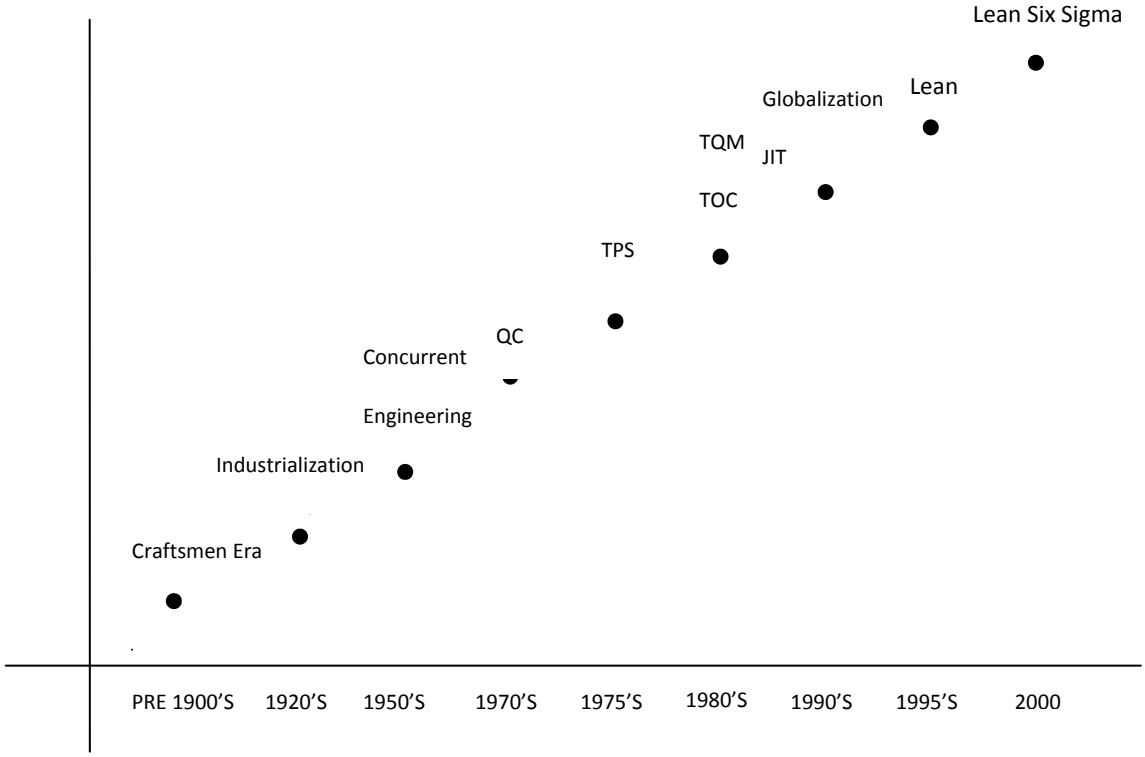
Recent developments have included increased organizational and academic interest in the Six Sigma approach to business improvement. Six Sigma was born approximately two decades ago as a process improvement philosophy to help improve business financial performance. It was developed in industry and spread largely by professional consultants. Since its introduction it has found its way into most sectors of today's business society. Inspired leaders, such as Jack Welch and Larry Bossidy, have incorporated Six Sigma into the fabric of their businesses and achieved results beyond the predictions of the most enthusiastic Six Sigma advocate. Six Sigma has also been expanded from merely improving existing processes to the design of new products and processes.

Six Sigma has now evolved from a quality improvement program to an overall business strategy executive system and business-results-oriented program, which seems more *total* than total quality management (TQM).

Six Sigma has acquired a strong perspective stance with practices often being advocated as universally applicable. Since its inception more than a decade ago, Six Sigma as a quality improvement framework has been gaining increasing attention & acceptance in industry. The performance in both manufacturing & service operations can now be calibrated in terms of "Sigma level", and companies eager to impress customers have begun to label themselves as "Six Sigma organizations". The Six-Sigma approach combines statistical methods with improvement processes to create a new methodology. This knowledge is then applied to improvement projects in an attempt to increase bottom line financials and customer satisfaction.

EVOLUTION OF SIX SIGMA

Over the past half-century various industries focused their attention to the quality of products. A large number of system/methods have been developed in an attempt to improve the product quality in industrial & service sectors. The Six Sigma approach to quality is said to have begun



Source: Figure Developed by the Authors

Fig 1: Initiative Time Line

with Bill Smith, a reliability engineer at Motorola, in 1987 (Evans and Lindsay, 2005). Many measurement standards (Cpk, zero Defects etc.) later came into practice, but credit for coining the term "Six Sigma" goes to Bill Smith, an engineer at Motorola company . However, Six Sigma took off as a significant quality movement in the mid 1990s when Jack Welch, CEO of General Electric, " . . . went nuts about Six Sigma and launched it," calling it the most ambitious task the company had ever taken on. (Welch, 2001). "Six Sigma has taken the corporate world by storm and represents the thrusts of numerous efforts in manufacturing and service organizations to improve products, services, and processes." (Evans and Lindsay, 2005). "Evidence of the power of the Six Sigma way is already visible in the huge gains tallied by some very high-profile companies and some not-so-high profile ones, . . . " (Pande et al., 2000).

Six Sigma is regarded as a fresh quality management strategy which can replace SQC, TQC, TQM and others. There are many success stories of Six Sigma application in well known world-class companies. Six Sigma was pioneered by Motorola and launched as a strategic initiative in 1987. Since then, and particularly from 1995, an exponentially growing number of prestigious global firms have launched a Six Sigma program. Motorola, General Electric, Allied Signal (Merged with Honeywell), Boeing, Caterpillar, IBM, Dell, Xerox, Citibank, DHL, 3M, Raytheon, U.S. Air Combat Command , Microsoft, DEC,NASA, Texas Instruments, Sony, Kodak, Nokia, The McGraw- Hill Companies, Intel, Philips Electronics etc. have been quite successful in Six Sigma. In Korea, the Samsung, LG, Hyundai groups and Korea Heavy Industries & Construction Company etc. have been quite successful with Six Sigma. Manufacturing and Service organizations in India also adopted the concept of Six Sigma as an approach, these are L&T, Essar, Reliance , Tata Motors, TELCO, TISCO, Mahindra & Mahindra, Tata Honeywell Ltd., VIP Industries, TVS Suzuki Ltd., Jhonson & Jhonson, Grasim Industries, Apollo Tyres, HEG Ltd., Pidilite Industries, IPCL, Wipro, Cummins, Tata Consultancy Services, Godrej, Hindalco Ltd., Jindal Stainless Steel, Reliance Energy, Ultra Tech Cement Ltd.,Vodaphone, SKF, Airtel, Cognizant Technology Solutions, ICICI Prudential, ITC,Mumbai's Dabbawala etc.

WHY SIX SIGMA?

Six Sigma provides flexibility in the new millennium of 3Cs, which are:

- Change : changing society
- Customer : Power is shifted to customer and customer demand is high
- Competition : Competition in quality and productivity

The pace of change in last decade has been unprecented, and the speed of change in this new millennium is perhaps faster than ever before. Most notably, the power has shifted from producer to customer. The producer-oriented industrial society is no more in existence, and the customer-oriented information society exists. The customer has all the rights to order, select and buy goods and services. Competition in quality and productivity has been ever-increasing. Six Sigma is a methodology that provides businesses with tools to improve the capability of their processes by decreasing variation, which leads to a reduction in defects and an improvement in profits, employee morale and quality of products and services. Six Sigma is a disciplined, data-driven approach to process improvement aimed at the near-elimination of defects from every product, process and transaction. It can be used to improve every facet of business, from production, to human resources, to order entry, to technical support. Six Sigma can be used for any activity that is concerned with cost, timeliness and quality of results.

It solves business problems and quality problems in order to promote profitability and growth. Marketplace requirements are wed into business outputs in an aggressive program designed to transform the enterprise into a highly aligned profit making organization. Below the enterprise level, Six Sigma methods reduce variation, improve product quality, shorten the product development cycle, accelerate business transactions and improve overall service. The types of "business success" an organization may achieve are broad because the proven benefits of the Six Sigma "system" are diverse, including:

Improvement of the bottom line
Improvement of significant process
Alignment of participants and their activities with overall corporate goals
Provision of suite of systematic approaches to improvement, problem-solving and sustainment
Management of projects
Enhancement of staff capabilities
Emphasis on measurement and results
Improvements to corporate marketing
Enhancements in the use of statistical analysis
Development of focused products
Improvement of market share
Improvement of customer retention
Cost reduction
Productivity improvement
Market-share growth
Cycle-time reduction
Defect reduction
Culture change
Product/service development
And many more.

Improvements in these areas usually represent dramatic cost savings to businesses, as well as opportunities to retain customers, capture new markets, and build a reputation for top performing products and services. Six Sigma is about making every area of the organization better able to meet the changing needs of customers, markets, and technologies—with benefits for employees, customers, and shareholders.

The successful implementation of Six Sigma can result in benefits in the areas of cost reduction, increased profit, increased market share and enhanced business competitiveness, mainly by the reduction of the cost of poor quality (COPQ).COPQ usually includes appraisal costs, internal failure costs, and external failure costs. In manufacturing industries, COPQ sometimes reaches 15% of total sales. In service industries, the situation is even more serious. COPQ may account for as much as 50% of total costs. However, these COPQ could be saved with the use of Six Sigma. Indeed, thousands of companies around the world have enjoyed the breakthrough benefits of Six Sigma.

Six Sigma activities and achievements, seen mainly in large manufacturing operations, are also becoming more prevalent in small businesses, transactional business processes (e.g., HR and purchasing), and in the service sector (Gnibus & Krull, 2003; Goh, 2002; Hammer & Goding, 2001; Harry, 1998; Smith, 2003). Smaller companies have had similar financial success compared to larger companies but on a smaller scale (Brue, 2002; Gnibus & Krull, 2003; Harry, 1998). Both small and big organizations profited from implementing their own Six Sigma methodologies even though the Six Sigma method was originating from big companies. From at least a financial perspective, it appears that Six Sigma has had a considerable impact on numerous organizations across a variety of industries.

WHAT IS SIGMA?

'σ' pronounced as 'Sigma' is a letter in the Greek alphabet. It is used to designate the distribution or spread (variation) about the mean of a process i.e. where the process is centered around. Generally as we have seen in our example most of the values will cluster around the mean value. Values away from the central value will occur with lesser frequency. 'σ' is called standard deviation. For a stable process i.e. when process is under statistical control or within the chance cause variation only, predictions about process can be made from a knowledge of 'σ'.

WHAT IS SIX SIGMA?

Sigma *(σ)* is a letter that has become the statistical symbol and metric of process variation. The sigma scale of measure is perfectly correlated to such characteristics as defects-per-unit, parts-per-million defectives, and the probability of a failure. Six is the number of sigma measured in a process, when the variation around the target is such that only 3.4 outputs out of one million are defects under the assumption that the process average may drift over the long term by as much as 1.5 standard deviations.

In business and manufacturing organizations, variations in a process almost always result in defects, rework and scrap. If one can reduce the variation in a process, one can reduce the defects in the process (Harry, 1998). Six Sigma focuses all functions in "process". A process is a set of interrelated or interacting activities which transform inputs into outputs. Every process / procedure has an expected outcome / measurement called a "mean". Every outcome/measurement has some variability. The measure of that variability is called sigma (σ). Thus, the focus of Six Sigma methodology in manufacturing / business is to reduce variability and defects of processes.

A company's performance level is measured by the sigma level of their business processes. To increase the performance, the variation has to decrease. Fig 2. indicates how continual reduction of process variation can lead to higher quality, improved productivity and reduced cost (Desai, T. and Shrivastava, R., 2008).

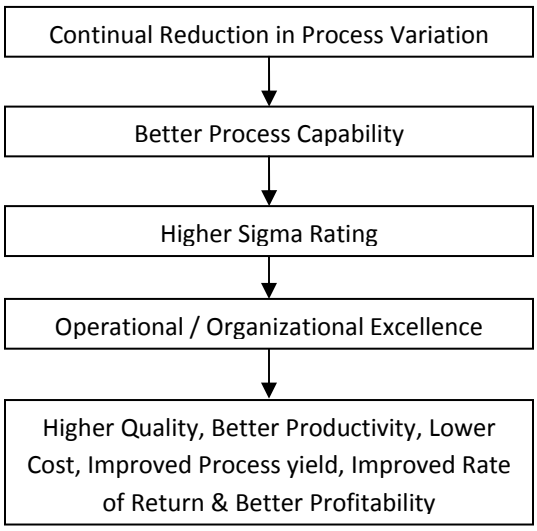
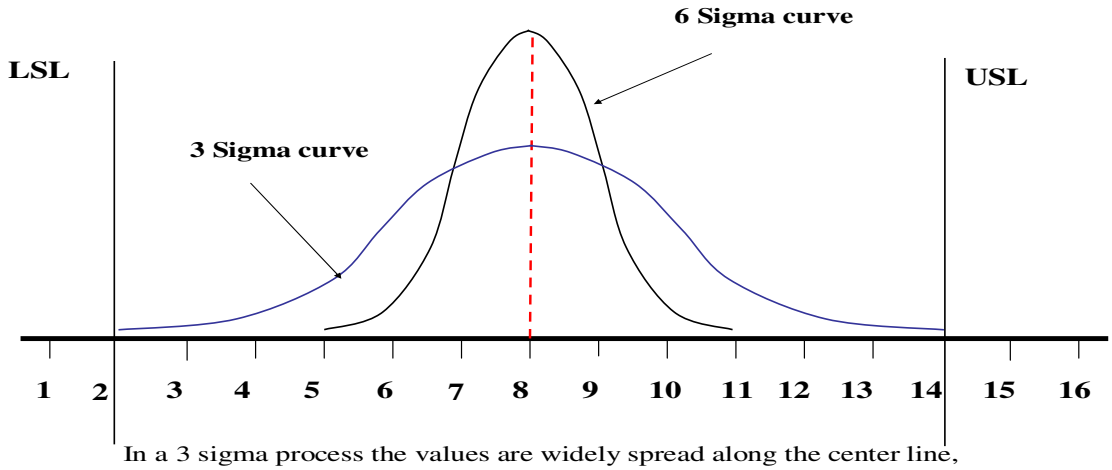


Fig 2. Process variation and higher quality

The goal of Six Sigma program is to reduce the variation in every process to such an extent that the spread of 12 Sigmas i.e. 6 Sigmas on either side of the mean fits within the process specifications. Figure 3 explains this concept. This figure also depicts the difference between 3-Sigma and 6-Sigma process. Six Sigma approach helps to ensure that the inherent variability in a process or service, the entire output is kept within the permissible or acceptable level i.e. it is an effort to keep the defects level at less than 3.4 parts per million. It is as good as zero. Higher the sigma level, lower is the DPMO number. This is evident from the Table 1 [Harry, 1998]. This table indicates how the industries are categorized based on the Sigma Level and Defects per Million Opportunity (DPMO).



In a 3 sigma process the values are widely spread along the center line, showing the higher variation of the process. Whereas in a 6 Sigma process, the values are closer to the center line showing less variation in the process.

Fig 3: Six Sigma Concept

Table 1 Sigma level and DPMO defining class of industry

Sigma level	Defects per million opportunities(DPMO)	Cost of poor quality(COPQ)	Industry class
6	3.4	< 10% sales	**World class**
5	230	10 to 15% of sales	
4	6,200	15 to 20% of sales	**Average**
3	67,000	20 to 30% of sales	
2	3,10,000	30 to 40% of sales	**Non-competitive**
1	7,00,000	>40% of sales	

Assuming that the process output is represented by a normal distribution, about 99.73% of the output is contained within bounds that are 3 standard deviations (3σ) from the mean. In this case the proportion of nonconforming product is about 0.27%, which is approximately 2700 parts per million (ppm). On the surface, this appears to be very satisfactory, but in reality it can be misleading. For example, if a product contains 10,000 parts or 10,000 operations, an average of 27 defects per product unit is expected. The product / process quality could be improved and it must be designed to tolerance limits that are significantly more than $\pm$ 3σ from the mean. In other words the product / process quality could be improved by reducing the value of 'σ' and limits could be set at 6σ, that is the process variability must be so small that the specification limits are 6 (Six) standard deviations from the mean, fig.4. If the process distribution is stable-that is, it remains centered between the specification limits – the proportion of nonconforming product should be only 0.001 ppm on each tail.

In real – world situations, the process distribution will not always be centered between the specification limits, process shifts to the right or left are common. Even if the process mean shifts by as much as 1.5 standard deviations from the center, the proportion of nonconforming product will be about 3.4 ppm. Comparing this to a three-sigma capability of 2700 ppm, this shows significant improvement in the expected level of quality from the process.

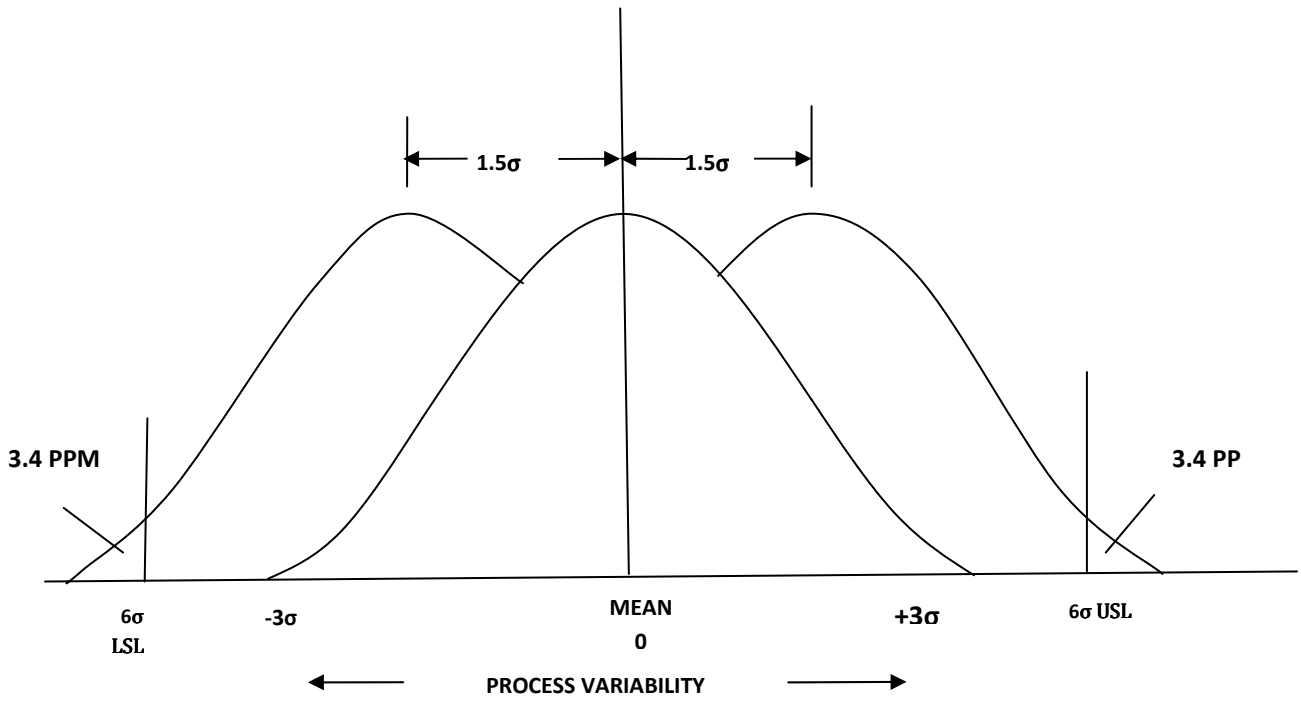


Fig 4: Six Sigma Capability

Six Sigma is a rigorous, focused and highly effective implementation of proven quality principles and techniques. Incorporating elements from the work of many quality pioneers, Six Sigma aims for virtually error free business performance. A company's performance is measured by the sigma level of their business processes. Traditionally companies accepted three or four sigma performance levels as the norm, despite the fact that these processes created between 6,200 and 67,000 problems per million opportunities! The Six Sigma standard of 3.4 problems per million opportunities is a response to the increasing expectations of customers and the increased complexity of modern products and processes.

The Six Sigma initiative focuses on continually improving the efficiency and effectiveness of all processes, tasks and transactions within any organization. This is achieved mainly on a project-by-project basis by a critical mass of members, trained in performance-enhancement methods, within a receptive and company culture and perpetuating infrastructure.

Six Sigma is both a business improvement strategy and a methodology to measure process performance. It is used to increase profits by eliminating defects, waste, and variability and to find the causes of mistakes in products, processes and services to increase yields. In Six Sigma, focus on the customer is the top priority. Performance standards are based on actual customer input, so that process effectiveness can be measured and customer satisfaction can be predicted. Variation signals fluctuation in the process output and is often a major source of poor quality; hence variation reduction is the key in terms of business process improvement. Variation is present in all processes and every aspect of work. Unintended variation reduces process performance and decreases customer satisfaction. Producing high quality products and services in the modern industrial environment is a tough task because of the existence of variation. Therefore, Six Sigma aims particularly at reducing variation. The word *sigma* or the symbol "*σ*" is used in statistical notation to represent the standard deviation in a population. The standard deviation is also used as a general measure of variation in any kind of product or process. With six standard deviations between the process mean and the customer's specification limit, we arrive at 3.4 defects per million opportunities (DPMO); that is, a 99.9997 percent yield. Before the Six Sigma technique was introduced, a three-sigma level of variation was regarded as being fairly good quality performance. Three sigma may be acceptable for a product or process having only a single or a few stages. It is not good enough for many products that are the result of hundreds of thousands of stages, such as automobiles and computers.

5.0 SIX SIGMA IMPLEMENTATION AND MANAGEMENT

Six Sigma is not about quality in the traditional sense. Quality, defined traditionally as conformance to internal requirements, has little to do with Six Sigma. Six Sigma is about helping the organization make more money by improving customer value, efficiency and productivity. To link this objective of Six Sigma with quality requires a new definition of quality. For Six Sigma purposes we define quality as the value added by a productive endeavor. Quality comes in two flavors: potential quality and actual quality. Potential quality is the known maximum possible value added per unit of input. Actual quality is the current value added per unit of input. The difference between potential and actual quality is waste. Six Sigma focuses on improving quality (i.e., reducing waste) by helping organizations produce products and services better, faster and cheaper. There is a direct correlation between quality levels and ''sigma levels'' of performance. For example, a typical company operating at roughly four sigma will produce roughly 6,210 failures per million transactions. Six Sigma focuses on customer requirements, defect prevention, cycle time reduction, and cost savings. Thus, the benefits from Six Sigma go straight to the bottom line.

For non-Six Sigma companies, these costs are often extremely high. Companies operating at three or four sigma typically spend between 20 and 30 percent of their revenues fixing problems. This is known as the cost of quality, or more accurately the cost of poor quality. Companies

operating at Six Sigma typically spend less than 5 percent of their revenues fixing problems (Figure 5) (Pyzdek, T., 2003). The reason for direct relationship of costs to sigma levels is that sigma levels are a measure of error rates, and it costs money to correct errors. Figure 6 (Pyzdek, T., 2003) shows the relationship between errors and sigma levels. As the sigma level goes up, the error rate drops exponentially, and that this correlates well to the empirical cost data shown in Figure 5. Also note that the errors are shown as errors per million opportunities, not as percentages. This is another convention introduced by Six Sigma. In the past we could tolerate percentage error rates (errors per hundred opportunities), today we cannot.

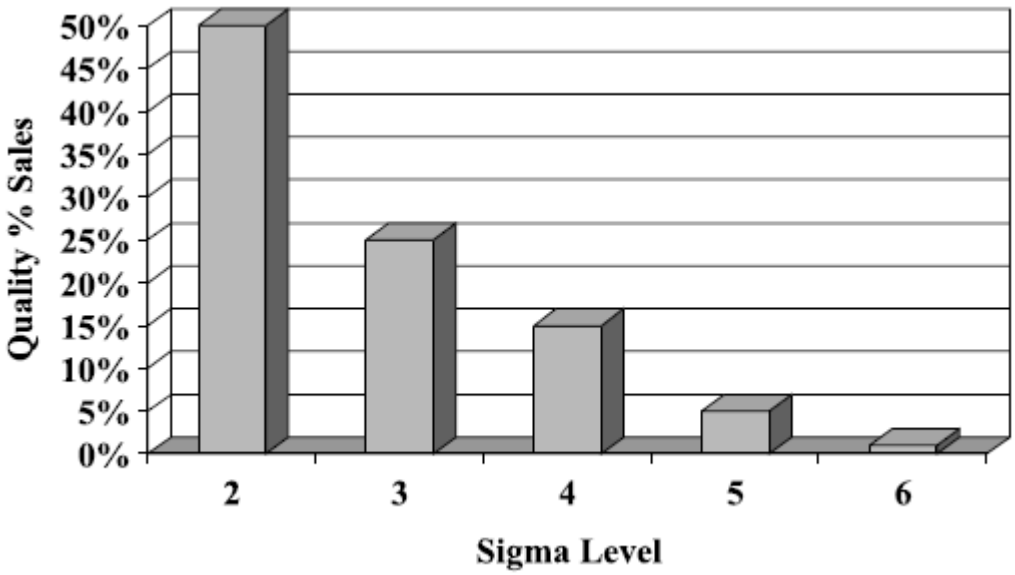


Fig. 5 Cost of poor quality versus sigma level (Pyzdek, T., 2003)

Six-sigma is a high performance, data driven method for improving quality by removing defects and their causes in business process activities. Six-sigma's target is to achieve less than 3.4 defects or errors per million opportunities hence the name. Higher the number of Sigmas, the more consistent is the process output or smaller is the variation. It is particularly powerful when measuring the performance of a process with a high volume of outputs.

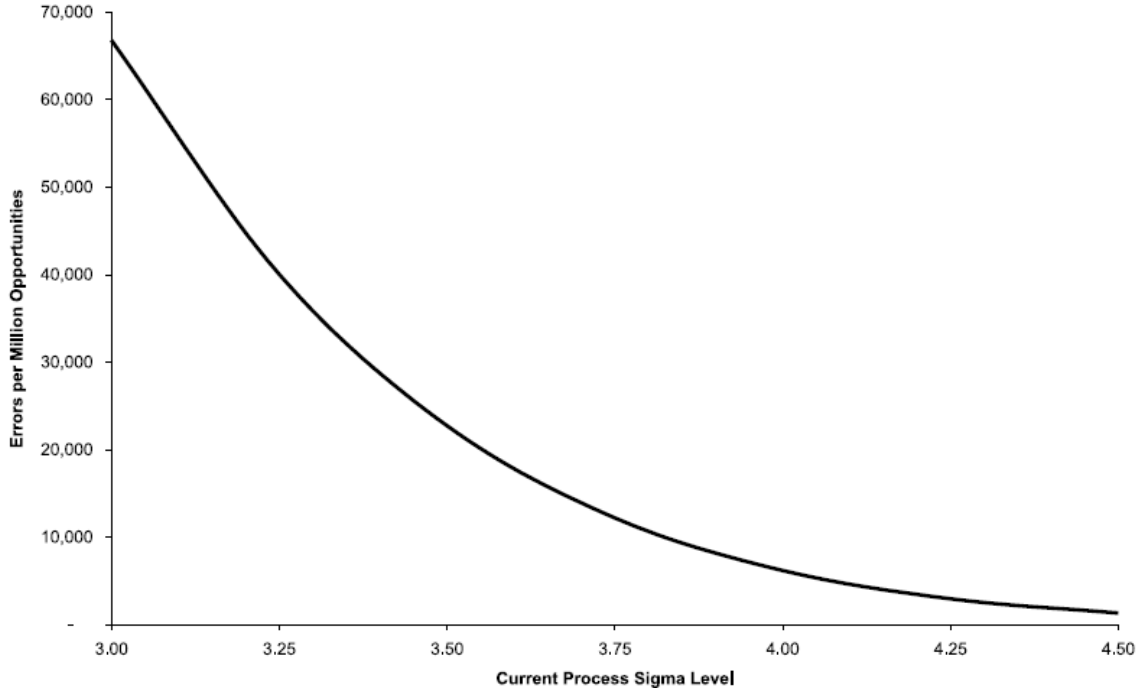


Fig 6. Error rate versus sigma level (Pyzdek, T., 2003).

Six-Sigma is a business improvement approach that seeks to find and eliminate causes of mistakes or defects in business processes by focusing on process outputs that are of critical importance to customers. Six-Sigma projects also often focus on improving productivity, process yields, production rates and process downtime. As a result, process performance is enhanced, customer satisfaction is improved, and the bottom-line is impacted through savings and increased revenue. Six-Sigma is a strategic approach that works across all processes, products and industries.

SIX SIGMA IS DEFINED

Six Sigma has been defined in the practitioner literature in a variety of ways. Quality Progress called Six Sigma a ''high-performance, data-driven approach to analyzing the root causes of business problems and solving them'' (Blakeslee, 1999., Harry and Schroeder, 2000), in their popular book on Six Sigma, described it as a ''business process that allows companies to drastically improve their bottom line by designing and monitoring everyday business activities in ways that minimize waste and resources while increasing customer satisfaction''. Hahn et al. (2000) described Six Sigma as a disciplined and statistically based approach for improving product and process quality. On the other hand, Sanders and Hild (2000) called it a management strategy that requires a culture change in the organization.

Six Sigma fundamentally focuses on reduction in variability. This technique is a simple common sense concept for those who understand statistical principles of targeting the mean to the required nominal value and controlling variance around the mean. But it is much more than just a statistical approach to problem solving. It is a company-wide initiative to improve both top line and bottom line through sustained customer satisfaction. The entire movement is driven by the voice of the external customer and concentrates on what is really important for the customer (Seth and Rastogi, 2004). It involves designing, improving, and monitoring business activities to minimize or eliminate waste while optimizing customer satisfaction and increasing financial stability (Pande et al., 2000). Six Sigma is customer focused and has the potential to achieve exponential quality improvement through the reduction of variation in system processes.

SIX SIGMA

Six Sigma is a comprehensive, flexible and holistic system; an organization wide approach driven by close understanding of customer needs, disciplined use of facts and data, and statistical analysis, for managing and improving business processes (by eliminating variations in processes) having goal of less than 3.4 defects per million opportunities(DPMO) for every process for achieving, sustaining and maximising business success.

BASICS OF SIX SIGMA

Six Sigma offers a measure of goodness, a methodology for improving performance, a measurement system that drives dramatic results, and a new paradigm that requires a passionate commitment from leadership to set high expectations. Figure 6 demonstrates the relationship between defect rate, sigma level, and cost reduction opportunities.

Six Sigma has been labeled as a metric, a methodology, and now, a management system.

SIX SIGMA AS A METRIC

Sigma is the measurement used to assess process performance and the results of improvement efforts - a way to measure quality. Businesses use sigma to measure quality because it is a standard that reflects the degree of control over any process to meet the standard of performance established for that process.

Sigma is a universal scale. The sigma scale allows us to compare very different business processes in terms of the capability of the process to stay within the quality limits established for that process. The Sigma scale measures Defects Per Million Opportunities (DPMO). When used as a metric, Six Sigma technically means having no more than 3.4 defects per million opportunities, in any process, product or service.

A process that operates at 4.6 Sigma is operating at 99.9% quality level.

That means:

- 4000 wrong medical prescriptions each year
- More than 3000 newborns being dropped by doctors/nurses each year
- 2 long or short landings at American airports each day
- 400 lost letters per hour

A process that operates at the 6 Sigma level is operating at 99.9997% quality level. At 6 Sigma, these same processes would produce:

- 13 wrong drug prescriptions per year
- 10 newborns dropped by doctors/nurses each year
- 2 long or short landings at U.S. airports each year
- 1 lost letter per hour

With sigma as the scale, measures of as-is process quality and standards for should-be process targets for quality improvement can be set and understood for any business process.

SIX SIGMA AS A METHODOLOGY

As a methodology, it is used to evaluate the capability of a process to perform defect-free, where a defect is defined as anything that results in customer dissatisfaction. Six Sigma's breakthrough strategy combines improved metrics and a new management philosophy to significantly reduce defects thereby strengthening a firm's market position and improving the profit line (Harry and Schroeder, 2000). The Six Sigma methodology builds on the Six Sigma metric. Six Sigma practitioners measure and assess process performance using DPMO and sigma. They apply the rigorous DMAIC (Define, Measure, Analyze, Improve, and Control) methodology to analyze processes in order to root out sources of unacceptable variation, and develop alternatives to eliminate or reduce errors and variation. Once improvements are implemented, controls are put in place to ensure sustained results. The organizations achieved significant improvements in product and service quality and profitability over the last several years using this DMAIC methodology. Depending on the state of the process, product, or service addressed by the project, a different methodology is sometimes used. For instance, for products or processes that are being designed or redesigned, the Define, Measure, Analyze, Design, Verify (DMADV) or the Identify, Design, Optimize, Validate (IDOV) framework is often used. These structures form the basis of Design for Six Sigma (DFSS).

Six Sigma as a Management System

Six Sigma as a best practice is more than a set of metric-based problem solving and process improvement tools. At the highest level, Six Sigma has been developed into a practical management system for continuous business improvement that focuses management and the organization on four key areas:

- Understanding and managing customer requirements
- Aligning key processes to achieve those requirements
- Utilizing rigorous data analysis to understand and minimize variation in key processes
- Driving rapid and sustainable improvement to the business processes.

As such, the Six Sigma Management System encompasses both the Six Sigma metric and the Six Sigma methodology. When Six Sigma is implemented as a management system, the organizations derive the greatest impact.

Six Sigma focuses on establishing world-class business-performance benchmarks and on providing an organizational structure and road-map by which these can be realized. This is achieved mainly on a project-by-project team basis, using a workforce trained in performance-enhancement methodology, within an organization culture and infrastructure. Six Sigma is particularly relevant to the enhancing of value of products and services from a customer perspective, but it is also directly applicable to improving the efficiency and effectiveness of all processes, tasks and transactions within any organization. Projects are thus chosen and driven on the basis of their relevance to increased customer satisfaction and their effect on business-performance enhancement through gap analysis, namely, prior quantitative measurement of existing performance and comparison with that desired.

Success in Six Sigma is dependent on active senior management leadership and mentoring, an established infrastructure of black and green belts, a continuing project focus on 'bottom line' opportunities and results, with established teams trained in using a structured approach and methodology to achieve the desired results.

SIX SIGMA PROCESS-IMPROVEMENT MANAGEMENT

The Six Sigma improvement process refers to the mechanism of breakthrough to world-class standards of performance across the whole enterprise .It is focused on 'adding value'; one in which organizations seek out opportunities to improve efficiency and effectiveness with a view to enhancing profit margins, competitiveness and customer satisfaction:

- It achieves results through a highly focused system of problem-solving and process-improvement projects;
- An infrastructure is created to make it work and keep on working;
- It is implemented through a standard road-map for each project undertaken;
- It is an initiative that aims at channeling and unifying the efforts of everyone in the organization towards the Six Sigma goal;
- It is based on scientific method utilizing practical and directed statistical thinking and methodology.,
- It is equally applicable to all processes in an organization and to any organization.

SIX SIGMA QUALITY

The Six Sigma philosophy was created to improve on some of the drawbacks of TQM. Kuei and Madu (2003) define Six Sigma as:

Six Sigma quality = meeting the very specific goal provided by the 6σ metric and

Management = enhancing process capabilities for Six Sigma quality.

Six Sigma is a disciplined, data-driven approach aimed at eliminating defects (driving towards six standard deviations between the mean and the nearest specification limit) in any process (George, 2002). The term "Six Sigma," borrowed from statistics, describes how a process is performing. To achieve the "Six Sigma" level, a process must not produce more than 3.4 defects per million opportunities. A "Six Sigma opportunity" is the total quantity of chances for a defect.

Six-Sigma is also a measure of process performance. The methodology utilizes 'process sigma' as a measure of process capability with a 6-sigma process having a defect level of 3.4 parts-per-million opportunities (ppm) and a 3-sigma process having a defect level of 66,807 ppm (Harry, 1998). In many instances a 6-sigma process is considered world class. The performance of most processes today is in the 3 to 4-sigma range. The Six-Sigma measure of process capability assumes that the process average may shift over the long-term by as much as 1.5 sigma (standard deviations) despite our best efforts to control it. In the case of the 6-sigma process, 3.4ppm is obtained by assuming that the specification limits are six standard deviations away from the process target value and that the process may shift by as much as 1.5 sigma. The 3.4 ppm value is the area under the normal curve beyond 6 – 1.5 = 4.5 sigma. Similarly, the 66807 ppm for the 3-sigma process is the area beyond 3 – 1.5 = 1.5 sigma.

The ability to produce products and services with only 3.4 defects per million opportunities yields a Six-Sigma process. Such a level of performance is considered to be

World-class for many processes. Six-Sigma level of performance should not be the goal for all processes. Some processes require a higher level of performance (e.g., airline safety). A lower level of performance may be acceptable for other processes. The appropriate level of performance is a business decision trading off the cost of attaining the higher level of performance versus the benefits of a higher performing process. The appropriate process sigma level may change over time as customer needs and competitive pressures change.

SIX SIGMA- THE ESSENCE

A symbol of excellence- a level of performance (3.4 defects par million) that reflects significantly reduced defects in products and services.

The sigma and part per million (ppm) are correlated as indicated in Table 2.

Table 2 Sigma & PPM

Sigma	Defects per million (PPM)
2	3,08,537
3	66,807

4	6,210
5	233
6	3.4

A statistical metric that describes how well processes meet requirements in terms of process capability as well as a benchmark for comparison and improvement.
A strategic tool which aims at eliminating defective output by bringing down the cost of quality to zero.
A data and fact driven management approach with focus on the customer. A set of statistical tools and techniques to help measure, analyze, improve and control processes and products.
A rigorous, analytical, process-oriented methodology for solving problems.
A mechanism which allows companies to drastically improve their bottom line and top line.
The focus of Six Sigma is on the following areas:
Root cause of any problem & its elimination / prevention.
Focus is on the inputs to the process & not on the output.
Focus is on the problem & not on the symptom.
Focus is on controlling the problem or the deviation & not on monitoring.

SIX SIGMA -THE ROLE

1. Six sigma attacks variation (variance) which is more effective than target value, by improving capability of processes.
2. It reduces quality costs viz. inspection costs, defects and defective costs, rework and rectification costs, costs related to product recall, customer goodwill etc.
3. It is a methodology which measures and controls costs which directly affects the bottom line, rather than talking about intangible saving.
4. It significantly improves yields of the process.
5. It improves the return on investment (ROI) and thereby profitability of a company.
6. It attacks and reduces random or natural causes of process variation also. Conventional SQC attacks on non-random or assignable causes of variation only and tolerates (or lives) with neutral (random) variations of the process.

INFRASTRUCTURE

Creation of an infrastructure to assure that performance improvement activities have the necessary resources is a very powerful feature of Six Sigma. Failure to provide this infrastructure is one of the reasons for failure of TQM implementations in the past. TQM presented general principles and left it to each organization to decide how to put the principles into practice. Sigma provides a quasi-standardized set of guidelines for deployment. Hence Six Sigma enjoys a much higher success rate than TQM. Of course, there are still those companies that put together half-hearted efforts and call it Six Sigma. They will fail just as those companies who deploy half-baked TQM programs. Six Sigma full-time change agents are the catalyst that institutionalizes change**.** Figure 7 illustrates the infrastructure required by Six Sigma. General functions at different level are mentioned below.

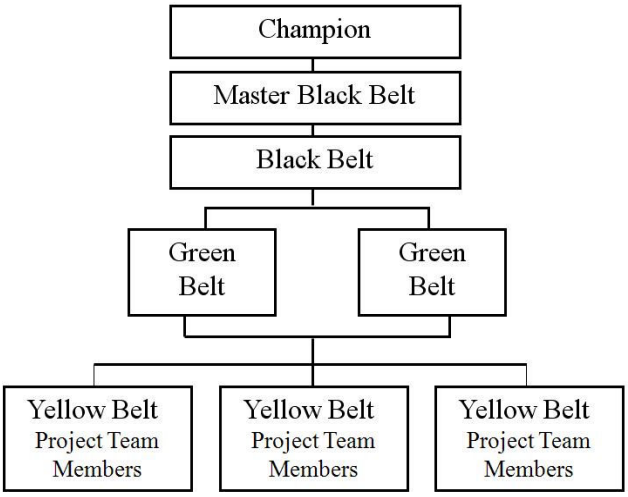


Fig. 7 A typical Structure in Six Sigma Organization

A Six Sigma deployment effort typically starts with the following infrastructure:

- A senior executive, often a president or chief executive officer, provides the necessary impetus and alignment by assuming a leadership role.
- An executive committee, working operationally at a level similar to that of the senior executive, oversees the Six Sigma deployment.
- A champion sponsors an individual project. This individual is usually a member of the executive committee and has enough influence to allocate resources and remove obstacles without having to appeal to a more senior individual.
- A process owner has the authority and responsibility to make improvements to operations.
- A black belt supports project teams, taking a leadership role in this effort. This individual is a full-time change agent who is allocated to several projects. A black belt is usually a quality professional, but is often not an expert on the operational processes within the scope of the project.

- A green belt works part-time on a project or perhaps leads a smaller-scope project.
- A master black belt mentors the Six Sigma community (black belts and green belts), often provides training, and advises the executive committee. A master black belt must have a proven track record of effecting change and be a known and trusted individual. This track record is established by having successfully completed and led numerous Six Sigma projects within the same organization.

SIX SIGMA: THE PROJECT-BY-PROJECT APPROACH

There are many possible different approaches to the project-by-project approach to improvement in organizations. The standard Six Sigma project road-map proposed here is a generic one. It consists of eight steps:

1. Identify the project.
2. Define the project.
3. Measure current process performance.
4. Analyze the current process.
5. Develop the improvements; pilot and verify.
6. Implement the changes; achieve breakthrough in performance.
7. Control at new level; institutionalize to hold the gains.
8. Communicate new knowledge gained; transfer solution to similar areas.

IMPLEMENTING SIX SIGMA

The steps required to successfully implement Six Sigma are described below:

1. Successful performance improvement must begin with senior leadership. Start by providing senior leadership with training in the philosophy, principles, and tools they need to prepare their organization for success. Using their newly acquired knowledge, senior leaders direct the development of a management infrastructure to support Six Sigma. Simultaneously, steps are taken to ''soft-wire'' the organization and to cultivate an environment where innovation and creativity can flourish. This involves reducing levels of organizational hierarchy, removing procedural barriers to experimentation and change, and a variety of other changes designed to make it easier to try new things without fear of reprisal.
2. Systems are developed for establishing close communication with customers, employees, and suppliers. This includes developing rigorous methods of obtaining and evaluating customer, owner, employee, and supplier input. Base line studies are conducted to determine the starting point and to identify cultural, policy, and procedural obstacles to success.
3. Training needs are rigorously assessed. Remedial basic skills education is provided to assure that adequate levels of literacy and numeracy are possessed by all employees. Training is imparted to all employees in systems improvement tools, techniques, and philosophies.
4. A framework for continuous process improvement is developed, along with a system of performance indicators for monitoring progress and success. Six Sigma metrics focus on the organization's strategic goals, drivers, and key business processes.
5. Business processes to be improved are chosen by management, and by people with intimate process knowledge at all levels of the organization.
6. Six Sigma projects are conducted to improve business performance linked to measurable financial results. This requires knowledge of the organization's constraints.
7. Six Sigma projects are conducted by individual employees and teams comprising of Green Belts, Black Belts, Master Black Belts and Champions. The approach is simple, but it is by no means easy. Research has shown that organizations that successfully implement Six Sigma perform better in virtually every business category, including return on sales, return on investment, employment growth, and share price increase.

CONCLUSION

In this paper the varied perspectives of Six Sigma are described and a direction is provided for integrating them into the planning, design and implementation framework to enhance the effectiveness of Six Sigma. Six Sigma improvement drive is the latest and most effective technique in the quality engineering and management spectrum. Six Sigma has been widely accepted as a business strategy to improve business profitability and achieve operational excellence through the effective application of both statistical and non statistical tools. The program is applicable to not only manufacturing processes but also to processes related with administrative and office works, technical education systems, etc. Six Sigma as a powerful business strategy has been well recognized as an imperative for achieving and sustaining operational (process) effectiveness, producing significant savings to the bottom line and thereby achieving organizational excellence. Six Sigma is a methodology that links various established management and statistical tools in a structured manner for demonstrable quality improvement. The methodology requires the organization's overall support: Support for Six Sigma means making sure that top management drives the effort that sufficient resources are allocated to make it succeed, that the culture is supportive of change, and that employees develop the skills and behaviors necessary to reinforce Six Sigma efforts at the level of individual jobs and work processes.

The improvement drives such as Total Quality Management, Business Process Reengineering, Kaizen, Just in Time etc. are useful in their own ways, but they often fail to make breakthrough improvements in bottom line (profitability, return on investment etc.). If implemented properly with total commitment & focus, Six Sigma can put industries at the forefront of the global competition. It has proven to be one of the most emerging strategies of the 21st century for accelerating innovations and continuous improvement activities in achieving operational and business excellence. Six Sigma will continue to grow and evolve to match the needs of the modern business in the 21st century.

ABBREVIATIONS

TQM – Total Quality Management, JIT – Just in Time, BPR – Business Process Reengineering, SPC – Statistical Process Control, , TPM – Total Productive Maintenance, , MBO – Management by Objectives, QC – Quality Control, TPS – Toyota Production System, TOC – Theory of Constraints, QFD – Quality Function Deployment, FMS – Flexible Manufacturing System, SQC – Statistical Quality Control, TQC – Total Quality Control, COPQ – Cost of Poor Quality, DPMO – Defects per Million Opportunities, , DMAIC – Define Measure Analyze Improve & Control, DMADV – Measure Analyze Develop Verify, DFSS –Design for Six Sigma, ROI – Return on Investment

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FOREIGN INSTITUTIONAL INVESTMENTS AND INDIAN CAPITAL MARKET: AN EMPERICAL ANALYSIS

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ABSTRACT

Capital Market plays a vital role in channelizing the savings of individuals for investment in the economic development of the country. The investors are not constrained by their individual abilities, but by the abilities of the companies, which in turn enhance the savings and investments in the Country. This paper examines the impact of Foreign Institutional investors on Indian capital market. This also aims to find out the relationship between the Sensex and Nifty variations with the variation of the investments made by the foreign institutional investors. For the research purpose we selected BSE i.e. Sensex and NSE i.e. S&P CNX Nifty. The sample data of foreign institutional investors consists of their yearly investment trends from January 1999 to June 2009. The sample data of Nifty and Sensex consists of the yearly closing index from December 1998 to June 2009. Regression and Correlation statistical tools are used for the analysis. The study concluded that the movement of Foreign Institutional Investments flows almost a significant influence on the movement of stock market indices when there is an upward trend in FIIs due to greater buying, Sensex and Nifty also rises on the other hand.

KEY WORDS

Capital Market, Foreign institutional Investors, Investment Trends, Nifty and Sensex.

INTRODUCTION

Capital market plays a vital role in channelizing the savings of individuals for investment in the economic development of the country. The investors are not constrained by their individual abilities, but by the abilities of the companies, which in turn enhance the savings and investments in the Country. Liquidity of Capital Market is an important factor affecting growth. Since projects require long term finance, but on the other hand, the investors may not like to relinquish control over their savings for a long time. A liquid stock market ensures a quick exit without incurring heavy losses or costs. Thus development of efficient market system is necessary for creating conductive climate for investment and economic growth. The capital markets consist of the primary market, where new issues are distributed to investors, and the secondary market, where existing securities are traded. The Indian Equity Markets and the Indian Debt markets together form the Indian Capital market.

The Indian Equity Market depends mainly on monsoons, global funds flowing into equities and the performance of various companies. The Indian Equity Market is almost wholly dominated by two major stock exchanges -National Stock Exchange of India Ltd. (NSE) and The Bombay Stock Exchange (BSE). The major players in the Indian Equity Market are Mutual Funds, Financial Institutions and FIIs representing mainly Venture Capital Funds and Private Equity Funds. India opened its stock market to foreign investors in September 1992 and has, since 1993, received portfolio investment from foreigners in the form of foreign institutional investment in equities. This has become one of the main channels of FII in India for foreigners. In order to trade in Indian equity market foreign corporations need to register with SEBI as Foreign Institutional Investor (FII). India allows only authorized foreign investors who are referred to as FII's and which are registered with a statutory authority in their own country of incorporation or settlement. It is possible for foreigners to trade in Indian securities without registering as an FII but such cases require approval from the RBI or the Foreign Investment Promotion Board. FII generally concentrate in secondary market. Initially, there were many terms and conditions which restricted many FIIs to invest in India. But in the course of time, in order to attract more investors, SEBI has simplified many terms such as: -

The ceiling for overall investments of FIIs was increased to 24% of the paid up capital of Indian company.
Allowed foreign individuals and hedge funds to directly register as FIIs.
Investment in government securities was increased to US $ 5 Billion.
Simplified registration norms.

REVIEW OF LITERATURE

Mukherjee, Bose and Coondoo (2002) found that FII's activities exert a strong demonstration effect and thus drive the domestic stock market in India, evidence from causality tests suggests that FII flows to and from the Indian market tend to be caused by return in the domestic equity market and not the other way round.

Gordon & Gupta, (2003) found that foreign investor could play a role of market makers and book their profits that is they can buy financial assets when the prices are declining thereby jacking-up the asset prices and sell when the asset prices are increasing. They found that there is a possibility of bi-directional relationship between FII and the equity returns.

Kumar (2006) examined that an important feature of the development of stock market in India in the last 15 years has been the growing participation of Institutional Investors, both foreign institutional investors and the Indian mutual funds combined together, the total assets under their management amounts to almost 18% of the entire market capitalization.

Shromon (2007) mentioned spectacular rise of the Sensex over the past few months and it also shows how volatile FII flows are. It is almost impossible to predict whether FIIs will be net sellers or net buyers tomorrow. What is more important is that there is no rigid relationship between the Sensex and FII flows.

Aravind, Raghavendra & Philip (2008) found that FII's has a major impact in Indian stock market. Particularly, the fall on October 17, 2007, in which just a speculation about governments plan to control P-Notes had caused the biggest fall in Indian stock market, even market had to be closed for one hour without trade.. They also found that the major (almost 50%) of FIIs' investments are from P-Notes. This has a negative impact on stock market.

Gupta and Kawatra (2008) explained the reason behind the major downfall in Indian stock market on January 21, 2008 and March 3, 2008. The major reason behind the fall of 1408 points in sensex on January 21, 2008 was the panic selling of shares by the FIIs

Parakh (2008) analyzed the role of FIIs in Indian Stock Market. The flow of FIIs is increasing every year. The study found that FII's cash inflows increase the market indices and cash outflows decreases the Indian stock market indices. This is the way FII is supplementing volatility in Indian market.

Prasanna (2008) found the reaction of the stock market when SEBI imposed a ban on Participatory Notes (PN) and mandated registration of FIIs. Since the Fed rate cut on September 18, 2007, FIIs have consistently invested in Indian stock markets. To check the increase surge of this capital flow, the Indian capital market regulator authority, SEBI showed its strong intent to introduce capital controls and check capital inflows in the long run.

Chand (2009) launched The INSTANEX FII INDEX in India to tracks the price performance of the portfolio of listed Indian equity shares owned by FIIs. The Index comprises of the top 15 companies by value of FII holdings. Reviews are conducted quarterly and companies are deleted from the Index if they are not among the top 20 FII holdings. The study found that, in March, FIIs have increased their investing activity and out of the 15 components, 13 showed the heightened interest of the FIIs determine the direction of the market. They are also the most successful portfolio investors in India with 102 per cent appreciation since September 30, 2003.

THE OBJECTIVES OF THE STUDY

First is to Study the impact of Foreign Institutional Investors on the Indian capital market and second is to find the relationship between the FIIs investment and stock indices.

Null Hypothesis (Ho): The BSE index Sensex and S&P CNX Nifty index does not rises with the increase in FIIs investment.

Hypothesis (H): The BSE index Sensex and S&P CNX Nifty index rises with the increase in FIIs investment.

METHODOLOGY

Sources of Data: Secondary data is collected from BSE i.e. Sensex and NSE i.e. S&P CNX Nifty.

Period of Study: The sample data of Foreign Institutional Investments consists of the Yearly investment from December 1999 to June 2009. The sample data of Nifty and Sensex consists of the yearly closing index December 1998 to June 2009.

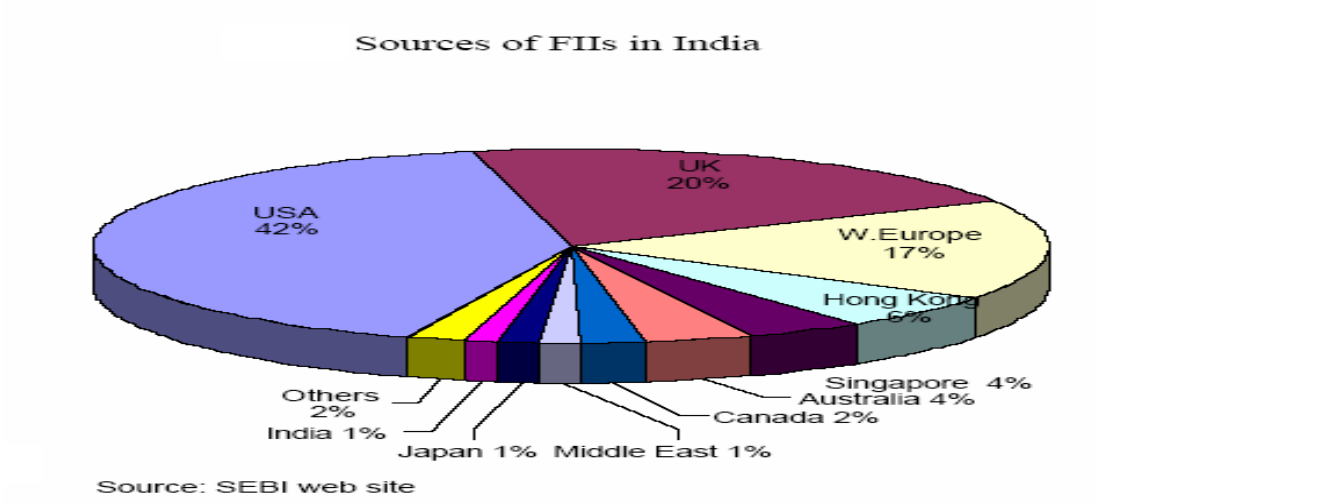
Statistical Tool: A simple linear relationship has been shown between two variables using correlation and regression as the data analysis tools. FIIs have been taken as the independent variables while the stock index has been taken as dependent variables.

SOURCES OF FOREIGN INSTITUTIONAL INVESTORS IN INDIA

FIIs is used to denote an investor - mostly of the form of an institution or entity, which invests money in the financial markets of a country different from the one where in the institution or entity was originally incorporated. FII investment is frequently referred to as hot money for the reason that it can leave the country at the same speed at which it comes in. In countries like India, statutory agencies like SEBI have prescribed norms to register FIIs and also to regulate such investments flowing in through FIIs are as Pension Funds, Mutual Funds, Investment Trust, Insurance or reinsurance companies , Endowment Funds , University Funds, Foundations or Charitable Trusts or Charitable Societies, Asset Management Companies, Nominee Companies , Institutional Portfolio Managers, Trustees, Power of Attorney Holders and Banks.

The sources of these FII flows are varied. The FIIs registered with SEBI come from as many as 28 countries (including money management companies operating in India on behalf of foreign investors). US-based institutions accounted for slightly over 42%; those from the UK constitute about 20% with other Western European countries hosting another 17% of the FIIs. It is, however, instructive to bear in mind that these national affiliations do not necessarily mean that the actual investor funds come from these particular countries. Given the significant financial flows among the industrial countries, national affiliations are very rough indicators of the 'home' of the FII investments. In particular institutions operating from Luxembourg, Cayman Islands or Channel Islands, or even those based at Singapore or Hong Kong are likely to be investing funds largely on behalf of residents in other countries. Nevertheless, the regional breakdown of the FIIs does provide an idea of the relative importance of different regions of the world in the FII.

Figure 1. Sources of FII's in India



MAJOR FOREIGN INSTITUTIONAL INVESTORS

FIIs are playing an important role in the Indian capital market by making investment. Major players are Deutsche group, Citigroup, HSBC global investments, Merill lynch capital markets etc.

Figure 2. Major Foreign Institutional Investors

GLOBAL PLAY IN INDIAN MARKETS

Holdings of world's top investment banks and brokerages in Indian firms*.

	No. of companies	Value (in Rs crore as on 19 Mar)
Deutsche group	84	33,579.37
Citigroup	184	23,890.38
HSBC Global Investments	126	18,074.74
Morgan Stanley and Co. International	154	16,638.36
Merrill Lynch Capital Markets	142	15,130.72
CLSA Asia-Pacific	42	9,146.96
Goldman Sachs Investments Mauritius	104	7,307.17
JPMorgan Chase	20	6,835.11
UBS Securities Asia Ltd**	88	5,847.64
Bear Stearns Asset Management Ltd	86	2,490.76
ABN Amro NV	45	1,580.72
Lehman Brothers Asia Ltd	14	439.35

*As on 31 Dec. Only 1% or above stakes are taken into account
**With its subsidairy Swiss Finance Corp. (Mauritius) Ltd
Source: Capitaline

Source-Capital line

- **DEUTSCHE GROUP** is a part of Deutsche Asset Management, was founded in 1956 in Frankfurt/Main. With fund assets under management of euro 267 bn, the company is **one of the Top 10 companies worldwide.** In Europe, DWS is one of the leading mutual fund companies and currently manages euro 173 bn. In excess of more than euro 147 bn assets under management, DWS represents 22, 3% of the fund market **in Germany,** making it the **unchallenged number one.** The International nature of its business differentiates DWS significantly from its domestic and international competitors. DWS Investments' activities span all the key European markets. In the USA, DWS is represented by DWS Scudder and manages assets of euro 86 bn. In spring 2006, it launched its first funds as well as the DWS brand in Singapore and India, continuing its **successful expansion in the Asia-Pacific region.** Thereafter, more funds were registered in other countries in Asia-Pacific.
- **CITIGROUP** formed in 1998 created a new model of financial services organization to serve its clients' financial needs. As the company continues to grow and evolve, it's increasingly evident that such a large, complex grouping of businesses can indeed succeed. With 275,000 employees working in more than 100 countries and territories, Citigroup's globality and diversity contribute to its continued success.
- **HSBC GLOBAL INVESTMENTS** is one of the world's premier fund management organizations. It has established a strong reputation with institutional investors including corporations, governments, insurance companies and charities the world over for delivering consistently superior returns. In India it offers fund management services for institutional as well as retail investors. Our array of products includes Equity Funds Income /Debt Funds.

- **MORGAN STANLEY & CO INTERNATIONAL LTD** is a global financial services firm and a market leader in securities, investment management and credit services. It has more than 600 offices in 27 countries and manages $421 billion in assets for institutional and individual clients around the world. Stanley Investment Management (MSIM), the asset management company of Morgan Stanley was established in 1975. Morgan Stanley entered Indian market in 1989 with the launch of India Magnum Fund. In 1994, Morgan Stanley launched Morgan Stanley Growth Fund (MSGF). It is one of the largest private sector schemes investing in equities.
- **DSP MERRILL LYNCH** Mutual Funds are managed by DSP Merrill Lynch Fund Managers. DSP Merrill Lynch Ltd. (DSPML) is a premier financial services provider and Merrill Lynch (ML) holds 90% stake in DSPML. DSPML was originally called DSP Financial Consultants Ltd. The firm traces its origins to D. S. Purbhoodas & Co., a securities and brokerage firm with over 140 years of experience in the Indian market. Merrill Lynch is one of the world's leading wealth management, capital markets and advisory companies with offices in 37 countries and territories and total client assets of approximately $1.5 trillion.

SEBI GUIDELINES FOR FIIS

The SEBI is the nodal agency for dealing with FIIs, and they have to obtain initial registration with SEBI. The registration fee is $10,000. For granting registration to an FII, the SEBI takes into account the track record of the FII, its professional competence, financial soundness, experience and such other criteria as may be considered relevant by SEBI. Besides, FIIs seeking initial registration with SEBI will be required to hold a registration from an appropriate foreign regulatory authority in the country of domicile/incorporation of the FII. The broad based criteria for FII registration has recently been relaxed. An FII is now considered as broad based if it has at least 20 investors with no investor holding more than 10 per cent of shares/units of the company/fund. The SEBI's initial registration is valid for five years. The Reserve Bank of India's general permission to FIIs will also hold good for five years. Both will be renewable. There are approximately 506 FIIs registered with SEBI, but not all of them are active.

- FIIs can invest in all securities traded on the primary and secondary markets. Such investments include equity/debentures/warrants/other securities/instruments of companies unlisted, listed or to be listed on a stock exchange in India including the Over-the-Counter Exchange of India, derivatives traded on a recognized stock exchange and schemes floated by domestic mutual funds. A major feature of the guidelines is that there are no restrictions on the volume of investment - minimum or maximum - for the purpose of entry of FIIs. There is also no lock-in period prescribed for the purpose of such investments.
- Further, FIIs can repatriate capital gains, dividends, incomes received by way of interest and any compensation received towards sale/renouncement of rights offering of shares subject to payment of withholding tax at source. The net proceeds can be remitted at market rates of exchange.
- All secondary market operations would be only through the recognized intermediaries on the Indian stock exchanges, including OTCEI. Forward exchange cover can be provided to FIIs by authorized dealers both in respect of equity and debt instruments, subject to prescribed guidelines. Further, FIIs can lend securities through an approved intermediary in accordance with stock lending schemes of SEBI.

NET INVESTMENT OF FIIS FROM 1992-2009

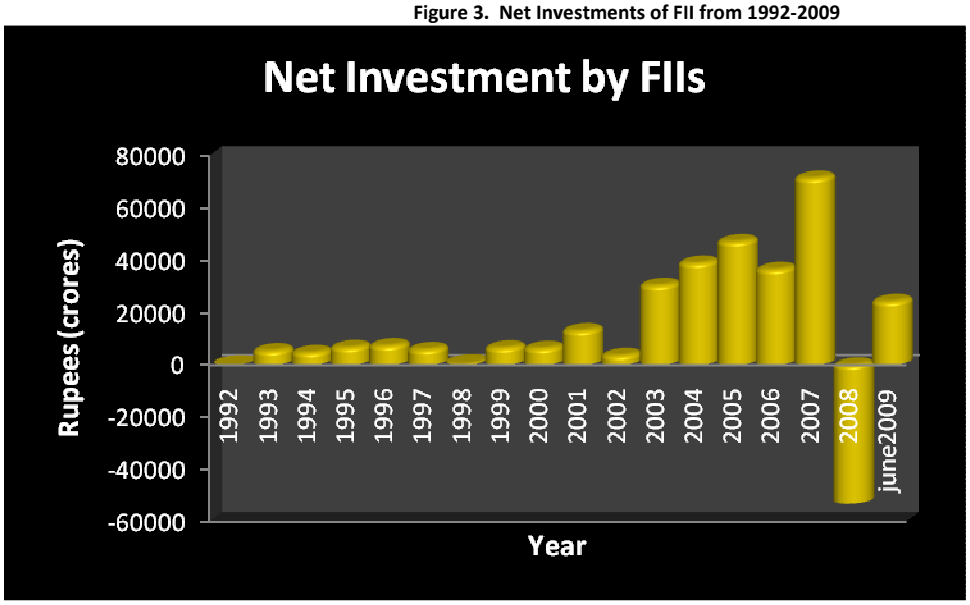
The following figure depicts the net investment by FIIS from their entrance into the Indian capital market from 1992 till June 2009.

Table- 1 Net Investments of FII from 1992-2009

Year	Net Investments (Rs Cr.)
1992	4.27
1993	5444.60
1994	4776.60
1995	6720.90
1996	7386.20
1997	5908.45
1998	729.11
1999	6578.40
2000	6369.9
2001	13128.2
2002	3629.6
2003	30458.7
2004	38965.1
2005	47181.2
2006	36539.7
2007	71486.5
2008	-52987.1
2009 (June)	24303.5

Source-sebi.gov.in

Figure 3. Net Investments of FII from 1992-2009



FIIS made their entry in Indian capital market in the year 1992 with Rs. 4.27 crores of investment. In the year 1993 they have improved their stake by making investment of 5444.60 crores. With the passage of time foreign investment has increased so much that Indian market started depending on it. As the investment by FIIs is increased it started putting positive impact on to the market and when FIIS started withdrawing their money from market, market fells down. Is clearly seen from table 1 that in the year 2007 investment by FIIs was Rs 71486.5 crores and this was the period when market touched 21K and when they had started withdrawing investment in the year 2008 then it put negative impact on to the market. As we can see in the investment trends table 1 except for 2008, the net investment by the FIIs in the Indian market has always been positive since liberalization which to a large extent tells about the consistency of their presence in Indian market. This is also evident from the fact that the number of FII registering in India is increasing in spite of the fact that SEBI has declined to issue any further Promissory Notes and also asked them to get registered. This shows that India still remains the hot spot for the foreign investors in the coming years.

STATISTICAL ANALYSIS

For the purpose of statistical analysis we have considered 9 yrs data of FII Net Investments, NSE S&P CNX Nifty and BSE Sensex Indices. Statistical Analysis is carried out to find the degree of association between the Net investments by the Foreign Institutional Investors with the capital market i.e. (Sensex & Nifty indices). Since 9 years data is a very comprehensive data and the internal and the extraneous factors have been changing over the time which does have impact on the Indian capital market. We have applied correlation and regression analysis to find out the degree of association among the FII Net Investments and the Sensex. Similarly the degree of association is been calculated for Nifty index with FII's.

In order to trade in Indian equity market foreign corporations need to register with SEBI as Foreign Institutional Investor (FII). India had 506 FIIs registered with SEBI by end of 2000 and as on 30th June 2009 is 1668 (sebi.gov.in). In order to study the impact of FII in Indian Capital Market, Now we can do the analysis to study the impact of FIIs on Capital Market.

Table 2 Analysis of Net Investment by FIIs, Sensex and Nifty from December 1999 to December 2007

Year	Net Investment by FIIs (in cr.)	Sensex	Nifty
1999	6578.40	5005.82	1480.45
2000	6369.9	3972.12	1263.55
2001	13128.2	3262.33	1059.05
2002	3629.6	3377.28	1093.5
2003	30458.7	5838.96	1879.75
2004	38965.1	6602.69	2080.5
2005	47181.2	9397.93	2836.55
2006	36539.7	13786.91	3966.4
2007	71486.5	20286.99	6138.6

Source: www.bse.com, www.nse.com

Table 2 shows net investment made by FIIs, Sensex and Nifty from 31st December 1999 to 31st December 2007. As the table depicts that in year 1999 investment by FIIs was around 6578 crores and sensex was at 5005 points. In year 2003 FIIs investment was around Rs. 30458 crores and it has increased to Rs 47181 crores in year 2005 it means in these two years there is an increase in FIIs investment by Rs 16723 crores and market also behaves respectively. In this period Sensex was also increased by 3559 points and Nifty increased by 957 points. In year 2007, FIIs

investment has increased to around Rs 71486 crores and it also depicts an increase in Sensex and Nifty figure. At this point of time Sensex and Nifty indices were near to its life time high around 20286 and 6138 Points respectively.

EMPIRICAL ANALYSIS

	Correlation with FII	R square	Standard Error	Significance
BSE Sensex	.881	.777	2891.45908	.002
NSE Nifty	.894	.799	806.26558	.001

The analysis shows the results from year 1999 to year 2007 and correlation value is .881 between FIIs and Sensex, as .894 between FIIs and Nifty. It depicts that Foreign Institutional investors has an influence on Sensex, Nifty and market's direction. As we can see the degree of association is around 77% among FII and Sensex, 79% between FIIs and Nifty. It means that Sensex and Nifty is highly dependent on FIIs investment. The result analysis that, as the FIIs invests in the market, it behaves accordingly.

Year	Net Investment by FIIs in cr.	Sensex	Nifty
2008	-52987.1	9647.31	2959.15
June 2009	24303.5	14493.84	4291.10

As we see the results of analysis from 1999-2007 that with the increase in the investment by FIIs market goes upward likewise in the year 2008 when FIIs started withdrawing their money steadily around 52000 crores from the market then market showed downward trend to 9647 points from 21000 points from BSE Sensex and around 3000 points from Nifty . Again when FIIs started investing money in year 2009, capital market goes upward. As FIIs increased their investment up to Rs. 24303 crores till June, Sensex goes to 14493 points and Nifty goes to 4291 points. It is examined from the study that there is an impact of investment made by the Foreign Institutional investors on stock market Indices i.e. SENSEX and NIFTY. According to this study we found that SENSEX and NIFTY are highly dependent on the investment made by FIIs.

FINDINGS

- In India there is a continuous increase in number of Registered FIIs and with that there is an increase in the Foreign Institutional Investments flows till December 2007.
- Foreign Institutional Investments and movement of Sensex and Nifty are closely correlated in India. The movement of Foreign Institutional Investments flows almost a significant influence on the movement of stock market indices when there is an upward trend in FIIs due to greater buying, Sensex and Nifty also rises on the other hand.
- The high degree of volatility in Capital market can be attributed to the Foreign Institutional Investments.

RECOMMENDATIONS

After analyzing the nature and behavior of the foreign institutional investment in the past and its influence on the Indian capital market it would be safe enough to say that foreign funds are one of the most volatile instruments floating in the market and needs to be handled cautiously. Government should certainly encourage foreign institutional investment but should keep a check on the volatility factor. Long term funds should be given priority and encouraged some of the actions that could be taken to ensure stability are strengthening domestic institutional investors, broad basing of eligible entities, Knowledge activities and research programs.

CONCLUSION

According to the findings and results, we concluded that FIIs have significant impact on the Indian capital market. Therefore the hypothesis is accepted. Foreign Investments are influencing the Indian market but the extent of this influence cannot be determined or rather the extent of India's dependence on the FIIs is a subjective issue as on no clear grounds can we see a permanent relationship between the stock market returns and the foreign inflows. But to generalize they have shown a positive relation most of the time apart from a few occasions where the behavior of their relation was difficult to explain.

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HARMONIZING HR PRACTICES AND KNOWLEDGE MANAGEMENT

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ABSTRACT

Knowledge has emerged as a strategic asset and today's organizations are actively pursuing knowledge as a sustainable competitive advantage for long term. However, simply possessing knowledge based resources will not itself create competitive advantage – these resources must be managed in ways that allow the organization to leverage them for strategic advantage. As organizations are adopting knowledge management practices to create, store and share knowledge and institutionalize the tacit knowledge, there is an imminent need to adapt the HR practices to support knowledge management activities. HRM needs to understand the changing needs of the organization, that is actively engaged in knowledge management, and align its sub-functions to allow the organization reap the intended benefits. This paper attempts to suggest changes in HR practices for a knowledge managing organization. A model – HRM for Knowledge Managing Organization is presented to describe specific changes to be made to the HR practices to buoy up knowledge management activities.

KEYWORDS
Knowledge Management, HR practices

INTRODUCTION

Globalization, rapid change, and competition in a global market, increasingly sophisticated consumers have led organizations to seek a sustainable advantage that distinguishes them in their business environments (Davenport and Prusak 1998). Of late, Knowledge is recognized as important to organizations and is acknowledged as critical to organizational success. Now-a-days, with increased levels of competition, high costs associated with human resources, increases in employee transience, and shortages of qualified knowledge workers, organizations have actively pursued the notion of making more effective use of the knowledge and expertise. Knowledge based capabilities are recognized as the key to build sustainable competitive advantage. Knowledge is more and more considered as a strategic asset for organizations.

Management of "intellectual capital" that exists within the existing employee base as a corporate resource has been looked to as one of the few foundational weapons that promise to deliver sustainable, distinctive competencies in the future. Knowledge management is a frame work for designing organizational goals, structure and knowledge processes so that the organization can use what it knows, to create value for its customers and community. At the firm level this places the enterprises' people, their knowledge and innovative capacity at the heart of strategic potential, and organizations that excel in attracting, creating, managing, and sustaining knowledge capabilities are advantaged. Knowledge management is rapidly becoming an integral business function for many organizations as they realize that competitiveness hinges on effective management of intellectual resources (Grover and Davenport 2001).

However, simply possessing knowledge based resources will not itself create competitive advantage – these resources must be managed in ways that allow the organization to leverage them for strategic advantage (DeNisi, Hitt and Jackson 2003). Organizations are facing innumerable challenges in nurturing and managing knowledge. Knowledge involves the mental processes of comprehension, understanding and learning that go on in the mind and only in the mind. Knowledge management is a discipline that promotes an integrated approach to the creation, capture, organization, access, and use of an enterprise's information assets. These assets include structured databases, textual information such as policy and procedure documents, and most importantly, the tacit knowledge and expertise resident in the heads of individual employees. Unlike manufacturing activities, knowledge activities are difficult to monitor and control, because only a part of knowledge is

internalized by the organization, the other part is internalized by individual. This duality between individual knowledge and organizational knowledge demands different sets of management strategies in knowledge management's success for the organization.

KM focused HRM

Increased emphasis on the knowledge management has resulted in the significant shifts in the working environment in organizations. Effectively managing the knowledge worker requires finding and fostering the linkages between leadership and organizational capability in constructing proper knowledge management systems and understanding the intrinsic motivational factors driving the knowledge worker toward information acquisition, internalization, integration and reproduction. HRM is no longer simply focused on "managing people' in the conventional meaning of the phrase. Human resource management is now responsible for managing the capabilities that people create and the relationships that people must develop. Knowledge management initiatives are focused on harnessing the available knowledge assets and to prevent knowledge from walking out of the door. Hence, there is a need for the integration between the knowledge management initiatives and the HR policies of the organization. Focus on knowledge has changed the role and position of HRM from personnel administrator to one of strategic role player, knowledge facilitator, and change agent and asset manager. The following section delineates on the changing face of HRM in the organization and identifies the key issues in each of the HR practices that need to undergo change to facilitate and take maximum advantage of knowledge management. *Illustration 1* presents a model of HRM in knowledge managed organization.

RECRUITMENT

The role of HR in the staffing process has become significant not only in who should be appointed but also as to how recruitment needs to take place within knowledge organizations.

This process requires the identification of required skills and knowledge gaps and then establishing a program that will attract committed people with desirable competences, and place them in the right places, for the right duration and at the right cost (Walker & Perrin, 2001).

The recruitment function in a knowledge managing organization has to focus on the extent to which the knowledge possessed by a person is inline with central strategy of the organization. As well as, should stress a fit between organizational culture and personality of the new-hire and ability of the individual to socialize (Kristof 1996; Judge and Cable 1997). As knowledge transfer and sharing are critical for developing a competitive advantage, the function of the HR department is to select and recruit individuals who would subscribe to this culture of sharing information and knowledge dissemination. Select employees who are capable of contributing to the organization in a variety of ways now and in the future, rather than simply filling the current vacancy.

The focus should be on the employment of 'smart' and resilient people who are open-minded, innovative and curious, possess lateral thinking, and have the ability to work in teams or groups with the aim of sharing expertise. Further, people who could apply knowledge in task execution, learn new skills continuously, and adapt to a variety of circumstances and cultures are to be cherry-picked through a rigorous and appropriate selection process. The ability to generate new ideas and communicate them to others is an important criterion in the selection process. Interview panel for selection should include several consultants from a number of disciplines along with HR manager. Social process model (Iles 1999) may be apt for hiring.

REWARD SYSTEM

Research studies have clearly established that people are not willing to share data unless they are rewarded for it (Suresh, 2002). To maximize the value of knowledge sharing, employees must be made aware of the benefits that sharing knowledge and experience provide to them as individuals, advantages that will be gained by the organization as a whole when knowledge is institutionalized. One needs to convince the employees that knowledge sharing has become an integral part of every employee's daily function and moreover, senior management recognizes the sharing of knowledge. The organization should consequently have appropriate reward and incentive system which would recognize and adequately reward persons who share knowledge with the others in the organization. Contributions in knowledge management activities should be a part in staff promotion process beside the existing performance evaluation, seniority and experience. Incentives can be offered to those who actively participate in all facets of knowledge management activities. Incentives to new idea formulation will encourage the employees to create new knowledge. Domain experts must be recognized and rewarded in ways that make them feel it is worth their time to cooperate. The compensation and reward system should focus on promoting knowledge exchange and group collaboration. Many knowledge workers prefer to have free time to work on knowledge building projects, attending conferences or spending time on interesting projects to monetary rewards (Evans 2003; Depres and Hiltrop1995). Financial rewards are not necessarily the best choice as knowledge workers tend to value non-financial incentives e.g. overt recognition as important. Hence, the reward system needs to generate new non-monetary incentives / rewards that motivate knowledge generation and dissemination.

RETENTION

Traditionally, organizations retain only those people who add value to the organization through their experience, expertise and knowledge. But, in the present scenario, it does not suffice if people posses knowledge, but need to share it with others in the organization. This shared knowledge is stored in a central repository accessible to all in the organization. Organizations must encourage and retain those people who are willing to share knowledge and work towards the holistic improvement of the organization and just not solve problems localized around his personal expertise.

HR function needs to play an important role in developing strategies, measures and policies to retain knowledge workers and to prevent knowledge from walking out of the door. A challenge is the creation of an intellectually stimulating and challenging working environment, focusing on continuous learning, innovation and the intellectual growth and development of employees. HR need to focus on implementing effective knowledge transfer methods e.g. mentorship and pre-retirement programs. In accommodating and retaining the key knowledge creators, alternatives need to be found which would enable individuals to meet their personal aspirations as well as to make choices that would suit their personal life styles, which vary according to different life stages (Probart, 2002, Verwey, 2003). In retaining organizational knowledge, particular attention should be paid to succession planning, pre-retirees, and care must be taken while downsizing and retrenchments. Identifying the pre retirees within the organization promote the knowledge transfer through conferences and training programmes, personal service contracts.

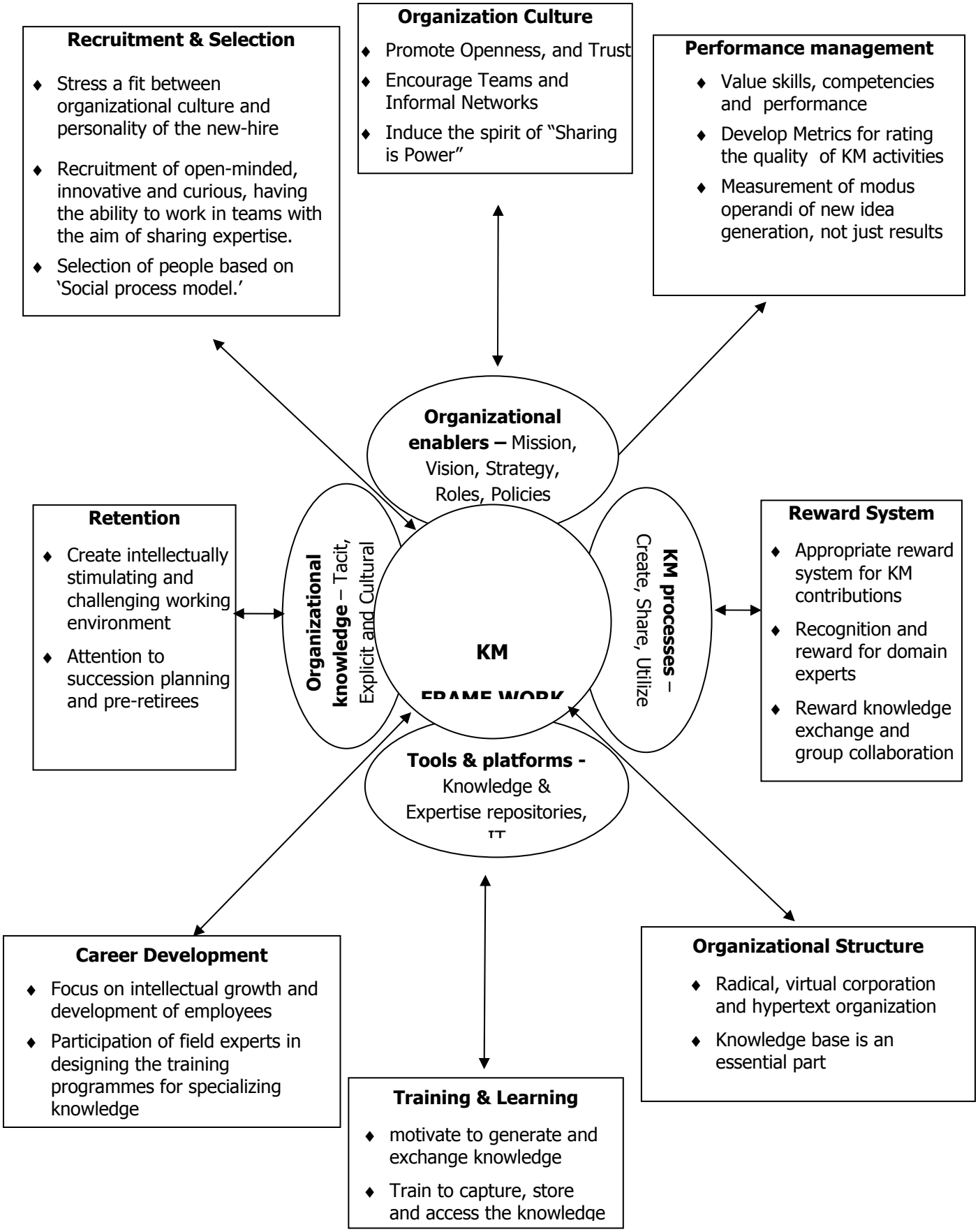
Recruitment & Selection
Stress a fit between organizational culture and personality of the new-hire
Recruitment of open-minded, innovative and curious, having the ability to work in teams with the aim of sharing expertise.
Selection of people based on 'Social process model.'
Organization Culture
Promote Openness, and Trust
Encourage Teams and Informal Networks
Induce the spirit of "Sharing is Power"
Performance management
Value skills, competencies and performance
Develop Metrics for rating the quality of KM activities
Measurement of modus operandi of new idea generation, not just results
Organizational enablers – Mission, Vision, Strategy, Roles, Policies
Retention
Create intellectually stimulating and challenging working environment
Attention to succession planning and pre-retirees
Organizational knowledge – Tacit, Explicit and Cultural
KM
KM processes – Create, Share, Utilize
Reward System
Appropriate reward system for KM contributions
Recognition and reward for domain experts
Reward knowledge exchange and group collaboration
Tools & platforms - Knowledge & Expertise repositories,
Career Development
Focus on intellectual growth and development of employees
Participation of field experts in designing the training programmes for specializing knowledge
Training & Learning
motivate to generate and exchange knowledge
Train to capture, store and access the knowledge
Organizational Structure
Radical, virtual corporation and hypertext organization
Knowledge base is an essential part

Illustration 1: HRM in the Knowledge Managed Organization

TRAINING AND LEARNING

In a knowledge-centric economy, the prosperity of organizations becomes explicitly dependent on the intellectual capacity of their employees and their ability to change and adjust to the dynamic business environment. In the present day turbulent environment the ability of individuals and organizations to obtain and master new knowledge has become the key to sustainable growth. Therefore the rate of learning has to be greater than the rate of changes.

The learning organization is the result of a strategic relationship with the employee training and development and the recognition of the fact that knowledge is the answer to the numerous challenges from the environment. The successful learning organization is able to attract the most talented people, to involve them into all business procedures and to motivate them to generate and exchange knowledge, enabling them in turn to maintain and improve their individual professional skills. Knowledge management initiatives, in recent times have focused on second-generation schemes with emphasis on knowledge creation in addition to the first-generation emphasis on knowledge codification and sharing (Suresh, 2002). Knowledge creation is a continuous and dynamic process and involves the process of capture and conversion of tacit knowledge into explicit knowledge. Hence, the training programmes initiated by the organization should result in learning and development as well as should train the employees on the ways to capture, store and access the knowledge across the organization. In terms of human resource training, the focus is placed on developing people capable of tapping internal and external information and turning it into useful organizational knowledge. The concentration needs be more on the use of electronic information systems (especially internet technologies) to deliver learning and training.

PERFORMANCE MANAGEMENT SYSTEMS

One of the most prominent shifts in performance measurement is that individuals are to be valued more for skills, competencies and performance than for loyalty, and these measures, rather than seniority, become the basis for rewards and incentives. Knowledge management activities should be a part of annual job assessment or performance evaluation. Measuring of, especially, tacit knowledge is difficult and measurement tools should be organization specific. They need to be linked to the overall organizational strategy and knowledge requirements, and specified in the individual's job description and performance agreement.

Metrics need to be developed to rate the quality of knowledge being created and shared by employees. Measuring tacit knowledge can be done by evaluating explicit demonstrations in the form of contributions made to knowledge sharing and assessing the degree to which employees succeed in exploiting their knowledge competence in terms of breadth, depth, diversity, and innovation. Performance rating should take into account sharing and learning, where the focus is on continuous improvement, innovation and creativity. Clearly, HRM has an important role to play not only with regard to designing and developing performance management system linked to organizational mission, but also in equipping management to assess knowledge workers' performance. While managing the performance of employees appraisal systems need to measure not only outcomes but also the modus operandi of the new idea originators and developers (Narasimha, 2000).

ORGANIZATION CULTURE

A key to sustained knowledge management is organizational culture that forms the environment in which information and know-how can flow. Organizational cultural practices are particularly important to investigate because, they are the most direct measure for changing behaviors needed to support Knowledge creation and sharing. The various tools and techniques available to convert tacit knowledge into explicit knowledge may prove ineffective in the absence of a favorable culture, which facilitates sharing. Understanding and use of our own personal knowledge is different from managing the development, flow, and application of knowledge on an organizational basis. It is a tough task. The "bandwidth" of the flow of knowledge is based upon trust in both the organization as a whole and the specific individuals with whom the individuals interact. (Van der Westhuizen, 1999). Organizations must deal with this issue by providing a climate of trust built on a culture that embraces and rewards knowledge-sharing in all its manifestations such as learning, mentoring, collaboration, sharing ideas and stories, etc.

The activities of the human resources department should focus on creating an appropriate culture in the organization that facilitates sharing of information and motivates individuals to make their tacit knowledge, gained through years of experience and practice, explicit. The task of HR is to bring about a change in the organization culture that underlines the fact that "knowledge sharing is power rather than knowledge is power".

Effective knowledge creation depends upon the way in which people relate to each other in the organization. Untrustworthy behavior, constant competition, 'that's not my job' attitude are impediments to proper knowledge transfer and sharing. To overcome individual barriers for sharing, organizations must concentrate on forming of social networks or informal networks among employees and all business partners to share the tacit knowledge. Social networks play vital role in fostering trust and interpersonal relationships in order to share their know-how. Culture HR department has to measure the level of trust based on the type and quality of knowledge being shared among employees in the organization and find the ways to enforce the values of the company.

ORGANIZATIONAL STRUCTURE

The phenomenal growth of the internet has resulted in radical changes in the structure of organizations from the more traditional bureaucratic and matrix type of organizational structure to a more radical, virtual corporation and hypertext organization. Organization has to stress on the accumulation and leveraging of knowledge for the success of this type of organization. .An organization's knowledge base should be seen as a valuable asset and managed accordingly, influencing organizational structures and affecting organizational change and development. This requires different approaches, as well as structural, paradigm and behavioral changes in people and the organization where each business unit should take ownership of the knowledge in their midst and optimally manage it to improve performance. The work environment needs to be restructured and reorganized to ease access to and link employees with one another to provide for knowledge sharing. The creation and implementation of units of work, projects, teams and communities of practice are aimed at connecting people to share information and best

practices. Organizations with a centralized, bureaucratic management style can stifle the creation of new knowledge, whereas a flexible, decentralized organizational structure encourages knowledge-sharing, particularly of knowledge that is more tacit in nature (Sharratt and Usoro, 2003). Organizations that rely on quick and adaptive responses as a competitive advantage need a flat organizational structure and short lines of communication among employees and between the employees and management thus allowing employees to make important decisions at all levels (Beijerse, 2000).

CAREER MANAGEMENT

Knowledge resides in people, and no person has all the knowledge that is needed at any given moment. Once this fact is realized by the people, they will start advancing their own careers in profound ways. Career system is important in shaping the flow of employees over time and the way that this interacts with the acquisition and exchange of knowledge (Evans 2003;Scarbrough 2003; swart and Kinnie 2003).Hence the HR team needs to design specific activities for the development of thinking skills of the people which are vital in knowledge career. Participation of respective field experts in designing the techniques and programmes to develop specialized knowledge of people must be encouraged. Identification of organizational knowledge realities can add value in different ways to the organizational development and problem solving. HR career development function need to shift from a traditional approach to developing the skills required for KM activities.

CONCLUSION

Managing knowledge requires an organization culture built on trust and openness, that encourages social networks. The organization needs to be flat for supporting free flow of knowledge without the hassles of hierarchical barriers. Moreover, the organization needs to hire people who are willing to learn and share knowledge and transform individual knowledge into institutional knowledge. Knowledge and people who contribute to KM through creation, codification and sharing knowledge must be encouraged and retained. Training needs to emphasize the philosophy that knowledge sharing is power. In order to achieve this conducive climate for knowledge management, the organization needs to invent, realign HR strategies and practices as discussed in the paper to support KM and help organization to achieve its objective of making knowledge a competitive advantage.

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EFFECTIVENESS OF ENDORSEMENT ADVERTISEMENT ON RURAL VS URBAN YOUTH BUYING BEHAVIOUR

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ABSTRACT

Organisations are increasingly learning the positive influence 'Celebrity endorsement' can have on the Marketed Brands. Approximately 20 percent of Advertisements feature celebrities and the numbers are growing. Several Studies have also been conducted to investigate the effectiveness of Celebrity advertising on Buyer behaviour. However not much work has been undertaken to identify the impact of celebrity endorsement on Youth across various locations like Rural and Urban. The Paper presents the results of the survey of 930 respondents from various towns and villages of the State of Haryana. Result of the analytical study based on Location- wise cross tabulation of data has been presented. Hypothesis are tested as to whether celebrity advertisement are effective for influencing Youth Buyer Behaviour and the comparative study of effectiveness of celebrity advertisement on Rural vs. Urban youth.

KEYWORDS

CELEBRITY ADVERTISEMENT, ENDORSEMENT ADVERTISEMENT.

INTRODUCTION

In today's highly competitive markets, big brands are at logger-heads when it comes to products being offered, each having a similar product to that of a rival. Where does one brand gain that quintessential advantage - advertising, service, promise of trust, or even the all important price factors? Advertising seems to be the best platform where brands prefer to compete on - right from hiring the best advertising agencies to getting the biggest celebrities. Celebrity endorsement is a special type of advertisement which includes a famous person from film fraternity, athletes, and sports, modeling world etc. It helps in promoting the Brand and also increasing the sales of the product. Celebrity endorsement has not developed in recent years, it is being used since the days of Lux and Dabur Amla Hair Oil. This type of marketing strategy is used to promote the Brand and has proved in itself a boon in advertising world. However, it is very expensive to endorse a celebrity for a product but in the long run it has helped in enhancing the Brand Image. Celebrities are also interested in endorsing themselves as they get highly compensated and their visibility also increase. Infact several celebrities from bollywood use these advertisements for Promoting their new releases and also vice-versa.

India is a country where people are star-struck. Why? Population of 1 billion and ticking everyday, people need something or someone to look up to. A sense of security, admiration, comfort, familiarity, and above all, someone they aspire to be at some hidden level in their lives. And clever marketers leverage this very celebrity appeal and are successfully carrying out their jobs by giving the bottom lines of all the brands what they want - profit, market share and even recall. But how much star power is too much? "Does Amitabh really use Boro Plus"and "Does Salman Khan really uses Wheel" asked a 6 year old to her mother. Her mother laughs and says, "No way, just a gimmick." What does that do to the brand?

Many companies have had considerable success using celebrities as spokesperson. Endorser image serve as mediators in the equity-creation process of celebrity product endorsement (***Seno and Lukas, 2007***). Product attitude was predicted by inferences about the endorser's liking for the product and by attitudes towards the endorser ***(Silvera and Austad, 2004***). When however respondents are exposed to negative information about a celebrity endorser, a negative transference of affect in the endorsement relationship may also occur. When the situation is reversed and the respondents are exposed to negative information about the brand, the transference of affect is mitigated (***White et al., 2009***).

Businesses have long sought to distract the attention of the potential customers that live in a world of ever increasing commercial bombardment. Everyday consumers are exposed to thousands of voices and images in magazines, newspaper, and on billboards, websites, radio and television. Every brand attempts to steal a fraction of an unsuspecting person's time to inform him or her of the amazing and different attributes of the product at hand. Because of the constant media saturation that most people experience daily, they eventually become numb to the standard marketing techniques. The challenge of the marketer is to hook the subject's attention.

This is true for the classic forms of celebrity, like Film Stars (eg. Amitabh Bachchan, Shahrukh Khan, Rani Mukherjee, Aamir Khan and Pierce Brosnan). Models (e.g., Malaika Arora, Lisa Ray , Naomi Campbell, Gisele Bundchen etc)., Sports Figures (e.g., Sachin Tendulkar, Mahendra Singh Dhoni, Virander Sehwag, Rahul Dravid, Zaheer Khan , Steve Waugh, etc). Entertainers (e.g. Cyrus Broacha, Oprah winfrey, Conan O'Brien), and Pop-Stars (e.g., Madonna, David Bowie) – but also for less obvious groups like Businessmen (e.g., Donald Trump, Bill Gates) or politicians.

Celebrities appear in public in different ways. First, they appear in public when fulfilling their profession, e.g., Viswanathan Anand, who plays chess in front of the audience. Further, celebrities appear in public by attending special celebrity events, e.g., award ceremonies, inauguration or world premier of movies. In addition, they present themselves in news, fashion, magazines, and tabloids', which provide second information on events and the 'private life' of celebrities through mass-media channel (e.g., Smriti Irani being regular feature in various publications). Last but not the least, celebrities act as spokes-person in advertising to promote products and services, which is referred to celebrity endorsement.

For Instance:

Vodafone signed Irfan Khan for advertisement of Sim cards.

Tennis sensation Sania Mirza was appointed to increase the sales of 'Bournvita energy drinks'.

'ITC' roped in Deepika Padukone for promotion of its soap named 'Fiama di Wills'.

Famous Brand 'Veet' roped in Katrina Kaif as its Brand ambassador.

Shahrukh Khan has been chosen by Big Brands for their Advertisement which includes 'Dish TV' and 'Airtel'.

M.S Dhoni and Baichung Bhutia for 'Project Tiger of Aircel'.

Companies spend huge amount of money on Celebrities to sell anything from a candy, hair oil, soaps, colas, pens, paints, automobiles etc. Most companies know that celebrities have an appeal and a Brand can be best helped to reach out to the masses.

REVIEW OF LITERATURE

The use of testimonials by advertisers dates back to the 19th century when medicines were patented. Firms have been juxtaposing their brands and themselves with celebrity endorsers (e.g., athletes, actors) in the hope that celebrities may boost effectiveness of their marketing. The late '80s saw the beginning of celebrity endorsements in advertising in India. Hindi film and TV stars as well as sportspersons began encroaching on a territory that was, until then, the exclusive domain of models. There was a spurt of advertising, featuring stars like Tabassum (Prestige pressure cookers), Jalal Agha (Pan Parag), Kapil Dev (Palmolive Shaving Cream) and Sunil Gavaskar (Dinesh Suitings). Of course, probably the first ad to cash in on star power in a strategic, long-term, mission statement kind of way was for Lux soap always endorsing the latest hit actress. A brand which has, perhaps as a result of this, been among the top three in the country for much of its lifetime.

Today, the use of celebrity advertising has become a trend and a winning formula of corporate image building and product marketing. It provides empirical evidence demonstrating that attitudes can be affected in such a way.

The impact of Tiger Woods tournament performance on the endorsing firm's value subsequent to the contract signing was examined. No relationship was found between Tiger's tournament placement and the excess returns of Fortune brands. No significant relationship was found for American Express, suggesting the market does not view a golfer endorsing financial services as credible. However, a positive relationship and significant impact of tiger's performance on Nike's excess returns was found suggesting that the market values the additional publicity that Nike receives when Tiger is in contention to win (***Farrell et al., 2000)***.

Some marketers choose to utilize multiple celebrities to promote their Brands. Fit between the endorsed product and various celebrities is a key factor for using multiple celebrity endorser in advertising (***Hsu & McDonald, 2002***). The use of celebrity endorser in advertising is wide spread – as much as 20 percent of all advertising use some type of celebrity endorser. Marketers invest significance dollars in securing the promotional support of well-known individuals (***Till, 1998***). Products which are ultimately sold by retailers are endorsed more frequently by celebrities in certain sports than others ***(Lear et al., 2009).*** The importance of fit between the endorser and the endorsed product has been described as the "Match-up Hypothesis", research has focused on physical attraction ***(Till and Busler 1998)***. Celebrities can be used to gain attention and maintain sales, while spokesperson's effectiveness is in establishing a lifelong link with the product (***Tom et al., 1992)***.

The perusal of above mentioned studies makes it very clear that endorsements advertisement does have strong impacts on consumers. The present paper has taken a leaf from these studies and has proceeded for an empirical investigation, into a Region-Wise Impact of Celebrity Endorsement which is presented subsequently.

RESEARCH METHODOLOGY

Research problems tend to be different from one another and so it requires own special emphasis and different approach. Since the entire research problem is unique in some ways, the research process has to be typically customized. All the steps adopted in the research have been elaborated in the following sections.

STATEMENT OF THE PROBLEM

The present paper aims at finding the extent to which endorsement advertising has been successful to influence the buyer behaviour across Urban and Rural groups. The research problem investigated herein has been precisely defined as- "Effectiveness of Endorsement Advertisement on Rural vs. Urban Youth buying behaviour".

OBJECTIVES

To study the likeability of the endorsement advertising.

To study as to what extent endorsement advertising impact the consumer behaviour towards endorsed Brands.

To comparatively study the impact of endorsement advertisement on Rural vs. Urban Buyer Behaviour.

HYPOTHESIS

In order to ensure effective analysis and understanding of data collected for the Purpose of this study, the following hypothesis have been framed:

1 H0: Celebrity endorsements do not affect the likeability of the Brands.

2 H0: There is no significant difference between the impact of Celebrity endorsement on Urban and Rural youth buying behaviour.

The two hypothesis have been checked through a series of Chi-square test administered on each statement of the questionnaire as shown in Table 1.4 with special attention to region-wise comparison as analysed in Table 1.3

RESEARCH DESIGN

The present research is descriptive in nature as it aims at comparatively studying whether endorsement advertising has an impact on Youth buyer behaviour. It also aims to find out as to what type of consumers in terms of locality is more influenced by endorsements. Information has been collected from the respondent with the help of a structured questionnaire. The universe of the study is the state of Haryana covering both cities and small villages. Since it was not feasible to study the entire region, the researcher drew a sample.

SAMPLING DESIGN AND SAMPLING TECHNIQUE

Nine hundred eighty questionnaires were administered. Fifty questionnaires were found to be incomplete and hence were excluded in the final data. Therefore, data from nine hundred thirty respondents have been collected and analyzed. Due care has been taken to ensure that enough number of Urban and Rural respondents be included in the sample.

DATA COLLECTION METHOD

In the present study, Structured Questionnaire method has been used to collect the data. In some case, particularly in case of semi-literate/illiterate respondents, personal interview technique was used to draw out information as per the questionnaire.

SCALING OF ITEMS

A five point Likert's scale from "Strongly Agree" to "Strongly Disagree" was used to measure the response to each statement (Items).

TOOLS OF DATA ANALYSIS

The data collected have been duly tabulated and classified. Thereafter it has been analyzed with the help of simple percentage technique to describe the present status of respondents. Chi-square test has been used by the researcher to study the association between various variables as well as to study the association between quantitative and qualitative variables.

Table 1.1

PROFILE OF RESPONDENTS

Sr.No	Profile of Respondents	Urban (587)		Rural (343)		Total (930)	
1)	**Age (in yrs)**	**N**	**%**	**N**	**%**	**N**	**%**
	16-20	243	41.39	126	36.73	369	39.67
	20-24	184	31.34	116	33.81	300	32.25
	24-28	160	27.25	101	29.44	261	28.06
2)	**Occupation**	**N**	**%**	**N**	**%**	**N**	**%**
	Students	197	33.56	99	28.86	296	31.82
	Self-Employed	141	24.02	78	22.74	219	23.54
	Business	144	24.53	88	21.28	229	24.62
	Housewife	105	17.88	78	16.90	183	19.67

Table 1.2
LOCATION & GENDERWISE BREAKUP OF RESPONDENTS

Sr.No	Profile	Urban		Rural	
1)	Location	N	%	N	%
		587	63.11	343	36.89
2)	Gender	Male		Female	
		N	%	N	%
		530	56.98	400	43.02

INTERPRETATION

The Profile of respondents as depicted in Table 1.1 shows that majority of them i.e. 369 respondents almost 40% fall in the category of age bracket of 16 to 20 years with 41% Urban and 37% Rural respondents.

Majority of the respondents who were a part of this survey constituted of 296 students (31.82%), followed by 229 Businessman (24.62%) and 219 Self-employed (23.54%).

As the study was done to take the opinion of both Urban and Rural audience the data collected revealed 587 (63.11 %) respondents from urban areas as compared to 343 (36.89%) respondents from rural areas and suburb have been studied.

Due importance was given to take response from both male and female respondents and hence 400 (43.02%) females participated in this survey as against 530 (65.98%) male respondents.

Table 1.3
DISTRIBUTION OF RESPONDENTS AS PER ATTITUDE INDICATORS

Sr. No	Indicators	Strongly Agree				Agree				Neutral				Disagree				Strongly Disagree			
		Urban		Rural		Urban		Rural		Urban		Rural		Urban		Rural		Urban		Rural	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1)	Celebrity Advertisement is more noticeable	**214**	36.5	**170**	49.6	**97**	16.5	**48**	13.9	87	14.8	48	13.9	88	15	46	13.4	101	17.2	31	9.0
2)	Celebrity Advertisement have high recall rate.	**140**	23.9	**100**	29.2	**144**	24.5	**113**	32.9	127	21.6	60	17.4	95	16.2	30	8.7	81	13.8	40	11.6
3)	Celebrity Advertisement positively motivates audience for product purchase.	**147**	25.0	**103**	30.0	**123**	20.9	**102**	29.7	114	19.4	34	9.9	100	17.0	50	14.5	103	17.5	54	15.7

4)	Audience enjoys watching Celebrity Advertisement.	**130**	22.1	**100**	29.2	**124**	21.1	**105**	30.6	120	20.4	40	11.6	110	18.7	44	12.8	103	17.5	54	15.7
5)	Audience have positive attitude towards product having Celebrity Advertisement.	**140**	23.8	**103**	30.0	**114**	19.4	**102**	29.7	118	20.1	34	9.9	108	18.3	50	14.5	107	18.2	54	15.7
6)	Celebrity Advertisement are remembered for a long time.	**120**	20.4	**110**	32.1	**120**	20.4	**83**	24.1	118	20.1	55	16.0	100	17.0	60	17.5	129	21.9	35	10.2
7)	Use of Celebrity Advertisement enhances the credibility of Brands.	**213**	36.3	**170**	49.6	**98**	16.6	**48**	13.9	86	14.6	49	8.3	90	15.3	45	13.1	100	17.0	32	9.3
8)	Celebrity Advertisement is used when brand performance is poor.	**194**	33.0	**95**	27.7	**131**	22.3	**70**	20.4	102	17.4	78	22.7	95	16.2	40	11.7	65	11.1	60	17.5
9)	Celebrity Advertisement ignores	**150**	25.6	**20**	5.8	**120**	20.4	**105**	30.6	110	18.7	128	37.3	100	17.0	40	11.6	107	18.2	50	14.5

	product quality/feature.																				
10)	Customers only remember celebrities & not brands in Adv.	**150**	25.6	**135**	39.4	**126**	21.4	**94**	27.4	120	20.4	50	14.5	95	16.1	25	7.2	96	16.3	39	11.3
11)	Use of Celebrity in advertisement increase the cost of brand sold in market.	**200**	34.1	**115**	33.5	**145**	24.7	**80**	23.3	90	15.3	40	11.6	77	13.1	43	12.5	75	12.7	65	18.9
12)	Poorly performing celebrity affects the brand perception negatively.	**194**	33.1	**103**	30.0	**131**	22.3	**76**	22.2	100	17.0	60	17.5	95	16.2	62	18.1	67	11.4	42	12.2
13)	Social ideas may be promoted by celebrities.	**146**	24.8	**109**	31.7	**132**	22.4	**104**	30.3	133	22.6	57	16.6	91	15.5	33	9.6	85	14.4	40	11.6

Table 1.4
TABLE OF INTERPRETATION

Level of Significance - .05

NULL HYPOTHESIS	**Calculated Value of Chi-Square**	**Tabulated value at 4 d.o.f**	**Hypothesis**
1) There is no significant difference between Urban and Rural Youth with respect to noticeability of Celebrity advertisement.	**20.54**	**9.48**	**Rejected**
2) There is no significant difference between Urban and Rural Youth with respect to Celebrity	**19.4**	**9.48**	**Rejected**

Advertisement having high recall rate.			
3) There is no significant difference between Urban and Rural Youth with respect to Celebrity Advertisement positively motivating audience for product purchase.	**22.4396**	**9.48**	**Rejected**
4) There is no significant difference between Urban and Rural Youth with respect to enjoying watching Celebrity Advertisement.	**26.87**	**9.48**	**Rejected**
5) There is no significant difference between Urban and Rural Youth with respect to Audience having positive attitude towards product having Celebrity Advertisement.	**29.466**	**9.48**	**Rejected**
6) There is no significant difference between Urban and Rural Youth with respect to Celebrity Advertisement being remembered for a long time.	**23.754**	**9.48**	**Rejected**
7) There is no significant difference between Urban and Rural Youth with respect to Use of Celebrity Advertisement enhancing the credibility of Brands.	**20.09**	**9.48**	**Rejected**
8) There is no significant difference between Urban and Rural Youth with respect to the use of Celebrity Advertisement when brand performance is poor.	**16.4391**	**9.48**	**Rejected**
9) There is no significant difference between Urban and Rural Youth with respect to Celebrity Advertisement ignoring product quality/feature.	**83.4698**	**9.48**	**Rejected**
10) There is no significant difference between Urban and Rural Youth with respect to remembering only celebrities & not brands in advertising.	**37.745**	**9.48**	**Rejected**
11) There is no significant difference between Urban and Rural Youth with respect to Use of Celebrity in advertisement increasing the cost of brand sold in market.	**8**	**9.48**	**Accepted**

12) There is no significant difference between Urban and Rural Youth with respect to poorly performing celebrity affecting the brand perception negatively.	**2.5154**	**9.48**	**Accepted**
13) There is no significant difference between Urban and Rural Youth with respect to Social ideas being promoted well by celebrities.	**19.764**	**9.48**	**Rejected**

From the table above, one may see that out of total 13 statements, to comparatively study the effect of endorsement advertisement on rural and urban youth, we reject 11 hypotheses and accept only two. Thus it may be safely concluded that there is a significant difference between the two segments and Rural Segment is more likely to be affected by celebrity advertisements as against urban segment.

ANALYSIS & INTERPRETATION

According to the analysis shown in the table 1.3 it was found that majority 529 (56.88%) of the respondents including 311 (52.98%) from Urban segment and 218 (63.56%) from Rural segment held that Celebrity advertisements are more noticeable. It may be observed that 64% of rural as against 53% of Urban respondents agreed to this statement. Hence it was proved that celebrity advertisement is more noticeable by Rural segment as compared to the Urban segment. The Chi-square value of Table 1.4 also indicates the same.

Analysis of second indicator shows that majority of the respondents 497 (53.44%) believe that celebrity advertisement do have high recall rate. From analysis it was also proved that majority of 62% Rural segment believe that they have high recall rate and only 48 % of Urban respondents believe so. Chi-square value also proves the same and so this hypothesis is rejected.

As can be analyzed in table 1.4 it is seen that 475 (51.07%) respondents feel that if the product is being endorsed by any celebrity it motivates the audience for purchasing that product. Looking closely at it 60% of rural respondents as against only 46% of Urban respondents feels this. Chi-square value also supports this statement.

Analysis shows that 459 (49.35%) respondents including 254 (43.27%) from Urban segment and 205 (59.77 %) from Rural segment enjoys watching celebrity advertisement. Also it is evident from the above interpretation that Rural segment enjoys watching celebrity advertisement more as compared to Urban segment. Chi-square value of table 1.4 also favours this statement by rejecting the Null Hypothesis.

However, it was also seen that a total of 459 (49.35%) respondents which included only 254 (43.27%) from Urban Segment and a majority of 205 (59.77%) from Rural segment have a positive attitude towards the product having celebrity advertisement. There is a big difference between the two segments on this statement. Chi-square value supports this statement too.

Study revealed the fact that a total of 433 (46.56%) respondents including just 240 (40.88%) from Urban Segment and a majority of 193 (56.27%) from Rural segment felt that celebrity advertisements are remembered for a long time. The Rural segments are more likely to have a strong appeal in their minds of their favorite celebrity by remembering the advertisements also. Chi-square value of table 1.4 also indicates the same.

According to the study conducted it was found that a majority of 529 (56.88%) respondents including only 311 (52.98 %) from Urban segment and 218 (63.56%) from Rural segment believe that generally celebrity advertisements enhance the credibility of the brands. According to the study Rural segment strongly supported this statement which was also evident from the Chi-square value.

Analysis revealed that 490 (52.69%) respondents felt that companies generally used celebrity advertisements when their brands performance is poor and it is difficult for them to sustain their brand in the market. But majority of Urban segment i.e. 325 (55.37%) support this statement as against only 165 (48.10%) of rural respondents sharing this statement and Chi-square value also conclude that there is a significant difference between Urban and Rural Youth with respect to this statement.

It was evident from the study that 395 respondents (42.47%) felt that Celebrity Advertisement ignores product quality or any kind of features in it. But majority of the Rural segment i.e. 63.56% as against 54.01% of Urban respondents do not support this statement. Chi-square test also supports that Rural respondents trust the celebrity endorsements in terms of product quality.

Accordingly it was found that a majority of 505 respondents (54.30%) including 276 (47.02%) from Urban segment and 229 (66.76%) from Rural segment remember the celebrity in that advertisement and not the Brand endorsed by them. Rural segment strongly feels that somehow they tends to forget the brand. This shows the peripheral route adopted by audience of Celebrities which generally overshadows the Brand. Chi-square test also supports the same.

According to the study conducted it was found that majority of the respondents 540 (58.06%) including 345 (58.77%) from Urban segment and 195 (56.85%) from Rural segment felt that if a celebrity is used to advertise a product it however means that it will increase the cost of brand in the market. Chi-square also concludes that there is no significant difference between Urban and Rural Youth with respect to this statement.

However with reference to the study conducted majority of the respondents 504 (54.19%) including 325 (55.37%) from Urban segment and 179 (52.19%) from Rural segment felt that a poor performing celebrity does affect the brand perception negatively even if it is their favorite actor, actress or sports star. Chi-square value also supports this by accepting the hypothesis.

According to the study conducted majority of the respondents 491(52.79%) felt that social idea are well promoted by the celebrities. A higher majority of Rural segment 213 respondents (62.09%) felt that the celebrities are perfect alibi when it comes to promoting social ideas. Chi-square value also indicate that Urban segment do not support this statement as compared to Rural segment.

N.B- All the figures mentioned in the above Analysis & Interpretation is the accumulation of Strongly Agree and Agree Variables.

CONCLUSION

From the above analysis it may be concluded that the Celebrity Endorsement does have a positive impact on the Youth Brand perception. The Brands endorsed by celebrities are more noticeable and the recall rate of such Brands is higher. Majority of the respondents held that watching a celebrity in the advertisement is enjoyable, tends to create a positive attitude towards a brand and enhances the credibility of the brands thus endorsed. However, at the same time, most of the respondents also feel that the use of celebrity makes the audience ignore the features and quality of the product while also sacrificing the recall of the brand name being endorsed. There is awareness amongst the respondents that use of celebrity in a brands promotion increases the cost of the Brand. Respondents maintained that as positive so does negative information about a celebrity affects the brand being endorsed. It was pointed out that during the ongoing IPL 2010 Series; the poor performance of any cricketer affected the reaction to any of the Brands endorsed by him. At the same time there is a significant difference between the Rural and Urban perception on the issue. While the Rural youth is more likely to be affected by the celebrity power, the Urban youth enjoys watching celebrities but have a relatively less influence on their purchase behaviour. However, the youth is also confused as to whether to buy a Samsung mobile as endorsed by Aamir Khan or a Micromax handset as endorsed by Akshay Kumar or to decide on buying a Karbonn moble as featured by Sehwag or a Maxx mobile as endorsed by MS Dhoni.

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DUPONT ANALYSIS OF SELECTED INDIAN COMMERCIAL BANKS TO MAKE INFORMED DECISION: AN EMPIRICAL INVESTIGATION

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ABSTRACT

Selecting best bank is a complicated task. The choice becomes even difficult as common people can make out very little from the published financial results. In the present study we have considered DuPont analysis as our tool to measure the financial performance of the twelve selected Indian commercial banks. The data considered for the purpose of the study is pertaining to the period from 2000 to 2009. Firstly we have performed subjective analysis of the DuPont ratios and ROA in order to reach to conclusion. But, as subjective analysis is not free from bias we have objectified the subjective values with the help of normalization techniques. Results from both the analysis have suggested that Kotak Mahindra Bank is the best amongst the lot followed by HDFC Bank. The present study can be an eye-opener so that banks having small asset size may not be neglected for long.

KEY WORDS

DuPont Analysis, Indian Commercial Banks, Normalization, ROA.

INTRODUCTION

The ever changing world of banking business environment has motivated the finance and banking researchers to do work in examining banking performance. In the recent years, the problem of banking and its financial system soundness has become more important in all over the world due to several instances of failures in banking system. The problem is more acute in western countries whereas Indian banking survived the recession due to strict supervisory framework by the Reserve Bank of India. In this juncture it is necessary to analyze the financial performance of Indian banks to ascertain their real strength. It is a complicated issue to measure banks' creditworthiness and risk exposures and it is also difficult to interpret banks' financial data. Thus, it is needed to use all available financial information as fully as possible from the official financial statements of banks to analyze banks' financial performance.

Over the years banking and finance authors are using many methods to measure the financial performance of the banks. Ratio analysis is one of the most commonly used tools to measure the financial performance of the banks. Different authors have used different versions of financial ratio analysis for the bank performance analysis using financial statement items as initial data sources. One of the important ratio analysis methods is DuPont Analysis. Saunders (2000) provided the model of financial analysis for financial institutions based on the DuPont system of financial analysis return on equity model. It is a system of analysis which focuses management's attention on the three critical elements of good financial condition--operating management, asset management, and capital structure management.

The DuPont Formula shows the interrelationship between five key financial ratios. The information contained in the balance sheet and Profit and loss statements are of no use until subjected to managerial analysis. The task becomes complicated when it comes to Banks. Little effort has been done to analyze banks by taking into consideration all the ratios of financial performance measurement. DuPont analysis aims at tracing down the components of ROE in order to get the complete picture. The present study aims at combining all the ratio set, and the systems to get the complete picture of bank performance so that informed decision can be taken. It is very difficult for ordinary people to rank banks on the financial performance parameters due to lack of understanding of the ratios. In order to rank banks the present study has taken comprehensive view of the financial performance by taking into consideration profitability, expenditure, debt and equity.

REVIEW OF LITERATURE

Several studies are being conducted over the years highlighting the financial performance of companies. DuPont analysis is one such tool devised to augment the financial measurement of the companies. But few studies are concerned with the measurement of financial performance of Indian commercial banks using the elements of DuPont analysis. It is observed by the authors that Return on Assets (ROA) is also used as a tool to measure the financial performance of the banking companies over the years. It is also observed that ROA demonstrate the ability of the management to acquire funds at low cost and invest them in profitable investments. In the previous study of (Simpson and Kohers, 2002) the same argument about ROA is reflected. Several studies also claim that ROA is "the most meaningful financial indicator in the banking industry" (Reger, Duhaime and Stimpert, 1992). Small firms which have a very small equity base can use ROA with ease as the big firms with large equity base can and this contributes to yet another advantage of ROA, but use of ROE can be give misleading results compared to ROA (Reger et al., 1992).

As pointed in the earlier studies, the ROE and ROA is found to be highly correlated in the banking sector. Both the ratios gives the same results in the direction of financial performance but the point of difference is their magnitude and interpreted analysis (Simpson and Kohers, 2002, Karr, 2005,Castelli, Dwyer and Hasan, 2006).

Previous studies lay much emphasis on Return on Equity (ROE) as one of the most commonly used bank financial performance measure. The use of ROE as a tool of financial measurement can be well found in much of the research, highlighting bank performance (Lindblom and Von Koch, 2002). ROE can also be said as a simple method to calculate and measure past performance while giving a good approximation of future ROE as pointed in the study conducted by Wilcox (1984).

Hopkins et al. (1997) strongly advocates for ROE and states ROE as the ultimate measure to ascertain the strength of any financial institution. They also pointed out that ROE can be effectively used for comparing banks differing in size and structure.

The use of ROE is based on the assumption as pointed in the study conducted by Lindblom et al. (2002).They argued that the "customer value creation is positively correlated to the financial performance [measured as ROE] of the bank" . Also, the authors have warned that use of ROE can lead to inaccurate results as banking companies differ in size in the dimension of credit risk (Lindblom et al., 2002).

In the use of ROE minor differences in the account types are ignored, also different type of loan and deposits are ignored and the varying profit margins are not taken into account. Thus, all these figure as the limitation of use of ROE, highlighted in the study of Avkiran (1997). The use of ROE is having yet another limitation as it ignores cost of equity in its calculation (Fraker, 2006).

Individual ratios are used to measure the financial performance highlighting different dimensions like profitability, liquidity etc. but it is always wise to use a set of ratios. The set of ratios can effectively highlight the interrelation between the ratios and provide managers with the understanding as well as the information regarding the factors which are meaningfully affecting the bank performance.

From the previous studies it is well demonstrated that the ROE is calculated as Net Income Before Tax divided by Total Shareholder Equity; reflecting the percentage return on each dollar of shareholder's equity. Thus, the higher return signifying the maximization of stock holder's value. Usually in the calculation of ROE, Net Income Before Tax is usually considered in order to nullify the effect of different tax rates as also pointed in the study of Ahmad (1998) and Greuning and Iqbal (2008).

The DuPont analysis is based on reaching ROE while decomposing the ROE into its contributing ratios usually in the reverse way. Where as ROA is the measure of net income on per dollar of total asset owned by the firm during that period. Banks can afford higher default on loans if its equity ratio is high but the higher equity ratio can also have adverse impact on the ROE. Thus higher equity ratio can motivate banks to take more of credit risk and book profits when earnings are positive but equally the chances are there to magnify loss if earnings turn out to be negative (MacDonald and Koch, 2006: 66-70). Thus in the present study we have considered the higher value of equity ratio or Equity Multiplier as adverse whereas the lower value is considered favourable.

OBJECTIVE OF THE PAPER

An attempt has been made in this study to perform DuPont analysis of the selected commercial banks taking into account all the parameters of performance. The whole effort is concentrated in ranking the banks so that people can make informed choice. The study is structured in such a way that all the dimensions of financial performance is addressed and taken into purview in order to arrive at the final ranking.

METHODOLOGY

Ten years (2000 to 2009) data have been taken into account for empirical analysis and we have considered 12 banks from the Nifty list. The banks are Axis Bank, Bank of Baroda, Bank of India, Canara Bank, HDFC bank Ltd., IDBI Bank, ICICI Bank, Kotak Mahindra Bank, Oriental Bank of Commerce, Punjab National Bank, State Bank of India and Union Bank of India. For data collection Capital Line software was used.

In this paper the performance of the selected banks has been analyzed with the help of two methods – first is the financial method which is subjective in nature and the second is the statistical method which aims at objectification of the subjective treatment.

To analyze the performance of the 12 selected banks, we have considered the widely used DuPont analysis. In DuPont analysis five financial ratios are considered with the help of which we can study the performance of the banks. The five ratios are Profit Margin, Total Asset Turnover, Return on Investment, Equity Multiplier and Return on Equity. The DuPont Formula shows the interrelationship between these five key financial ratios. Formulae of the ratios are given below:

Profit Margin (PM) = Net Income ÷ Sales (or Total Revenue)
Total Asset Turnover (TAT) = Sales (or Total Revenue) ÷ Total Assets
Return on Investment (ROI) = PM × TAT
= Net Income ÷ Total Assets
Equity Multiplier (EM) = Total Assets ÷ Total Equity
Return on Equity (ROE) = PM × TAT × EM
= ROI × EM
= Net Income ÷ Total Equity

In this paper, we have considered net profit in place of net income. To shorten the data set, average value of the five ratios over the period of ten years (2000-2009) has been calculated.

Beside these five DuPont ratios another important ratio Return on Asset (ROA) has also been used to study the performance of the banks. Changes in ROA are usually the cause of the most important changes in banks' performance and needs a thorough analysis. The formula of ROA is shown below:

ROA = Earning before Tax ÷ Total Assets

In order to rank banks and arrive at informed decision making the average values of ten years derived by DuPont analysis has been considered. The decision making process involved in selecting the best bank has been based on certain criteria. As the decision making is individual process and is based on individual judgment and hence is not free from bias. In order to make this decision making rational we have converted the subjective opinions into objective values. Instead of using the ordinal values for each factor, we ranked the banks for each DuPont factor.

Smaller rank value is more preferable than higher rank values. We transform the score value of each factor according to the range value such that each factor will have the same range. The value of each rank has either been 1 or 2 or3…… or 12 based on the DuPont factor score. As smaller rank means higher value and preferable than higher rank we have normalized the sum of ranks in different way using the formula formulated by kardi (http://people.revoledu.com/kardi/resources/index.html).

Normalized score = $\frac{1}{2}\left(1-\frac{Sum}{TotalSum}\right)$

All the values of DuPont ratios have been first normalized between the range values 0 to 1. Each ordinal score has been divided by the sum of all score in order to arrive at the weighted score and hence normalized. Only the value of Equity multiplier has been normalized using the following formula formulated by kardi (http://people.revoledu.com/kardi/resources/index.html).

New score = $\frac{nub-nlb}{oub-olb}(originalscore-olb)+nlb$

Where,
nub= New upper bound
nlb= New lower bound
oub= Old upper bound
olb= Old lower bound
In the present calculation 'nub' has been taken as 1 and 'nlb' as 0 whereas 'oub' has been taken as 50 and 'olb' as 1.

ANALYSIS AND INTERPRETATION

In order to undertake the DuPont analysis of the selected banks the average value of the ten years has been calculated. The five ratios have been calculated and presented in Table 1. Also each of the ratios has been individually analyzed by considering the average value of the selected banks and compared amongst themselves. To analyze individual ratios, we have drawn five graphs.

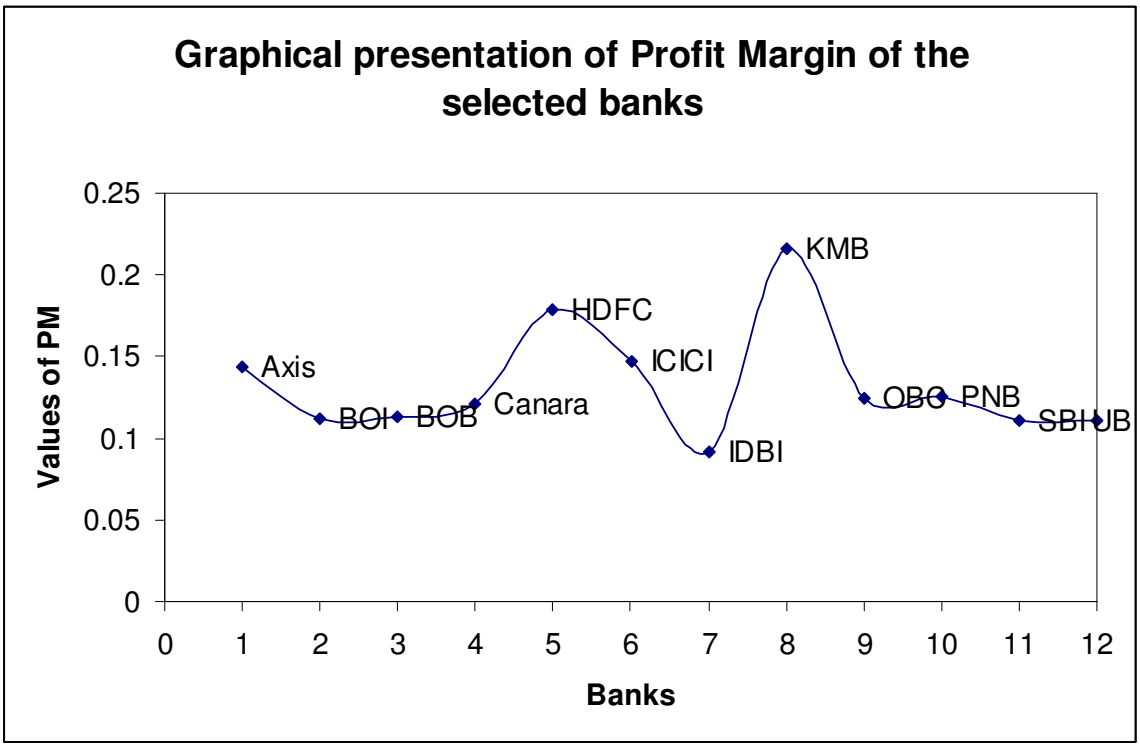
Table 1: Calculation of average DuPont ratios of twelve selected banks

Ratios	Axis	BOI	BOB	Canara Bank	HDFC Bank	ICICI Bank
PM	0.143125	0.112079	0.112615	0.121447	0.178629	0.147176
TAT	0.068495	0.073037	0.07404	0.077353	0.069533	0.064745
ROI	0.009593	0.007992	0.008149	0.009158	0.012239	0.009478
EM	21.11646	21.32604	17.13278	19.20572	13.77851	12.60122
ROE	0.197265	0.165327	0.139236	0.173214	0.168531	0.117547
Ratios	IDBI	KMB	OBC	PNB	SBI	UB
PM	0.091552	0.216044	0.124344	0.125537	0.11137	0.110651
TAT	0.077891	0.097429	0.083296	0.079337	0.075341	0.079673
ROI	0.006945	0.021596	0.010155	0.009649	0.008224	0.008458
EM	11.89376	6.97884	15.7921	19.16854	19.63835	19.57565
ROE	0.07684	0.104317	0.161005	0.180931	0.158818	0.163337

Source: Authors' own calculation

Each of the above ratios shown in table 1 has been graphically presented below to make the study of the banks performance easier. We have considered banks in the horizontal axis and the value of the individual ratios in the vertical axis.

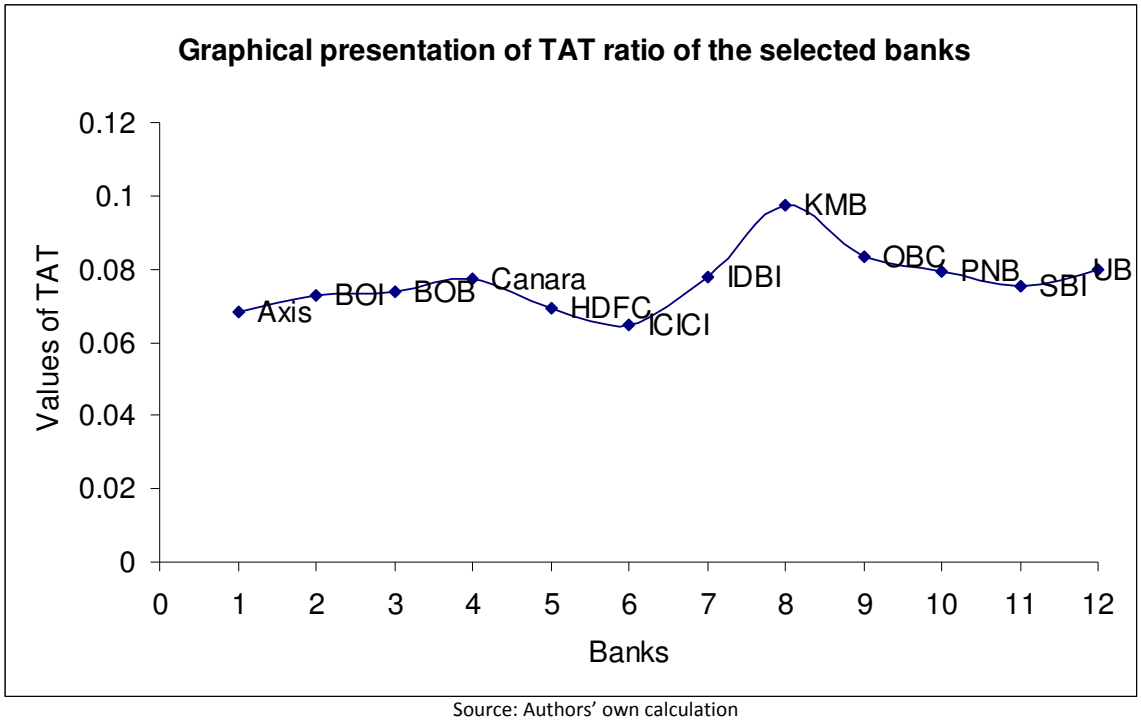
Figure 1: Graphical presentation of Profit Margin of the selected banks



Source: Authors' own calculation

Profit Margin (PM) ratio of the KMB is highest as compared to the other eleven banks. The IDBI has the lowest PM ratio of 0.091552 during the study period. Thus, among all the twelve banks KMB's operating management was performing well during the study period. The bank's earning was good during the period as compared to the other banks.

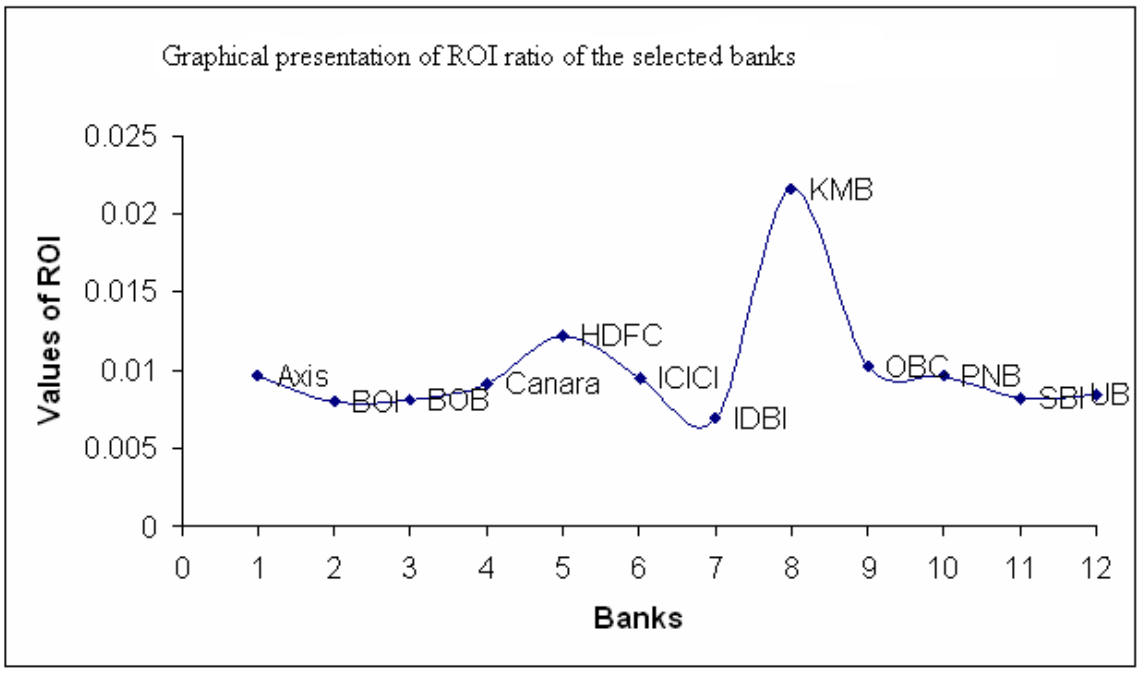
Figure 2: Graphical presentation of TAT of the selected banks



Source: Authors' own calculation

When TAT ratio rises across time, it is a good sign signaling superior asset management of the concerned company. TAT of KMB is again highest among all the twelve banks. It can be said that the bank is able to produce more sales from its assets as compared to the other banks. In other words, KMB is becoming more efficient in using its assets. On the contrary, ICICI Bank has the lowest TAT ratio (0.064745).

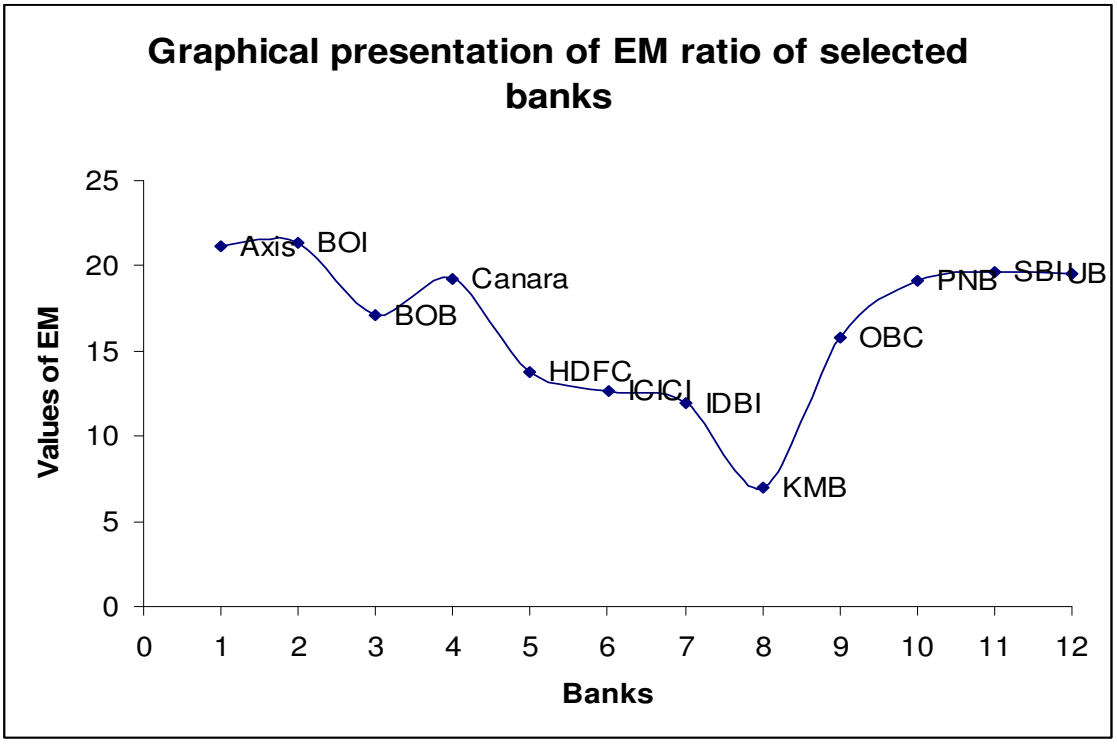
Figure 3: Graphical presentation of ROI ratio of the selected banks



Source: Authors' own calculation

ROI ratio measures the profitability of assets used by the firm. Like most profit measures, this ratio should be positive and growing over time. As KMB has highest PM ratio and TAT ratio, its ROI is also highest with the average value of 0.021596. The lowest average value of ROI is of IDBI.

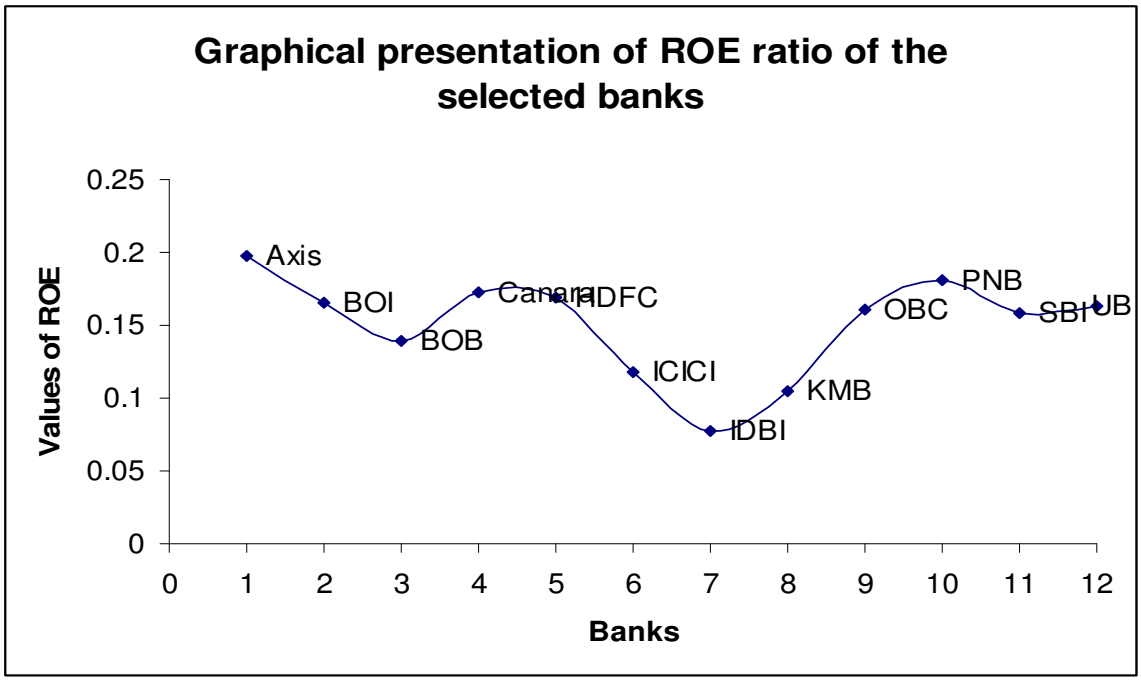
Figure 4: Graphical presentation of EM ratio of the selected banks



Source: Authors' own calculation

EM ratio implies that how much of the total asset is financed by equity capital. If the value of the ratio increases over the time, it means that the value of the total asset is increasing over the time and the extra value of the asset is financed by debt. So, lesser the value of EM more will be the efficiency of the firm. Among the twelve banks EM of KMB (6.97884) is the lowest. That means its performance is better when compared with the other banks. On the other hand, BOI's EM is highest (21. 32604), which indicates that its capital structure management is poor.

Figure 5: Graphical presentation of ROE ratio of the selected banks

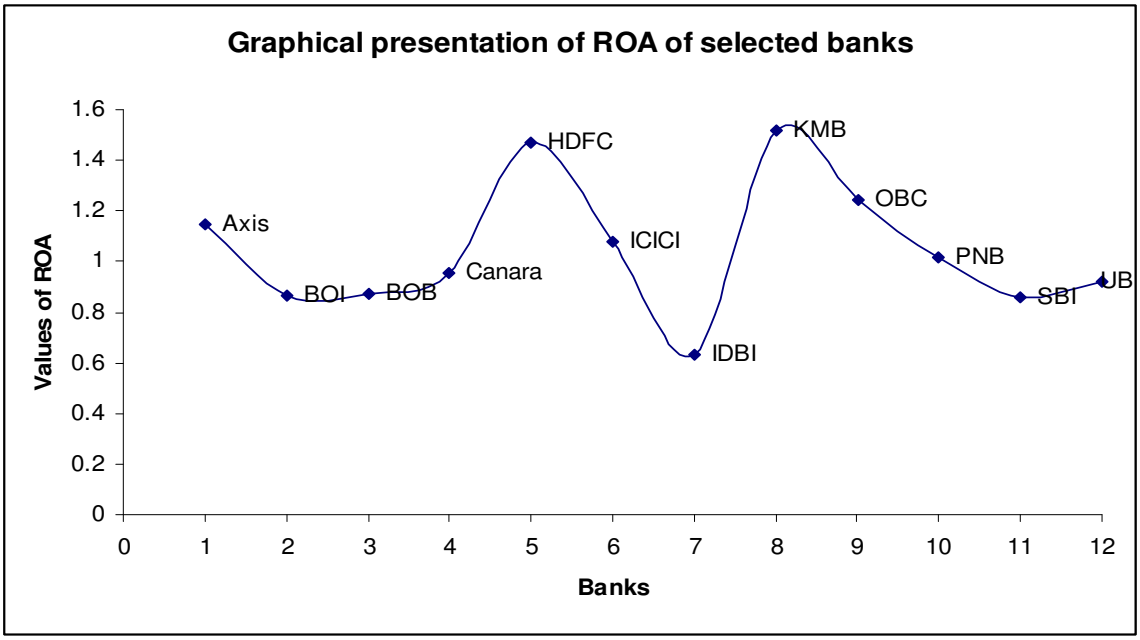


Source: Authors' own calculation

Return on Equity represents the profitability of funds invested by the owners of the firm. All firms should attempt to make ROE as high as possible over the long-term. From the above graph, it is clear that ROE of IDBI is lowest and the ROE of Axis bank is highest. Axis bank's ROE is highest because of high value of EM ratio. It is not good for the bank. Because, it's higher return was coming from overuse of debt. The high ROE should be produced by high ROI, PM, and TAT and not from high EM. In our case, ROE of KMB is good. Because, it's ROI, TAT and PM are highest among the other banks and consequently its EM is lowest. BOI's managerial performance is not good, as its ROE is mostly based on the high value of EM which is sending bad signal to the stakeholders. BOB's operating management and asset management are moderate while its capital structure management is also moderate as compare to the other banks. So, we can say that its performance is moderate. Canara bank's performance is better than BOB, as its asset management and operating management both are better when compared to BOB. Consequently, its managers could not show good performance during the study period due to higher value of EM. When we considered the DuPont ratios of HDFC bank, we have found that its PM is good as compared to other banks, and also the values of other three ratios are good as compared to other banks. Hence, its ROE (0.168531) is better than other banks except KMB. On the other hand, ICICI bank's PM, TAT and EM are good while its ROE (0.117547) is not good because of low value of ROI. ROE of IDBI bank is poor because its value of ROI and PM are not good, although its EM and TAT are comparatively good. Financial performances of PNB, SBI and UBI are not at par as compared to the other banks during the study period. Their ROE values are very high because of high value of EM. ROI of these three banks are low but their PM and TAT values are good. Lastly, when we have considered OBC, we found that its ROE is also not good because of high value of EM and low vale of TAT.

After the detailed discussion on the DuPont ratios and considering the overall raking, we can place KMB in the first position. HDFC bank stood in the second position in our calculation and ICICI bank can be placed in the third position.

Figure 6: Graphical presentation of ROA of the selected banks



Source: Authors' own calculation

During the study period, ROA of KMB is highest amongst the selected banks while the ROA of HDFC is closer to that of KMB and can be told almost same. Hence, it can be concluded that both KMB and HDFC are at par on the parameter of ROA. Both the banks have exhibited skills in effectively managing their assets and helping them to stay performing and give adequate returns. It is also evident that during the study period the amount of nonperforming assets was less and the earning of KMB and HDFC was handsome when compared with the other banks. BOI, BOB and Canara bank exhibited more or less the same amount of ROA. The ROA of ICICI dipped due to poor asset management during the study period. SBI, OBC and PNB all performed poorly on asset management front and hence their ROA is poor. IDBI bank performance in ROA is worst when compared with the other banks during the study period due to poor management of assets, investments which turned out to be sticky and dip in the earning before tax. Thus it can be said that KMB and HDFC are the best and at par in the ROA parameter while IDBI scored poorly on ROA parameter.

In the present section we have discussed about the objectification of the subjective treatment performed for deciding upon the best bank taking DuPont ratio as the base. Here, we have first ranked the banks after taking into consideration each of the DuPont ratio's value. Each of the banks has been ranked based on the ten years' average value, highest value getting rank one while the lowest value getting rank twelfth. In case of a tie same rank has been assigned. After assigning the rank values, the rank so assigned has been normalized. The final score of each bank based on ranking of the DuPont ratios are presented in Table 2.

Table 2: Average values of the ratios and scores of the selected banks

Measures	Axis	BOI	BOB	Canara	HDFC	ICICI
PM	0.143125	0.112079	0.112615	0.121447	0.178629	0.147176
TAT	0.068495	0.073037	0.07404	0.077353	0.069533	0.064745
ROI	0.009593	0.007992	0.008149	0.009158	0.012239	0.009478
EM	0.41054	0.414817	0.329241	0.371545	0.260786	0.23676
ROE	0.197265	0.165327	0.139236	0.173214	0.168531	0.117547
Scores%	45.89744	44.10256	44.74359	46.02564	47.17949	45.64103
Measures	IDBI	KMB	OBC	PNB	SBI	UB
PM	0.091552	0.216044	0.124344	0.125537	0.11137	0.110651
TAT	0.077891	0.097429	0.083296	0.079337	0.075341	0.079673
ROI	0.006945	0.021596	0.010155	0.009649	0.008224	0.008458

EM	0.222322	0.122017	0.30188	0.370787	0.380375	0.379095
ROE	0.07684	0.101954	0.161005	0.180931	0.158818	0.163337
Scores %	44.48718	48.07692	47.05128	47.17949	44.35897	45.25641

Source: Authors' own calculation

It is evident from the table 2 that KMB is the best bank amongst all the banks considered for study. The second position being shared jointly by HDFC bank and PNB due to the following reasons. Both the banks have scored more or less the same rank in all the parameters except in TAT and EM. The ranking of HDFC in TAT is tenth which is comparatively poor when compared to rank of PNB which is fourth in the same parameter. Another area where HDFC has regained much of its lost ground is the EM. The rank of PNB in the parameter EM is seventh where as the rank of HDFC is fourth. Thus in the aggregate both the banks scored the same points and thus shared the second spot jointly. OBC performance is at par with PNB and HDFC except in ROE where it scored more when compared to PNB and HDFC. Thus, OBC scored the third position. The final ranking of the selected banks during the study period is presented in table 3.

Table 3: Over all ranking of the Banks

Name of the bank	Overall score	Rank
KMB	48.07692	1
HDFC	47.17949	2
PNB	47.17949	2
OBC	47.05128	3
CANARA BANK	46.02564	4
AXIS BANK	45.89744	5
ICICI BANK	45.64103	6
UNION BANK	45.25641	7
BOB	44.74359	8
IDBI BANK	44.48718	9
SBI	44.35897	10
BOI	44.10256	11

Source: Authors' own calculation

CONCLUSION

DuPont analysis is widely used as a tool for financial analysis of the company. It's use is very limited in case of banking company's financial performance measurement. The present study uses DuPont as a tool of financial analysis and uses both subjective and objective treatment of the results of DuPont analysis. Kotak Mahindra Bank ranked first among the subjective analysis as well as in objective analysis. HDFC ranked the second position. The so called big banks were distant rank holders. It can be safely inferred from the present study that during the study period the banks which are small in asset size exhibited excellent asset management skills as well as consummate managerial skills in managing both its resources and people. So the myth of 'size matters' can be somewhat negated and the new statement can be 'Small is beautiful'.

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ABBREVIATION

PM – Profit Margin
TAT- Total Asset Turnover
ROI- Return on Investment
EM- Equity Multiplier
ROE- Return on Equity
AXIS- Axis Bank
BOI- Bank of India
BOB- Bank of Baroda
CANARA- Canara Bank
HDFC- HDFC Bank
ICICI- ICICI Bank
IDBI- IDBI Bank
UB-Union Bank of India
PNB- Punjab National Bank
OBC- Oriental Bank of Commerce
SBI- State Bank of India
KMB- Kotak Mahindra Bank

INDIAN BANKING-A CASE OF RESILIENCE IN TURBULENCE

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ABSTRACT

The world over, Banking system is the focal point in the financial set-up of any developing country. Banks are regarded special in view of their specialized functions in the financial intermediation and payment system. In India too economic development has evolved around the banking system. The objective of the present study is to analyse the impact of world financial crisis on Indian banks vis-à-vis banks in other countries in the world. The paper concludes that the Indian banking system has exhibited resilience against the backdrop of global financial turmoil and slowdown of the Indian economy during 2008-09. The Reserve Bank of India report on the trend and progress of banking in India for 2008-09 has also depicted that despite facing a slowdown, the country has so far never witnessed a banking crisis.

KEY WORDS

Financial crisis, Indian banks, financial meltdown

INTRODUCTION

Banking Sector can be said to be the Mirror of the Economy and Banks are like the Purse of the Nation. The world over, Banking system is the focal point in the financial set-up of any developing country. Banks are regarded special in view of their specialized functions in the financial intermediation and payment system. In India too economic development has evolved around the banking system. In this era of Global economic slowdown and ongoing recession, Indian banks are considered sound & healthy unlike their counterparts in the West. Even as India Inc, facing the heat of the financial meltdown, has put a virtual halt on recruitment, the recruitment of Officers in Indian Banks during 2008-09 was 40,000. As per the preliminary estimates, PSBs are expected to hire over 30,000 people during 2009-10. During the coming few years the process is bound to be accelerated in view of the ageing manpower of banks. As per the Assocham survey, the banking sector emerged as biggest job generator in the first quarter of current fiscal. The sector topped the chart with the highest number of job announcements at 16,200. Public sector banks are on a recruitment overdrive at a time when recruitment managers in Indian companies are taking it easy having either stopped fresh intake, or are trimming their workforce to manage the economic slowdown, as per a report dated 15th July 2009 in Business Standard Mumbai Edition. The following table-1 describes the recent trend of recruitments and the reasons for the same trend.

Table-1

Recent Trend	Nos	Reasons
Initial vacancy estimate (2008-09)	34,000	1. 20% of the 750,000 PSU bank employees retire by 2011 2. Policy of financial inclusion, which means opening new branches across the country 3. Most public sector banks have branched into specialised services and need skilled people
Recruitments last year (2008-09)	55,000	

Source: Business Standard, Mumbai Edition, e-paper dated 15-07-2009

LITERATURE REVIEW

Various researches have been carried out to evaluate the functioning of banks in India in recent times. Delis et al. (2008) examine the relationship between the regulatory and supervision framework and the productivity of banks in 22 countries over the period 1999-2006. It follows a semi-parametric two-step approach. First, it uses the Malmquist index to estimate the productivity growth of banks. Then, a bootstrap procedure is used to regress the estimates of the first stage productivity estimates on variables related to capital requirements, official supervisory power, market discipline, and restrictions on bank activities, while controlling for country specific and bank-specific characteristics. The results indicate that regulations and incentives that promote private monitoring have a positive impact on productivity. Restrictions on banks' activities relating to their involvement in securities, insurance, real estate and ownership of non-financial firms also have a positive impact. However, regulations relating to the first and second Pillars of Basel II, namely capital requirements and official supervisory power do not appear to have a statistically significant impact on productivity.

Deepak Tandon (2009) studied the performance variances & efficiency parameters of the Indian Public Sector Banks. The researcher argues that the number of instruments available, the numbers of services banks provide both to retail and corporate customers, the levels of technology involved, are the mantras for leap bound progress of public sector banks but still there is a long way to go. Today Public Sector Banks are facing challenges of squeezed spreads, demanding customers and lack of matching skills with private sector banks of India; this has increased pressure on efficiency and productivity of the banks. This paper empirically defines and an attempt has been made by the authors to analyze technical efficiency of Public Sector Banks operating in India applying Data Envelopment Analysis (DEA) Model .The performance of Banks is assessed in DEA using the concept of efficiency or productivity, which is the ratio of total outputs to total inputs. The study explains the performance variance and relative efficiencies of 19 (nineteen) public sector banks excluding State Bank Group operating in India during 2003 to 2008 financial years.

Sharad Kumar and M. Sreeramulu (2008) in their study on, "Employees' Productivity and Cost – A Comparative Study of Banks in India During 1997 to 2008", compares the employee productivity and employee cost ratios between the traditional banks and modern banks from 1997 to 2008. The study concludes that the performance of the modern banks (foreign and new private sector banks) was much superior to the

traditional banks (public sector and old private sector banks). However, the gap between the performance of modern and traditional banks on all the five variables has shown a decreasing trend, which has significantly reduced during the period of 12 years under study, on account of the measures taken by the traditional banks during the period. In the similar line Sunil Kumar, Rachita Gulati (2007) examined the issue of convergence of efficiency levels among Indian public sector banks (PSBs) during the post-reforms period spanning from 1992-93 to 2005-06. The empirical results indicate that the majority of PSBs have observed an ascent in technical efficiency during the post-reforms years. Further, the inefficient PSBs have been noted to be catching up with the efficient ones. That is, the banks with low level of efficiency at the beginning of the period are growing more rapidly than the highly efficient banks. The study confirms a presence of convergence phenomenon in the Indian public sector banking industry.

Milind Sathye (2005) made a research on the topic "Efficiency of Banks in a Developing Economy: The Case of India". The objective of his paper is to measure the productive efficiency of banks in a developing country, that is, India. The measurement of efficiency is done using Data Envelopment Analysis (DEA). Two models have been constructed to show how efficiency scores vary with change in inputs and outputs. The efficiency scores, for three groups of banks, that is, publicly owned, privately owned and foreign owned, are measured. The study shows that the mean efficiency score of Indian banks compares well with the world mean efficiency score and the efficiency of private sector commercial banks as a group is, paradoxically lower than that of public sector banks and foreign banks in India. The study recommends that the existing policy of reducing non-performing assets and rationalization of staff and branches may be continued to obtain efficiency gains and make the Indian banks internationally competitive which is a declared objective of the Government of India.

As from the prior literature it is evident that many research studies have been conducted to investigate the performance of banks in India in respect of financial sector reform or comparison of public and private sector banks operating in India. But the present study focuses more on the performance of public sector banks performance in view of the world financial crisis and meltdown during 2008-09.

METHODOLOGY AND INFORMATION SOURCE

The present study is a qualitative in nature, where the data is basically collected from the secondary source. The sources like business news papers, financial and banking related magazines and journals, websites of RBI/IBA are referred in terms of getting information and data related to the performance of banks in India. In the present paper, the authors also attempted to compare the performance of banks in other developed and developing countries with Indian banks to draw a meaningful conclusion in relation to world financial meltdown and success of Indian banks. The analysis and interpretation of results in the paper is based on the financial parameters that achieved by Indian banks in comparison to their counter parts in other countries in the world.

THEORETICAL BACKGROUND

FINANCIAL SECTOR REFORM AND BANK PERFORMANCE

The economic reforms since 1991 has had a salutary impact on the financial health of the banking system as evidenced by the significant improvements in a number of prudential parameters. The average capital adequacy ratio for scheduled commercial banks that was around 2% in 1997 had increased to 13.15% on March 31, 2009. In regard to asset quality, the gross NPAs, which were as high as 15.7% at the end of March 1997, declined significantly to 2.4% by March 2009. The net NPAs of these banks during the same period declined from 8.1% to 1.12%. The NPA ratios have recorded remarkable improvements, despite a progressive tightening of the asset classification norms by RBI over the years. The reforms have also improved the profitability of banks. The return on assets of scheduled commercial banks increased from 0.4% in 1991-92 to 1.02% in 2008-09. The banking sector reforms also emphasised the need to improve productivity. A variety of initiatives taken by the banks, including adoption of technology, has resulted in increased productivity. Banks need to work further to achieve the desired results, particularly to further leverage the available technology.

RBI took a series of measures in addition to providing liquidity and special refinance. While the impact of global recession on India cannot be wished away, Indian banks, encouraged by the government and RBI, rose to the occasion to implement various stimulus packages and restructured facilities to tide over the crisis. In the middle of the previous financial year, the volatility in the global financial markets and closure of many big banks in the western world has given a shock to the banking system in India. However, the strong fundamentals of banks as well as support and guidance by regulators helped mitigate the severity of these trans-national developments. Having withstood the testing times, things are looking bright, as signs of recovery of Indian economy are visible. It gives us some hope that we can expect robust growth of the Indian banking industry in the medium term.

GLOBAL FINANCIAL TURBULENCE AND INDIAN BANKS RESILIENCE

The world has witnessed many recessions but the current one is quite severe, which has not been experienced in the last 40 years. The global crisis has hit India too, though its effect has not been as severe as in many developed countries. India has also displayed the ability to recover from recession faster than the US or any other developed countries. The cautious approach of Reserve Bank of India in the last two to three years advising banks to go slow on their exposure to sensitive sectors like real estate and capital market has saved the banking industry. The regulatory authorities had shown vision to foresee the dangerous signals ahead. The Indian banking system was not affected severely by the global crisis because its parameters have remained strong. The present financial system itself is adequate enough to allow both public and private sector banks to play an active role to ensure more financial inclusion, make priority sector obligations more meaningful, liberalise branch licensing/ATM policies, allow greater capital inflows to increase liquidity in financial markets, beef up credit information system and credit infrastructure.

EVIDENCE OF RESILIENCE

The Indian banking system has exhibited resilience against the backdrop of global financial turmoil and slowdown of the Indian economy during 2008-09. The Reserve Bank of India report on the trend and progress of banking in India for 2008-09 has depicted that despite facing a slowdown, the country has so far never witnessed a banking crisis. Analysing the strength of the Indian banking system, RBI's report highlighted that notwithstanding some slowdown in growth of balance sheet, income and profitability, the overall capital to risk-weighted assets ratio (CRAR) has improved and the asset quality remains at a comfortable level. Moreover, contrary to the trend in some advanced countries, the

leverage ratio (tier-I capital to total assets ratio) in India has remained high and reflected the strength of the system. The Indian banking system has thus remained sound and robust. As per the report, the commercial banks are the dominant institutions with linkages to other segments of the Indian financial system and the strength of this sector has provided an anchor to the Indian economy in turbulent times. As per the World Bank report, the leverage ratio of banks in the UK witnessed a decline throughout 1990s, which was accentuated after 2000 to reach a level of about 3% by 2008 from around 5% in the 1990s. On the other hand, the leverage ratio for Indian banks has risen from about 4.1% in March 2001 to reach a level of 6.3% by March 2009.

The report also highlights that on different parameters like regulatory CRAR, non-performing loans (NPAs), provisions and return on assets (ROA), India has performed better than some of the other developing and developed economies. For instance, NPAs for Indian banks in 2008 have stood at 2.3% as against its peers abroad like Indonesia, Philippines and South Africa, Which have seen its NPAs growing at 3.5%, 5.2% and 2.6% respectively. Provisions on loans on an average for Indian banks have also been lower at 52.6% in 2008, as against 84.7% in the US and Australia at 87.2%. The CRAR of SCBs improved to 13.2% at end-March 2009 from 13.0% a year ago, thus, remaining significantly above the stipulated minimum of 9.0%. Talking about the outlook on the overall banking system, the report said that it is expected to become a less fashionable and even more heavily regulated industry with greater state involvement, increased investor scrutiny and substantially higher capital levels.

Another reason of insulation of Indian banking can be attributed to the nascent stage of development of the credit derivatives market. The regulatory guidelines on securitisation do not permit immediate profit recognition, perseverance of prudential policies- which prevent institutions from excessive risk taking. The financial markets are becoming extremely volatile and turbulent and a close co-ordination between supervision of banks and their regulation have prevented Indian banking system from the ill effects of the global financial crisis.

ANALYSIS AND INTERPRETATION

Even as several top financial institutions and banks with footprint across several countries have crumbled under the relentless onslaught of a global financial turmoil, Indian banks and institutions have come out relatively unscathed from the recession. Built on strong financial fundamentals, strict vigil on risk appetite and firm monetary guidelines, Indian banks have proved among the most resilient and sound banking institutions in the world. But there has been considerable divergence in the performance of the various banking institutions in the country as also among the public, private and foreign banks operating in India. Going by the performance for the calendar year 2008, Indian public sector banks have not only been able to weather the storm of global recession but have been able to moderate its impact on the Indian economy as well, compared to its peers among the foreign and private banks. Figures put out by the Reserve Bank of India suggests that banking activity in the country continued unabated during the first phase of recession, thanks to the better than expected performance of public sector banks. Contradicting the general trends of the economy, the extension of non-food bank credit has grown faster in calendar year 2008 against the previous year. The same has been the case with regard to the flow of resources to the commercial sector, which includes non-food bank credit, investment on shares/bonds/debentures and commercial paper issued by public/private sector companies. In fact, resource flow from these sources had dipped by over 30 per cent during 2008, while flow from the banking sector had increased by close to 30 per cent.

This was while the assets and liabilities of both foreign and private sector banks dipped during the corresponding period last year the public sector banks seem to have more than made up for the shortfall from foreign and private sector banks and the growth inflow of bank resources to the diverse sectors of the Indian economy has continued unabated. The review of the Monetary Policy by the RBI for the third quarter of 2008-09 said: "There has been a noticeable variation in credit expansion across bank groups. Expansion of credit by public sector banks was much higher this year than in the previous year, while credit expansion by foreign and private sector banks was significantly lower."

Table-2

Annual Variations in Banking Indicators (figures in percentage)

Particulars	2007	2008
Aggregate deposits	25.1	21.2
Bank credit	21.4	24.0
Non-food bank credit	22.0	23.9
Flow to commercial sector	21.7	23.4

Note-Annual variations as on January 4, 2008, and January 2, 2009

Source: The Reserve Bank of India report on the trend and progress of banking in India for 2008-09

Table-3

Growth in deposit & Credit (figures in percentage)

Banks	Deposit		Credit	
	2007	2008	2007	2008
Public sector banks	24.2	24.2	19.8	28.6
Foreign banks	34.1	12.1	30.7	16.9
Private sector banks	26.9	13.4	24.2	11.8

Note: Annual percentage growth as on January 4, 2008 and January 2, 2009

Source: The Reserve Bank of India report on the trend and progress of banking in India for 2008-09

This credit expansion by the banking sector was also reflected in the deep divergence in the pace of growth in deposits among the banks. As per table -3 above, it was only the public sector banks which could maintain the pace of growth in deposit accretion at 24.2 per cent. Deposit accretion in foreign banks fell sharply from 34 to 12 per cent and for private sector banks from 27 to 13 per cent. Backed by the steady pace of growth in deposits, the growth in public sector banks disbursal also grew quite significantly. Meanwhile, there was a deceleration in credit extension by foreign and private sector banks during 2008. As reflected in the above tables, the slowdown in the economy along with the high interest rate regime and risk aversion by banks had led to a deceleration in some credit portfolios. While extension of credit to agriculture, industry and real estate continued to grow during 2008, there was a deceleration of credit to the retail housing sector. Flow of credit to the housing sector fell from Rs 31,780 crore in calendar year 2007 to Rs 21,989 crore in 2008. This was partly due to the slowdown in the Indian economy, the high interest rate regime and growing risk aversion of the banking sector. As the interest rates breached levels of 12 per cent, the potential home loan seekers deferred their investment decisions. Moreover, the real estate market had already peaked and the investors were

waiting for the prices to dip before re-entering the market. For the banking sector it was a case of risk aversion and the prevailing high interest rates which deterred further growth in the home loan portfolio. But successive slash in key interest rates, repeated promptings by the RBI and a corpus of low cost funds prompted some public sector banks to cut interest rates for fresh home loans. Facilitating the extent and reach of public sector bank's credit extension programme was the huge corpus of cheap Current Account/Savings Account (CASA) deposits, which command just nominal rates of interest. While foreign and private sector banks have been stymied by lower accretion and higher interest rates, access to cheap deposits have further fuelled credit delivery by public sector banks. The corpus of cheap funds has also prompted public sector banks to take the lead in disbursement of credit by offering retail loans at attractive rates. State Bank of India has taken the lead by slashing interest rates to eight per cent for certain home loans to rejuvenate the flagging home loan markets and reviving demand in a sluggish economy. Others such as Canara Bank have followed suit, sweetening the home loan portfolio with additional incentives and offers. Led by the public sector banks, the deposit and credit portfolios of the Indian banking industry has continued to grow during the first phase of India's economic slowdown. Now the very same banking institutions have led the way in slashing rates and reviving demand, which in turn could drive the Indian economy away from recessionary spell.

EVIDENCE OF INDIAN BANKS ARE SOUND AND HEALTHY

Indian banks are sound & healthy unlike their counterparts in the West, established by the stress test conducted by a committee on financial sector assessment in view of the ongoing economic crisis. The committee studied data of the end-September'08 period, when the financial crisis shot into the limelight. The gradual process of liberalisation in India has helped Indian banks in being relatively shielded from the global financial turmoil. Their exposure to international assets and their dependence on international liquidity for growth have been limited. Further, Indian banks remain well capitalised due to the nature of their domestic assets, which are mostly represented by straight credit extensions and relatively less complex off-balance-sheet products.

In comparison to global banks, Indian banks are quite strong in asset quality, diversified risk portfolio and low cost deposit base perspective. This is due to their effective management of the business and partly due to the conservative nature of our bankers and the regulators. Indian banks are safe and sound mainly because of our extremely prudent banking regulations and the fact is well documented in the financial results of banks in India in the period following the global financial meltdown.

Profit growth for banks moderated to 20 per cent in the quarter ended September 2009, from 63 per cent growth in the June quarter. Profits were once again aided by 'other income' growth of 41 per cent. The public sector banks (PSBs) are giving a tough competition to their private peers, if the second quarter performance of the banks in the current fiscal is anything to go by. The PSBs have showed an increase of 20.1% and 17.5% in their net profit and total income, respectively, as against 17.9% and 3% recorded by the private banks in the second quarter of the fiscal. A comparison between 25 PSBs and 17 major private banks shows the former clan performed significantly better in terms of profitability during the July-September 2009 compared to the year-ago period.

CONCLUSION

In this era of Global economic slowdown and ongoing recession, Indian banks are considered sound & healthy unlike their counterparts in the West. Even as India Inc, facing the heat of the financial meltdown, has put a virtual halt on recruitment, the recruitment of Officers in Indian Banks during 2008-09 was 40,000. In comparison to global banks, Indian banks are quite strong in asset quality, diversified risk portfolio and low cost deposit base perspective. This is due to their effective management of the business and partly due to the conservative nature of our bankers and the regulators. Indian banks are safe and sound mainly because of our extremely prudent banking regulations and the fact is well documented in the financial results of banks in India in the period following the global financial meltdown.

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EVALUATION OF WORKPLACE HEALTH, SAFETY AND WELFARE PROMOTION: A REVIEW OF NESTLE INDIA LTD.
[A FACTOR ANALYSIS APPROACH]

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ABSTRACT

Working conditions have attracted a great deal of attention of managements of business and other organizations in the recent years. There are two basic reasons for this .Firstly, the growth rate of trade union movement has compelled the managements to provide better working conditions to the employees, Secondly, enlighted managements realise the significance of better working conditions facilities to employees for achieving greater productivity and efficiency in the organization. An employ spends about 8 hours at the place of work during any working day. He must be provided with such types of facilities which will maintain his health and keep him interested in his work. This paper attempts to study the employee health welfare and safety measures provided at Nestle Ltd and their effect on improving the efficiency and productivity.The welfare measures influence the sentiments of workers whereby they feel that their interests are well protected by the management.

KEYWORDS
Health, safety, efficiency, Nestle India Ltd.

INTRODUCTION

EMPLOYEE HEALTH SAFETY AND WELFARE

Health and safety is a general state of physical, mental and emotional well being. The main objectives of industrial health and safety are as following:
Improve productivity and quality of work.
Reduce accidents, injuries, absenteeism and labour turnover.
Protect workers against any health hazard arising out of work conditions.

FOUNDATION OF NESTLE

The founder of Nestlé was Henry Nestle, a pharmacist, who from a modest beginning founded the company in 1866 in Switzerland for manufacturing milk powders for babies. At that time Switzerland faced one of the highest infant mortality rates and the milk formula saved the lives of many infants whose mothers were unable to breast feed successfully. At present Nestlé is the **World's largest food company** with its international headquarters at Vevey, Switzerland and production units as well as offices worldwide in almost every country in the world. Nestlé is often quoted by most as **"Multinational of Multinationals."** Nestlé is now the No. 1 food company. Nestlé operations worldwide are divides into 3 Zones mentioned as following:

Zone EUR : Europe
Zone AOA : Asia, Oceania and Africa
Zone AMS : Americas

India comes under zone AOA with South-Asia-Region (SAR). Nestlé is amongst the most admired companies as per survey of Fortune magazine.

Figure 1.1 Nestle India- The Market Leader

(Source: http://www.nestle.com/Resource.axd?Id=0E487F7F-C57B-4569-AC96-D035B5E5045B)

REVIEW OF LITERATURE

A number of researches have been conducted on Employee Health , Safety And Welfare. Due to shortage of time and resources, a review of all the past researches done could not be mentioned in this research project. So, a snapshot of some of the reviews is being presented. **Danna and Griffin(1999)** concluded that Investing in the health of employees can also bring business benefits such as reduced sickness absence, increased loyalty and better staff retention.,. **Fuller's (1999)** study indicated that managers had little health and safety training which left them with limited understanding of their legal and corporate responsibilities within the area. **Pransky (1999)** concluded that accurate reporting of work-related conditions is necessary to monitor workplace health and safety, Under-reporting of workplace injuries and illnesses is common due to a variety of causes and influences. **Reid(1999)** evaluated that the benefits of an OHS are to maximize health and morale of employees; maximize performance and increase productivity; minimize medico-legal costs; enhance workplace **s**afety; and reduce sickness absenc **Johansson and Partanen(2002)** concluded that workers have organized in trade unions and parties to strengthen their efforts at improving workplace health and safety, job conditions, working hours, wages, job contracts, and social security. **Nicholson(2002)** concluded that despite extensive legislation in the European Union, employees remain exposed to occupational risks and there is still a significant burden of work-related ill-health.

Shaw et.al (2004) concluded that after workplace injuries, supervisors can play an important role in aiding workers, accessing health care services, and providing reasonable accommodation **Hasle and Limborg (2005)** concluded that small enterprises have special problems with the work environment, the risk is higher and the ability to control risk is lower. The scientific literature regarding preventive occupational health and safety activities in small enterprises in order to identify effective preventive approaches **Mishra And Bhagat(2007)** concluded that high rate of labour absenteeism in Indian industries is indicative of the lack of commitment on the part of the workers **McEwen and Ritchie(2008)** indicated that management has responsibility for employee welfare at work and that an appropriate management structure to address safety issues should be accessible

Previous studies on Employee Health, Safety and Welfare focuses on the importance of these welfare activities in an organization. It also focuses on the role on management and supervisor in promoting these activities in the organization. Accurate reporting of work-related conditions is necessary to monitor workplace health and safety. A fresh research is needed to study that what the Indian industries are doing to promote these employee health, safety and welfare activities in their organisation and the employee attitude towards it

METHODOLOGY

This research is descriptive and conclusion oriented. The need of the study has arisen to have more insight vision into the fact how these employee health , safety and welfare programmes are followed in Indian Industries , its benefits and the employee attitude towards it .Earlier researches show that organization following health, safety and welfare programmes leads to minimize employee absenteeism and turnover. It will enable to cover the gap identified from the review of literature. So, a need was felt to undertake a fresh research in this area.

The scope of the study was restricted to Nestle India Ltd. .

Following were the objectives for carrying on the study:

To study about the safety provisions of the factory workers.

To know about the duties performed by safety officers.

To ascertain the satisfaction of employees regarding the various health, safety and welfare facilities provided in Nestle.

To know that how these helped in imoproving the efficiency and productivity.

In this study HR manager, HR executive, Supervisors and officers has helped in getting the questionnaires filled: A sample of minimum respondents was selected from various Departments of Nestle Factory. An effort was made to select respondents evenly. The survey was carried out on 100 respondents**:** For the purpose of research convenient sampling technique was used as employees from different departments were selected according to convenience. In this research the tools of analysis used were percentages. SPSS software was used to conduct Friedman two ways ANOVA, Reliability analysis and Factor Analysis.

Table.a.Demographic Profile Of Respondents

Demographics	No. Of Respondents	Percentage Of Respondents
AGE		
20-25	11	11%
25-30	23	23%
30-35	34	34%
35-40	20	20%
40-45	8	8%
Above45	4	4%
TOTAL	100	100%
GENDER		
Male	95	95%
Female	5	5%
TOTAL	100	100%
DURATION		
1-5 Years	18	18%
5-10 Years	77	77%
10-15 Years	5	5%
TOTAL	100	100%

Table depicted that majority of respondents were from the age group 30-35.Males were the majority of respondents in the study conducted and duration of the employment was 5-10 years.

ANALYSIS AND INTERPRETATION

The common factors which are the platform of the study are enumerated and analysed in the following tables.

STATEMENT1. EMPLOYEE WELFARE ACTIVITIES

Table 1: Employee Welfare Activities

Variable	Mean Rank	Ranks
Medical	2.24	1
Uniforms	3.80	4
Recreation	4.82	6
Laundary	3.12	3
Restrooms	3.10	2
Canteen	3.92	5

1 being most important and 6 being least important

From the table it was observed that Scores are significantly different on The Friedman two way ANOVA test ($p<0.001$). For the various Employee Welfare Activities in Nestle. The first rank being the most important that is Medical Aid Facility and the last rank that is 6, which is Recreation Facilities being the least important ranked employee welfare activity. It can be concluded that the majority of respondents ranked Medical Aid as the most important Employee welfare activity and Recreation Facilities as least important.

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STATEMENT2. BENEFITS OF CONDUCTING EMPLOYEE HEALTH, SAFETY AND WELFARE PROGRAMMES

Table2: Benefits Of Conducting Employee Health, Safety And Welfare Programmes

Benefits Of Conducting Employee Health,Safety And Welfare Programmes	Number Of Respondents	Percentage Of Respondents
Decrease Accident Rates	75	26.13%
Better Work Environment	52	18.12%
Improve Employment Relations	57	19.86%
Improves Quality Of Work	51	17.77%
Reduce Employee Turnover	52	18.12%
TOTAL	287	100%

* The number of respondents was more than sample size because of multiple choice options.

ANALYSIS AND INTERPRETATION

Out of the total data collected about 26% of the respondents felt that decrease in accidents while working was the major benefit of these activities. While 20% of the respondents felt improved employment relations followed by better work environment. Improves quality of work and reduce employee turnover with 18% of respondents in favour. It can be concluded that majority of the respondents felt the reduce accident rates as the major benefit.

STATEMENT3. HYGIENIC CONDITIONS MAINTAINED IN AND AROUND CANTEEN AND WORKPLACE

Table3: Hygienic Conditions Maintained In Canteen And Workplace Areas

Hygienic Conditions Maintained In Canteen And Workplace Areas	Number Of Respondents	Percentage Of Respondents
To the highest	16	16%
Somewhat higher	41	41%
Somewhat low	40	40%
To the lowest	3	3%
TOTAL	100	100%

ANALYSIS AND INTERPRETATION

From the data collected it has been found that 41% of the respondents said that hygienic conditions maintained were somewhat higher, 40% said somewhat low,, 16% said to the highest and rest 3% said to the lowest.

It can be concluded that the majority of the respondents found that the hygienic conditions maintained were somewhat higher.

STATEMENT4. SATISFIED WITH HEALTH AND SAFETY FACILITIES

Table 4: Satisfied With Health And Safety Facilities

Satisfied With Health And Safety Facilities	Number Of Respondents	Percentage Of Respondents
Very Much	81	81%
Somewhat	11	11%
Not at All	8	8%
TOTAL	100	100%

ANALYSIS AND INTERPRETATION

From the data collected it has been found that 81% of the respondents were very much satisfied with health and safety facilities, 11% were somewhat satisfied and remaining 8% were not all satisfied with it.

It can be concluded that the majority of the respondents were very much satisfied with health and safety facilities.

STATEMENT5. SATISFIED WITH WELFARE FACILITIES

Table 5: Satisfied With Welfare Facilities

Satisfied with Welfare Facilities	Number Of Respondents	Percentage Of Respondents
To a Great Extent	79	79%
Somewhat	11	11%
Not At All	10	10%
TOTAL	100	100%

ANALYSIS AND INTERPRETATION

From the data collected it has been found that 79% of the respondents were satisfied with welfare facilities to a great extent, 11% were somewhat satisfied and remaining 10% were not all satisfied with it.

It can be concluded that the majority of the respondents were satisfied to a great extent with regard to welfare facilities.

STATEMENT6. RATERS AGREEMENT
Reliability Statistics

Table 6.1: Cronbach Alpha

Cronbach's Alpha	Number Of Items
.649	9

Table 6.2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.657
Bartlett's Test of Sphericity	**Approx. Chi-Square**	275.904
	Df	36
	Sig.	.000

Table 6.3: Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.824	31.378	31.378
2	1.650	18.337	49.715
3	1.111	12.342	62.058
4	1.016	11.290	73.347
5	.782	8.687	82.035
6	.650	7.223	89.257
7	.553	6.143	95.400
8	.282	3.131	98.531
9	.132	1.469	100.000

Extraction Method: Principal Component Analysis

Table6.4: Rotated Component Matrix

Variables	Component			
	1	2	3	4
Prevention		.681		
Behaviour	.911			
Coaching	.891			
Provisions	.944			
Reporting		.457	.602	
Security			.908	
Programmes				.859
Training				.588
Investigation		.847		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.a Rotation converged in 3 iterations.

Table 6.5: Factor Analysis

Variables	Statements	Factor Loadings
Prevention	Provide technical expertise on accident prevention.	.681
Behaviour	Observe health and safety behavior of employees.	.911
Coaching	Coach employees to be safety conscious	.891
Provisions	Organisation follows Safety provisions and security problems.	.944
Reporting	Develops safety reporting system	.602
Security	Monitor workplace for security problems.	.908
Programmes	Conduct health and safety programmes.	.859
Training	Train managers to recognize and handle difficult employee	.588

Investigation	Offers accident investigation expertise.	.847

Table 6.6: Safety Provisions

Factor Label	Statements	Loadings
	Provisions	.944
	Behaviour	.911
	Coaching	.891

Table 6.7: Accident Prevention

Factor Label	Statements	Loadings
	Investigation	.847
	Prevention	.681

Table 6.8: Safety Reporting

Factor Label	Statements	Loadings
	Security	.908
	Reporting	.602

Table 6.9: Safety Programme

Factor Label	Statements	Loadings
	Programmes	.859
	Training	.588

ANALYSIS AND INTERPRETATION

The factor analytic methodology has been used to analyze the Employee Health, Safety and Welfare in Nestle India Ltd. based on responses received from the 100 employees to the survey questionnaire. The cache of factor analytic methods is quite a rich and rigorous one. The Principal Components Analysis (PCA) has been used to explore and confirm the inter-relatedness between the occurrences of variables pertaining to dividend.

The correlation matrix of the ten variables on Employee Health, Safety and Welfare has been subjected to the PCA. It provided a set of components, which explained variances in descending order of total variance of a set of variables pertaining to a domain of variables under study. Theoretically, it extracted as many components as is the number of variables.

The number of principal components to be retained has been decided based on Kaiser's criterion of Eigen value>1 and Bartlett's test. The Bartlett's test of significance led to acceptance of nine significant principal components. The one variable was eliminated out of ten variables. The PCA with varimax rotation method has been used to maximize the sum of squared loading of each factor extracted in turn. It explained more variance than the loadings obtained from any other method of factoring. The factors loaded by variables having significant loadings of the magnitude of 0.40 and above have been interpreted.

The scales of measurement were tested using Cronbach α reliability test. Cronbach α was 0.649, which is satisfactory level of construct validity. The correlations between the factors were then examined which revealed the existence of correlation between certain factors. This perusal suggested the use of factor analysis to investigate any distinct underlying factors and to reduce the redundancy of certain barriers indicated in the correlation matrices. Principal Component Analysis was chosen as the method of extraction in order to account for maximum variance in the data using minimum number of factors. The default solution (eigen values>1) resulted in extraction of two factors.

The factor 1 variables: Provisions, behaviour and coaching are labeled as **"Safety Provisions"**. Factor 2 was named as **"Accident Prevention"** including: Investigation and prevention. Factor 3 was named as **"Safety Reporting"** including reporting and security. Factor 4 was named as **"Safety Programme"** including Programmes and training.

FINDINGS OF THE STUDY

The findings of the study were as follows:

Majority of the respondents felt that there is proper floor cleaning system in Nestle Co.

Majority of the respondents felt that there is proper ventilation in different production areas.

Majority of the respondents were Very much satisfied with the drinking water facilities in Nestlé.

Majority of the respondents consider Hygienic conditions in latrines and urinals above average in Nestlé.

Majority of the respondents agreed with the arrangement of proper fencing of Machinery

Majority of the respondents agreed that defective parts of machines were always replaced.

Majority of respondents ranked Medical Aid as the most important Employee welfare activity and Recreation Facilities as least important.

The major benefit that the respondents felt of employing these programmes was the reduce accident rates.

The majority of the respondents found washing facilities of the company fair.

Majority of the respondents were very much satisfied with the sitting arrangements.

Majority of the respondents agreed that first aid box was mostly available.

Majority of the respondents found that the hygienic conditions maintained were somewhat higher.

It was found that respondents were very much satisfied with health and safety facilities.

Majority of the respondents were satisfied to a great extent with Welfare Facilities.

Majority of the respondents agreed that the company follows safety provisions and security problems and majority disagreed that the company train managers to recognize and handle difficult employee situation. With the help of factor analysis correlation was found between certain factors.

CONCLUSION

In this chapter we will discuss about the conclusions which are drawn from the findings which we have discussed earlier in the data analysis.

An employee spends about 8 hours at the place of work during any working day. He must be provided with such types of facilities which will maintain his health and keep him interested in his work. It is the responsibility of every management to ensure workers' safety while they are at work. Safety measures not only result in reduced industrial accidents but also raise industrial efficiency. Therefore, employers should lay emphasis on safety measures in their plants. Accident prevention is the main objective of any safety programme. Accidents in industry cause damage to property and life. In Nestlé India Limited there is a separate "Safety Department" having four members. Besides it Nestle also provides various welfare facilities like Canteen, Lockers & Rest rooms, Medical Aid etc.

Previous studies on Employee Health, Safety and Welfare focuses on the importance of these welfare activities in an organization. It also focuses on the role on management and supervisor in promoting these activities in the organization. Accurate reporting of work-related conditions is necessary to monitor workplace health and safety. A fresh research is needed to study that what the Indian industries are doing to promote these employee health, safety and welfare activities in their organization and the employee attitude towards it.

It can be concluded that there is proper floor cleaning system in Nestle Co. There is proper ventilation in different production areas. Majority of the respondents were Very much satisfied with the drinking water facilities in Nestlé. They consider Hygienic conditions in latrines and urinals above average in Nestlé. They agreed with the arrangement of proper fencing of Machinery and that defective parts of machines were always replaced. Majority of respondents ranked Medical Aid as the most important Employee welfare activity and Recreation Facilities as least important. The major benefit that the respondents felt of employing these programmes was the reduce accident rates. Majority of the respondents found washing facilities of the company fair. They were very much satisfied with the sitting arrangements. They agreed that first aid box was mostly available. It found that the hygienic conditions maintained were somewhat higher. It was found that respondents were very much satisfied with health and safety facilities. They were satisfied to a great extent with Welfare Facilities. They agreed that the company follows safety provisions and security problems and majority disagreed that the company train managers to recognize and handle difficult employee situation.

RECOMMENDATIONS

As we did our research on knowing the Employee Health, Safety and Welfare in Nestle India Ltd. according to prescribed length and limitation, but we had received better view from the employees in this regard and also we got some suggestions from the various employees which may be contradict to each other because each person has its own perception about everything. A few suggestions received from employees are like below:

1. Regular cleaning should be done in training department
2. Temperature should be maintained at such level so that the body can tolerate it.
3. Mosquito killing spray should be used in drainage area
4. Sewerage storage area should be covered separately.
5. Grassy lawn should be properly maintained.
6. There should be some medical facilities available for night shift, and two employees from each department should be well-trained for providing first aid.

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AN OVERVIEW AND IMPLICATIONS OF BASEL I AND BASEL II

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ABSTRACT

This paper presents an analytical review of the capital adequacy regime and the present state of capital of risk –weighted assets ratio (CRAR) of banking sector in India. In current regime of Basel I, Indian banking system is performing reasonably well, with an average CRAR of about 12 per cent, which is higher than internationally accepted level of 8 per cent as well as India's own minimum regulatory requirement of 9 per cent. In this paper focus is given on one particular prudential regulation, i.e. capital adequacy requirement in the banking sector in India. Capital adequacy is an indicator of the financial health of the banking system. It is measured by the capital to Risk – weighted Assets Ratio(CRAR), defined as the ratio of bank's capital to its total risk weighted assets. As the revised capital adequacy norms, Basel II, are being implemented from March 2008, several issues emerge. It examines these issues from the Indian perspectives. This paper presents an analytical review of the current capital adequacy norms in India's system vis-à-vis the Basel framework. This paper also attempts to examine issue and challenges with regard to implementation of CRAR norms under Basel II regime in India. The paper tries to identify limitations, gaps and inadequacies in the Indian banking system which may hamper the realization of the potential benefits of the new regime will be adequately compensated by an improvement in the system.

KEY WORDS

Capital Adequacy Ratio, Basel I, Basel II, Reserve Bank of India, SMEs lending

INTRODUCTION

In its report submitted to Government of India in December 1991, the Narasimhan Committee on Financial System suggested several reforms measures of India's financial system. The Committee recommended gradual liberalization of the banking sector by adopting measures such as reduction of statutory preemptions, deregulation of interest rates and allowing foreign and domestic private banks to enter the system. Along with these, the Committee also recommended adoption of prudential regulation relating to capital adequacy, income recognition, assets classification and provisioning standards. While the liberalization was aimed at bringing about competition and efficiency into India's banking system, the prudential regulation was aimed at strengthening the supervisory system, which is important in the process of liberalization.

Financial regulators generally impose a capital adequacy norm on their banking and financial system in order provide for a buffer to absorb unforeseen losses due to risky investments. A well adhered to capital adequacy regime does play an important role in minimizing the cascading effects of banking and financial sector crises. The Narasimhan Committee endorsed the internationally accepted norms for capital adequacy standards, developed by the Basel Committee on the Banking Supervision (BCBS). BCBS initiated Basel I norms in 1988, considered to be the first move towards risk weighted capital adequacy norms. In 1996 BCBS amended the Basel I norms and in 1999 it initiated a completed revision of the Basel I framework, to be known as Basel II. In pursuance of the Narasimhan Committee recommendations, India adopted Basel I norms for commercial banks in 1992, the market risk amendment of Basel I in 1996 and has committed to implement the revised norms, the Basel II, from March 2008.

PROGRESS OF INTERNATIONAL CAPITAL ADEQUACY NORMS

The international financial community has witnessed several significant developments in the area of risk management and banking supervision over the last two decades. In 1988, BCBS introduced risk - based capital adequacy norms through Basel I accord (BCBS1988). Basel I mainly incorporated credit risk in calculating the capital adequacy norms of banks. It recommended a bank's regulatory capital at 8 percent of its risk – weighted assets, where assets were risk – weighted according to their credit risk. In 1996, an amendment was made to Basel I to incorporate

market risk in addition to credit in the weighing scheme (BCBS 1996). In July 1999, BCBS initiated the process of replacing the current framework with a revised version, the Basel II. After several rounds of discussions, consultations and deliberations within the global financial and banking institutions, Basel II has evolved as revised and comprehensive framework for prudential regulations to replace the current Basel I framework. In 2007, more than 100 countries are following Basel I norms. As far as Basel II is concerned, a survey by Financial Stability Institute (FSI) of the Bank for International Settlement in 2006 revealed that 95 countries intended to adopt Basel II, in some form or the other, by 2015. Out of these countries, the 13 BCBS member countries have initiated Basel II implementation process in 2007.

AN OVERVIEW OF BASEL I, MARKET RISK AMENDMENT OF BASEL I AND BASEL II

Basel I

Basel I is a framework for calculating 'Capital to Risk-weighted Assets Ratio' (CRAR). It defines a bank's capital as two types: core(or tier I) capital comprising equity capital and disclose reserves; and supplementary (or tier II) capital comprising items such as undisclosed reserves, revaluation reserves, general provisions/general loan-loss reserves, hybrid debt capital instruments and subordinated term debt. Under Basel I, at least 50 per cent of a bank's capital base should consist of core capital. In order to calculate CRAR, the bank's assets should be weighted by five categories of credit risk – 0, 10, 20, 50 and 100 percent. For example, if it an asset is in the form of cash or claim on central governments, it will get a risk weight of zero, if it is in the form of a claim on domestic public sector entities, then it will get a risk weight of 10, 20 or 50 per cent at the discretion of the national supervisory authority. Claims on private sector will get a risk weight of 100 percent. Table A1 in the Appendix provides the risk weights for different asset classes under Basel I.

Market Risk Amendment

In 1996, an amendment was made to Basel I to incorporate market risk, in addition to credit risk, in the calculation of CRAR. To measure market risk, banks were given the choice of two options:

A standardized approach using a building block methodology

An 'in-house' approach allowing banks to develop their own proprietary models to calculate capital charge for market risk by using the notion of Value-at-Risk (RaV)

These approaches, however, calculated the capital charges for market risk and not the risk-weighted asset. Therefore, this measure of capital charges would have to be multiplied by a factor 12.5 (reciprocal of 8 per cent, the minimum regulatory capital adequacy ratio) and then added to the risk-weighted assets computed for credit risk. In the calculation of CRAR, the numerator will be the sum of the bank's tier I and tier II capital (tier II capital should be limited to a maximum of 100 per cent of tier I capital), plus a tier III capital introduced in the 1996 amendment to support market risk.

Basel II

Basel II is a much more comprehensive framework of banking supervision. It not only deals with CRAR, calculation, but has also got provisions for supervisory review a market discipline. Thus, Basel II stands on three pillars:

Minimum regulatory capital (Pillar 1): This is a revised and extensive framework for capital adequacy standards, where CRAR is calculated by incorporation credit, market and operational risk.

Supervisory review (Pillar 2): This provides key principle for supervisory revise, risk management guidance and supervisory transparency and accountability.

Market discipline (Pillar 3): This pillar encourages market disciple by developing a set of disclosure requirements that will allow market participants to asses key piece of information on risk exposure, risk assessment process and capital adequacy of a bank.

Minimum Regulatory Capital under Basel II

Under Basel II, CRAR is calculated by taking into account three types of risks: credit risk, market risk and operational risk. The approaches for each one of these risks is described below.

Credit risk

There are two approaches for credit risk. Viz., the Standardized Approach (SA) and the Internal Ratings Based (IRB) approach. In SA, credit risk is measured in the same manner as in Basel I, but in a more risk sensitive manner, i.e. by linking credit ratings of credit rating agencies to risk of the assets of the bank. This, according to BCBS I an improvement over Basel I, where categorization of the assets into five risk-weight categories was an ad hoc categorization. BCBS has provided an example of how risk weights can be linked with the credit ratings. The responsibility of providing the risk-weights corresponding to various assets. Under SA. Lies with the supervisory authority of a country. As far as the IRB approach is concerned, banks will be allowed to use their internal estimates of credit risk, subject to supervisory approval, to determine the capital charge for a given exposure. This would involve estimation of several parameters such as the probability of default (PD), loss given default (LGD), exposure at default (EAD) and effective maturity (M) corresponding to a particular debt portfolio.

Market risk

As far as market risk is concerned, Basel II retains the recommendations risk in calculating CRAR. It is defined as "*the risk of direct or indirect loss resulting from inadequate or failed internal processed, people and systems or from external events*." In order to calculate the capital charges for operational risk, three approached – Basic Indicator Approach (BIA), standardized Approach (SA) and Advanced Measurement Approached (AMA) – have been suggested. In the BIA, an estimate of the capital charge for operational risk is provided by averaging over a fixed percentage of positive annual gross income of the bank over the previous three years. In this estimate, negative incomes are excluded. Under SA, at first the bank's business activities are divided into eight business lines. For each business line, a capital charge is calculated by multiplying the gross income of the business line by a factor. A capital charge is calculated as the three-year. Under AMA, a bank can, subject to supervisory approval, use its own mechanism for determining capital requirement for operational risk.

Capital adequacy standard in India

In India, at present, there is a 'three track' approach for Basel compliance - the commercial banks are Basel I compliant with respect to credit and market risk: the urban cooperative banks maintain for credit risk as per Basel I and market risk through surrogate charges; and the rural banks have capital adequacy norms that are not on par with the Basel norms (Leeladhar 2006). The three track approach is justified by the necessity to maintain varying degree of stringency across different types of banks in India reflecting different levels of operational complexity and risk appetite. The three track approach is also justified in order to ensure greater financial inclusion and for an efficient credit delivery mechanism (Reddy 2006).India adopted Basel I norms for scheduled commercial banks in April 1992, and its implement was spread over the next three years. It was stipulated that foreign banks operating in India should achieve a CRAR of 8 per cent by March 2006 while Indian banks with branches abroad should achieve the 8 percent by March 2008. All other banks were to achieve a capital adequacy norm of 4 percent by March 1993 and 8 per cent norm by March 1996.In its mid – term review of Monetary and Credit Policy in October 1998, the Reserve bank of India (RBI) raised the minimum regulatory CRAR requirement to 9 percent, and banks were advised to achieve this 9 per cent CRAR level by March 31, 2009. Thus, the capital adequacy norm for India's commercial banks is higher than the internationally accepted level of 8 per cent. The RBI has announced the implementation of Basel II norms in India for internationally active banks from March 2008 and for the domestic commercial banks from March 2009. Before we go into details of several issues facing the banking industry in India in the wake of Basel II, we briefly describe the current the current state of affairs with respect to capital adequacy of India's b banking industry.

The present state of capital standards for commercial banks in India

The scheduled commercial banks in India are categorized into the following groups: nationalized banks, other public sector banks, State Bank of India (SBI) group, Indian private banks (further categorized as old private banks and new private banks) and foreign banks. Sometimes the first two categories are clubbed together as there is only one bank in the category 'other public sector bank' the Industrial Development Bank of India (IDBI) bank. The first three were altogether 84 banks operating in India, consisting of 20 nationalized banks (including IDBI bank), 8 banks in SBI group, 19 old private banks, 8new private bank and 29 foreign banks. The ratio of total assets of the commercial banks to the GDP of India stood at 86.9 per cent at end-March 2009. At the end of March 2009, the share of public sector banks in the total banking assets of the country stood at 72.3 per cent. Old and new private banks together constituted about 20 per cent, while foreign banks accounted for 7.2 per cent of the total banking assets of India in March 2009. Table I provides yearly frequency distribution of different bank groups by their CRAR levels for the period 2000-2009. As shown in the table, by the end of March 1997, all but 2 nationalized banks and 4 private banks were short of meeting the capital adequacy norm. The SBI group and the foreign banks had achieved the minimum regulatory norm by March 1997. Although a few banks were having negative CRAR during 2000-02, all banks achieved the minimum regulatory level by 2009. As shown in Table I, majority of the banks in all bank categories have achieved a CRAR level of more than 10 per cent by March 2009, indicating good financial health of the banking industry, in terms of capital adequacy norm, over the recent years. The average level of CRAR for the Indian banking groups for the period 2000-2009 is presented in Table 2. As shown by this table, the average CRAR level for the banking industry has stood consistently between 11 and 12 per cent during 2000-2009, which is much higher than the current minimum regulatory requirement of 9 per cent and the international minimum requirement of 8 per cent. As seen from Table 2, overall CRAR for the banking system has marginally declined since 2005. Between 2004 and 2005, the overall CRAR declined by 0.1 percentage points and between 2005 and 2006, this decline was by 0.5 percentage points. Bank group wise, between 2004 and 2005, 'old private banks' recorded the highest decline of 1.2 percentage points in CRAR followed by a 1 percentage point fall for SBI group and the foreign bank group each. The 'new Private Banks' recorded a rise of 1.9 percentage points in CRAR and the nationalized banks recorded a rise of 0.1 percentage points. The net result was a marginal decline in CRAR for the banking system as a whole. RBI attributed this decline to the increase in total risk-weighted assets relative to the capital, for the first time since March 2000 (RBI 2005b). The increase in risk-weighted assets was due to a higher growth in the loan portfolio of banks and higher risk weights made applicable for housing loans, the most rapidly increasing component of retail loans for banks. Following a similar pattern, CRAR levels for all but one banking group recorded a decline between 2005 and 2006. The highest decline of 1 percentage point was observed for 'foreign banks', followed by a decline by 0.8 percentage point for 'nationalized' and 'old private banks', 0.7 percentage points for 'other public sector bank' (IDBI being the sole member of this group)and a decline by 0.5 percentage points for the SBI group. During this period 'new private banks' showed a rise of 0.5 percentage point in CRAR. The resultant change in CRAR for the banking system as a whole was a decline of 0.5 percentage points. This overall decline in CRAR could be attributed to three factors – (i) higher growth in loan portfolio of banks as compared to investment in government securities, (ii) increase in risk weights for personal loans, real estate and capital market exposure, and (iii) application of VaR-based capital charge for market risk for investment held under 'held for trade' and 'available for sale' portfolios (RBI 2006).

International comparison

Table 3 provides a comparative picture of the capital adequacy ratios of different countries vis-à-vis India's. As shown by this table, CRAR of India banking system compares well with many emerging countries such as Korea, Malaysia and South Africa. Countries such as Brazil, Indonesia, Hong Kong, Singapore and Thailand have higher CRAR level than India in 2005 while Japan, Taiwan, the United States and the neighbouring countries of Bangladesh and Sri Lanka have lower CRAR levels than India. In 2005, China's banking system had a CRAR level of less than 8 per cent. According to the official website of the Chinese Government, 74 per cent of China's total banking assets could meet the 8 per cent level in 2009, compared with 0.56 per cent in 2003 when only eight banks complies. Thus, when compared with China, India is at a much better position with respect to capital adequacy.

Table 1: Distribution of Indian banks by CRAR (2000-2009)

(Unit: Nos.)

Level	**<4%**	**4% -MRR**	**MRR – 10%**	**>10%**	**<4%**	**4% - MRR**	**MRR – 10%**	**> 10%**
Year	***Nationalized banks***				***SBI group***			
1999-00	2	-	6	11	-	-	3	5
2000-01	1	-	6	12	-	-	1	7

2001-02	1	-	4	14	-	-	-	8
2002-03	1	-	4	14	-	-	-	8
2003-04	1*	1	2	15	-	-	-	8
2004-05	1	1	2	15	-	-	-	8
2005-06	-	-	1	18	-	-	-	8
2006-07	-	-	1	18	-	-	-	8
2007-08	-	-	2	18	-	-	-	8
2008-09	-	-	-	20	-	-	-	8

Year ***Indian private banks (old and new)*** ***Foreign banks***

1999-00	3	1	8	22	-	-	14	24
2000-01	2	2	8	22	-	-	12	30
2001-02	2	2	5	25	1	-	14	29
2002-03	2	2	3	25	-	-	5	37
2003-04	2*	1	5	23	-	-	4	38
2004-05	1*	1	3	25	1*	-	2	37
2005-06	2	-	3	25	-	-	-	36
2006-07	1	1	-	28	-	-	-	33
2007-08	1	1	5	22	-	-	1	30
2008-09	2	-	2	23	-	-	2	27

Note: *1) MRR is Minimum Regulatory Requirement (9% from 1999-00)*
*2) -indicates nil, * indicates negative*

Source: *RBI, Reports on Trend and Progress of Banking in India, various issues*

Table 2: Average CRAR level of Indian banking groups

(Unit: Nos.)

Year (end March)	Nationalized banks	SBI group	Other public sector bank	Old Pvt. banks	New Pvt. banks	Foreign banks	All banks
1999	10.6	12.3	N.A.	12.1	11.8	10.8	11.3
2000	10.1	11.6	N.A.	12.4	13.4	11.9	11.1
2001	10.2	12.7	N.A.	11.9	11.5	12.6	11.4
2002	10.9	13.3	N.A.	12.5	12.3	12.9	12
2003	12.2	13.4	N.A.	12.8	11.3	15.2	12.7
2004	13.1	13.4	N.A.	13.7	10.2	15	12.9
2005	13.2	12.4	15.51	12.5	12.1	14	12.8
2006	12.4	11.9	14.8	11.7	12.6	13	12.3

Note: n.a. implies not available
Source: RBI, Report on Trend and Progress of Banking in India, 2010

Table 3: CRAR level in select countries

Country	2005	2006
Bangladesh	7.3	
Brazil	18.1	
China	8.5	
Hong Kong	14.9	15.2
India	12.8	12.3
Indonesia	19.5	
Japan	8.9	
Korea	13	13.1
Malaysia	13.6	12.8
Singapore	15.8	15.4
South Africa	13.3	
Sri Lanka	10.8	11.5
Taiwan	10.3	10.3

Thailand	14.2	14.7
US	10.3	

Source: Central Bank websites

Implementation of Basel II: the Indian status

The RBI announced in May 2004 that banks in India should examine the options available under Basel II for revised capital adequacy framework. In February 2005, RBI issues the first draft guidelines on Basel II implementations in which an initial target date for Basel II compliance was set for March 2007 for all commercial banks, excluding Local Area Banks (LABs) and Regional Rural Banks (RRBs). This deadline was, however, postponed to March 2008 for internationally active banks and March 2009 for cosmetic commercial banks in RBI's mid-year policy announcement of October 30, 2006. Although RBI and the commercial banks have been preparing for the revised capital adequacy framework since RBI's first intimidation on Basel II compliance, the complexity and intense data requirement of Basel II have brought about several challenges in its implementation. Given the limited preparation of the banking system for Basel II implementation, this postponement is not surprising. The final RBI guidelines on Basel II implementation were released on April 27, 2007. According to these guidelines, banks in India will initially adopt SA for credit risk and BIA for operational risk. RBI has provided the specifics of these approaches in its guidelines. After adequate skills are developed, both by banks and RBI. Under the revised regime of Basel II, Indian banks will be required to maintain a minimum CRAR.

Basel II: Some issues, some challenges

Scholars have drawn attention to certain shortcomings of the original Basel II guidelines, on the basis of which individual countries are expected to build their regulatory guidelines. In particular, many scholars have pointed out that linking credit rating to regulatory capital standards may have severed macro-economic implications. As the sovereign ratings of developing and emerging countries are not as high as the industrialized and the high income countries, this will have an unfavourable effect on the credit flows to developing and emerging economies. Empirical studies have pointed out that Basel II may significantly overestimate the risk of international lending to developing economies. Further, credit ratings are found to be pro-cyclical (Ferri et al. 1999, Monfort and Mulder 2000). Credit rating agencies upgrade sovereigns in times of sound market conditions and downgrade in turbulent times. This can potentially add to the dynamics of emerging market crisis. Bank and corporate ratings in emerging countries are linked to their sovereign rating. In times of crisis, when the need for credit may be imperative, credit flow may diminish due to downgrading of the sovereign (and therefore the bank and corporate) ratings by external rating agencies, leading to banking crisis, in addition to the currency/balance of payments crisis, what Kandinsky and Reinhart (1999) call 'twin crises'. This may have severe impact on the macro-economic stability. For example, Ferri et al. (2000) show that during the East Asian currency crisis of 1997-98, following Moody's down gradation of sovereign ratings for Indonesia, Korea and Thailand, the corporate ratings were also down gradation sharply in these countries, leading to a sharp fall in the international capital flows in the region. Interestingly, even when the sovereign ratings of Korea and Thailand were upgraded in 1999 following the macro-economic recovery, corporate rating continued to remain 'speculative grade'. Further, the study also found that in the short term, the rating of non- high income countries' banks are3 more sensitive to change in their sovereign rating in a noticeably asymmetric manner, i.e. it is more sensitive for o sovereign downgrading than sovereign upgrading. Thus, incorporation of external credit rating into regulatory capital requirement may lead to serious macro – economic instability. While these concerns remain for the Indian economy in general, several issues specific to India's banking system also arise in the wake of new regime. In this section, we discuss the issue specific to banking system of India.

RBI Risk – Weighting Scheme

A look at the RBI's scheme of risk – weighting reveals certain shortcomings. First, RBI's scheme provides much less risk weights to exposures to scheduled commercial banks than exposures to other banks/financial institutions. To be more precise, exposure to scheduled commercial banks with current regulatory level of CRAR will attract a risk- weight of 20 per cent while exposure to non –scheduled banks/financial institutions with same level of CRAR will attract 100 per cent risk – weight. This is discriminatory not only against non – scheduled banks of sound financial health, but also against cooperative banks and micro finance institution that cater to large number of urban and rural poor in India. Second, RBI's scheme encourages borrowers to remain unrated rather than rated below a certain level. A rating of B- and below will have higher risk – weight of 150 percent, while an unrated entity will have a risk – weight of 100 per cent. If borrowers consequently choose to remain unrated, then they would receive a risk – weight of 100 per cent under Basel II which is same as under Basel I, thus leading to no significant improvement in the risk – weighted asset calculation.

Issue on credit rating industry

As the SA approach of credit risk is dependent on linking risk weights to credit rating of an external rating agency, credit rating are being institutionalized into the regulatory framework of banking supervision. This raises four important issues that need to be looked into. These are – the quality of credit rating in India, the level of penetration of credit rating, lack of issuer rating in India and last but not the least, the effect of the credit rating scheme on small and Medium Enterprises (SMEs) and Small Scale Industry (SSI) lending. In this section we elaborate each of them. The credit rating industry in India presently consists of four agencies: Credit Rating Information Services of India Limited (CRISIL), Investment Information and Credit Rating Agency of India (ICRA), Credit Analysis & Research Limited (CARE) and Fitch India. These agencies provide credit rating for different types of debt instrument of short and long terms of various corporations. Very recently, they have also commenced credit rating for SMEs. Apart from that ICRA and CARE also provide credit rating for issuers of debt instrument, including private companies, municipal bodies and State governments. Basel guidelines entrust the national banking supervisors with the responsibility to identify credit rating agencies as for assessing borrowers. RBI has recognized all four credit rating agencies as eligible for purpose of risk – weighting bank's claims for capital adequacy. Further, the following international rating agencies are recognized for risk – weighing claims on foreign entities: Fitch, moody's and Standard & Poor's (RBI 2007b). Further, RBI has recommended the use of only 'solicited' rating.

Credit rating quality

In previous studies, Raghunathan and Varma (1992; 1993) evaluated the rating published by CRISIL in India and found that CRISIL ratings not only do not adequately reflect the financial ratios of rated entity, but also are internally inconsistent. In these studies, CRISIL ratings were found to be liberal by international standards. For example, what CRISIL rated as AAA would usually receives a rating of BBB or lower by international

standards. Further, companies rated in same category by CRISIL reflected a wide variety of credit- worthless, implying the lack of discriminatory power of other rating vis- a-vis the credit- worthless of entities in the same rating category. The literature on credit rating identifies lack of 'unsolicited' rating as an important factor leading to poor quality of credit rating. In India all ratings are 'solicited', i.e. all ratings are paid for by the entity. This creates a conflict of interest on part of the rating agency since it is dependent on the fees of the rated entity for its business. Thus, credit rating industry in India is driven mostly by the rated entities. Under the present system, issuers of bond/debt instruments may go to any number of agencies for a rating of their bonds/debt instruments and have the right to accept or reject the rating. Further, the rating cannot be published unless accepted by issuer.

Thus, while RBI has recognized all four credit rating agencies as eligible for the purpose of capital adequacy norm, one is faced with lack of objective assessment of the quality of these agencies. The few available studies indicate poor track record of the credit rating quality in India. In addition to this, RBI's recommendation for use of only solicited rating causes some concern, owing to problem of moral hazard.

Low penetration of credit rating

The second important issue in India's credit rating industry is low penetration of credit rating in India. A study in 1999 revealed that out of 9,640 borrowers enjoying fund – based working capital facilities from banks, only 300 were rated by major agencies. As far individual investors are concerned, the level of confidence on credit rating in India is very low. In an all- India survey of investors preference in 1997, it was found that about 41.29 per cent of respondents (out of a total number of 2,189 respondents) of all income classes were not aware of any credit rating agency in India; and of those who were aware, about 66 percent had no or low confidence in the rating given by credit rating agencies (Gupta et al. 2001). The legitimacy brought about by Basel II for credit rating of borrowers will definitely increase the penetration of the industry. However, until such time, most loans will be given 100 percent risk weightage (since an unrated claim gets 100 percent weightage); thus leading to no significance improvement of Basel II over Basel I

Issuer rating

Presently credit rating in India is restricted to 'issues' (instruments) rather than to 'issuers'. Ratings to issuers become important as the loans by corporate bodies and SEEs are to be weighted as per their ratings. Of late agencies like ICRA and CARE have launched issuer rating for corporations, municipal bodies and the state government bodies. Further, all agencies, with direct support from the Government of India, have launched SMEs rating. Until such efforts pick up rapidly, issuers will be assigned 100 per cent weightage, leading to no improvement in the risk – sensitive calculation of the loans. Thus, in this account too, the implementation of Basel II would not lead to significant improvement over Basel II.

Effects on SMEs and SSI lending

Besides agriculture and other social sectors, Small Scale is treated as priority lending sector by RBI. SSI accounts for nearly 95 per cent of the total export and 7 percent of GDP of India, 40 percent of the total industrial production, 35 percent of total export and 7 per cent of GDP of India. In spite of its importance on Indian economy, SSI receives only about 10 percent of bank credit (Table A4 in Appendix). As banking reforms have progressed, credit to SSI has fallen. The SSI sector in India is so far out of reach the credit rating industry. Under the proposed Basel II norms, banks will be discouraged to lend to SSI that is not rated because a loan to unrated entity will attract 100 per cent risk – weight. Thus, bank lending to this sector may further go down. In a recent initiative to promote credit rating of SEMs including sector SSI, the Government of India had launched SEMs Rating agency (SMERA) in September 2005. It is a joint initiative of Small industries Development Bank of India (SIDBI), Dun and Bradstreet Information Services India (D & B), Credit Information Bureau India Limited (CIBIL) and 16 major banks in India. Apart from SMERA, other rating agencies have launched SEMs rating. As an incentive to get credit rating, Government of India currently provides a subsidy of 75 per cent of the rating fees to SMEs who get a rating. Net of this subsidy, the rating fees for SMEs with annual turnover of less than Rs. 50 lack are as follows: Rs. 19,896 for a rating by CRISIL, Rs. 19,986 for a rating by ICRA, Rs. 7,400 for a rating by CARE and Rs. 22,141 for a rating by Fitch India. Without the subsidy, the fees are: Rs. 40,000 for CRISIL, Rs. 40,000 for ICRA Rs. 29,600 for CARE.

According to the Third all India Census of SSI conducted during 2001-02 by the Ministry of Micro, Small and Medium Enterprises, average output per unit of SSI in India in 2001-02 was about Rs. 4 lakh. Thus, with the subsidy, SSI units will have to spend 2-5 percent of their output as fees for credit rating. Without the subsidy, the percentage offers to output is in the range of 7-11 per cent. This additional cost of credit rating is bound to affect the economic viability of a large number of SSI units. While introduction of credit rating for the SMEs (including SSIs) may, in the long run, improve the accounting practices of the SSI, there is also a possibility that SMEs will continue to rely on the existing system of informal credit as formal credit is likely to become more expensive due to the credit rating requirement of Basel II.

OBSERVATION AND CONCLUDING REMARKS

In this article, attempt has been made to review the capital adequacy regime in India. In particular our focus is on the present state of capital to risk-weighted asset ratios of the banking sector. It was observed that with respect to the current regime of capital standards, the Basel I, India's banking industry is performing reasonably well, with an average CRAR of about 12 percent, which is not only higher the internationally acceptable level of 8 percent, but also higher than India's own regulatory requirement of 9 percent. The RBI has announced that the Indian banking sector should implement the revised capital adequacy norms, Basel II, by March 2008. Under the Basel II guidelines, the credit rating agencies will play a prominent role in determining regulatory risk capital. The main concerns are the unsatisfactory performance of the credit rating industry in India, the low credit rating penetration and the high costs of credit rating especially for SMEs. Further, the increased requirement of tier I capital, the high cost of implementation and requirement of extensive data and software for implementation of Basel II will, in our view, pose a major challenge in India's migration towards Basel II regime. It is argued that if these issues are not tackled up front, then the end result would be no different from the current Basel I norms, albeit at higher cost.

Despite these challenges, in a globalizing financial system, India will not be able to do away with recent international developments such as Basel II. In the long run, adherence to Basel II by Indian banks will result in improved accounting, risk management and supervisory principles that are internationally accepted best practices. While the Basel II regime provides the credit rating industry with an opportunity in terms of business expansion, it needs to be seen if the industry is able to perform in term of the key principles of objectivity, independence, transparency, disclosure, resources and credibility. We argue that solicited rating scheme is an implement towards this goal. Since development

of IT infrastructure is very crucial to Basel II implementation, India's growing IT industry is likely to benefit from the increased business opportunities in the long run. Processes such as data analysis, model building and model validation are likely to be outsourced to the BPO (Business Process Outsourcing) sector, increasing the role of by now mature BPO industry in India. Thus, in long run, adherence to Basel II regime is expected to benefit not only the banking industry, but also several other sectors of Indian economy, such as the credit rating industry, the IT industry and the BPO industry.

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CORPORATE DISCLOSURE PRACTICES V/S INVESTOR'S REQUIREMENTS-A STUDY

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ABSTRACT

Corporate Disclosure is a process through which a business enterprise communicates with the external parties. Several new developments are taking place in the contexts and extent of information disclosed in corporate reports. To survive in this global village, it is imperative that companies strengthen the vital pillar of the edifice- Annual Corporate Reporting. Generally, three concepts have been proposed for disclosure and they are adequacy, fairness and full disclosure. There has always been a difference of opinion between company management and the users of financial statements over relevance of adequacy or otherwise of financial disclosure in the company reports. This study aims at finding out the views and requirements of the investor's v/s information disclosed by companies in their annual reports. Further, it intends to find out the adequacy or otherwise of the present reporting practices. For studying investor's viewpoint regarding disclosure practices, a survey of 200 investors from various parts of the country has been conducted including 80 investors who do not read corporate reports. Investors have been selected by using judgment as well as convenience sampling methods. Information disclosed by investors through responses in questionnaires has been analyzed by using suitable statistical techniques. The study of analysis of investors reveal that there exists some 'information gap' between the data that companies release externally, and what the investors wants and needs to know. To bridge this gap, we propose a forward-looking corporate reporting approach that focuses on open communication with shareholders and stakeholders, thus broadening the scope of corporate reports. For these forward-looking companies that will implement this measure to close the information gap, the key benefits will be- better management credibility, and the increased ability to secure long term investors rather than speculators.

KEY WORDS

Corporate Disclosure, information gap, forward looking approach, credibility.

INTRODUCTION

Accounting has evolved and emerged, as have medicine, law, and most other fields of human activity, in response to the social and economic needs of society. The new developments are taking place in the contexts and extent of information disclosed in corporate reports. The fundamental objective of the information system is to communicate the information regarding the position and performance of an entity to the readers. Sharing in-depth information about the company helps it to build a strong structure, allowing for a more customer and investor-friendly image. Further, the advent of globalization and liberalization is likely to influence the corporate disclosure levels of the Indian Companies. As India too treads the path of globalization, perceptible changes are underway in the Indian Corporate houses as also the world over in the realm of contemporary corporate reporting, adding new vistas and dimensions to the disclosure and reporting practices. With a borderless world, global competitiveness has come to stay. To survive in this global village, it is imperative that companies strengthen the vital pillar of the edifice- Annual Corporate Reporting. Adoption of candid disclosure practices by companies in India is expected to give them the much needed strength. Obviously, global business calls for the adoption of global reporting practices. These days there has been much emphasis on global accounting standards. Corporate Disclosure is a process of reporting of accounting information of an entity to a user or a group of users. It signifies a total communication system between the corporation and its interested constituents. So, corporate reporting is nothing but the communication of financial information of the activities of the undertaking to the interested parties for facilitating their economic decisions. Generally, three concepts have been proposed for disclosure and they are adequacy, fairness and full disclosure. The most commonly used concept is adequacy; and it implies that all material information needed by the users of the financial statements and reports should be included in such financial statements and reports i.e. it should be adequate to the need of the users. The adequacy of the information can be tested when it is reported outside the organization, but when reported inside the organization, the adequacy of the disclosure cannot be tested accurately as there is no test to measure it. Another difficulty is that the needs of the users are different from user to user, and as a result, adequacy can be obtained only to a certain extent. The concept of ' fair disclosure' implies that all users of the information should be treated alike, in preparing the financial statements and reports, and the concept of ' full disclosure' implies that all relevant information of the financial activities of the business enterprise is presented in the financial reports.

NEED AND OBJECTIVES OF THE STUDY

The subject of corporate reporting has become very interesting and challenging due to the growth of the company form of organization. The Companies differ with regard to their corporate reporting practices. There has always been a difference of opinion between company

management and the users of financial statements over relevance of adequacy or otherwise of financial disclosure in the company reports. The users contend that the companies usually fail to provide them with all the information they need for making sound investment decisions. The companies plead that their annual reports contain not only the relevant information which is required by law for the benefit of external users but also a lot more relevant information which is beneficial to external users, more specifically, the shareholders. A number of studies have been conducted on the corporate reporting practices in the country. These studies have examined the adequacy of corporate reporting in annual reports; analyzed the financial reporting practices; financial and non-financial disclosure in the annual reports; relationship between quality of disclosure and various characteristics of the companies; the relevance of corporate annual reports in providing information to the shareholders; identification of the main determinants which affect the level of corporate reporting etc. The analysis of review of literature reveals that a little attempt has been made to assess the views of investors regarding corporate disclosure. The present study intends to study the investor's viewpoint regarding the items of disclosure in the annual reports and their requirements of disclosure for decision making. Further, it intends to find out the adequacy or otherwise of the present reporting practices from their point of view, to find out the areas of agreement and disagreement between investor's requirements and disclosure practices, and to make suggestions to improve financial reporting and disclosure practices. Therefore, it is in this context that the need was felt to study these areas and draw relevant conclusions from the study.

HYPOTHESES OF THE STUDY

The study has formulated and tested the following hypotheses:

1. Investor's preference to purpose of investment is uniform, and not significantly associated with their demographic profile.
2. Investor's preference to sources of information is uniform, and not significantly associated with their demographic profile.
3. Investor's disclosure requirements not differ significantly.

RESEARCH DESIGN

The study is descriptive in nature. In this case the researcher has no control over the variables. He can only report what has happened or what is happening. In the present study, the information is being collected from the investors by using a pre-tested and structured questionnaire. Consistent with broad objectives of the study, all the relevant information which could be available have been collected. For studying investor's viewpoint regarding disclosure practices, a survey of 200 investors from various parts of the country has been conducted. Investors have been selected using judgment as well as convenience sampling method.

DEMOGRAPHIC PROFILE OF INVESTORS

The analysis of corporate reporting v/s investors' requirements is based on the study of responses of 200 investors in total. Out of total 200 investors, 120 investors are such who examine the annual reports and 80 investors are such who never read it. 71.7 percent of investors under study belong to urban areas and 26.7 percent investors belong to metropolitan cities. On the basis of age, 7.5 percent investors belong to age upto 30 years and 12.5 percent investors are in the age group of 60 years and above. On the basis of qualification, 2 percent of the total investors under study are such who have not passed their bachelor degree examination. Graduate, post graduate and professionally qualified investors constitute 25 percent, 48 percent and 35 percent of the total investors respectively. Occupation-wise, 71 percent of the investors belong to service class, 6 percent of the investor under study are such who are professionals and doing their own practice. As for experience of investors is concerned, majority of the investors (71.7 percent) in the present study have experience of 5 years and above, the percentage of investors having experience of less than 2 years is only 3.3 percent. In the present study 32.5 percent of the investors have investment upto Rs.100000, and 31 percent of the investors have investment of Rs.200000 & above.

RESULTS & DISCUSSION

The results of analysis of investors are given as under:

Funds are invested with some 'purpose' in mind. It has been found that appreciation of funds is the prime objective of investment. It is given uppermost priority by the investors. Liquidity and safety of funds is the second preference of investors. Tax benefit is given the least importance in the purposes of investment [table 1]. It has been found that level of education, occupation, experience and amount of investment are positively associated with purpose of investment. The correlation between preferences to purpose of investment and educational qualification shows that there is significant relation/association between preferences of undergraduate and graduate investors, and post-graduate and professionally qualified investors [table 1(a)]. Further, occupation and investment experience are positively associated with the purposes of investment, but have no significant impact on it [table 1(b) and [table 1(c)].

Analysis of preferences to 'sources of information' has revealed that newspapers (financial/business) have been the first and foremost preference of all categories of investors. Information from internet browsing has been assigned seventh rank by almost all the investors [table 2]. Coefficients of correlations show positive association between preferences to various sources of information among the investors belonging to various levels education, occupation, experience and amount of investment. There is significant association between preferences assigned to various sources of information by investors having various levels of education. Occupation-wise, there is positive and significant association between preferences of business & service class, and preferences of service & professional class. However, correlation between preferences of business and professional class is not significant. Further, tests of significance show that experience of the investors and amount of investment have positive but no significant impact on preference to sources of information [table 2(a) to table 2(d)].

Besides 120 investors who examine annual report, 80 such investors have been surveyed who not read the report. The purpose is to analyze and find out 'reasons why people don't use/study annual report'. The study reveals that 42.5 percent of the investors don't read annual reports as they found it very complex while 12.5 percent of the investors comprehend some items of the report but don't read it due to shortage of time. Analysis has further exposed that 18.75 percent of the investor have not read reports as they consider that it is not connected to share price increase/decrease. 10 percent of the investors never read annual reports because they feel it contains unnecessary detail. A segment of investors (8.75 percent) did not read annual reports as they have not received a copy of it. [table 3].

Analysis of 'Components of Annual Report' depicts that investors consider balance-sheet, profit and loss account, ten years financial highlights, financial ratios, management discussion and analysis, director's report as highly useful. Cash flow statement, balance-sheet abstract, corporate

governance, graphs, charts and pictures etc. are considered useful by them. On the other hand, schedule and notes, auditor's report, adjusted financial statements according to US GAAP, international accountant's reports etc are considered less useful by the investors [table 4].

Investors views on 'Selected Accounting Policies' reveals that accounting for proposed dividend, accounting for investment, research and development and contingent liability is considered highly useful by them. Investors are of the view that valuation of inventories, reporting of system of accounting, accounting for retirement benefits, deferred revenue expenditure, prior period items, segment reporting and various other policies are not useful [table 5].

'Financial ratios' have been rated as highly useful by the investors. Analysis of ratios further reveals that investors consider profitability ratios as most important and assign it first rank. Employees' ratios are not considered as much noteworthy by the investors and hence placed at the fifth and last rank [table 6].

'Perception of investors as regards selected items' valuable in decision making shows that investors consider EPS, DPS and past performance of the share in terms of price as most essential and assign first, second, and third ranks to these items. Products of company, sales and total assets are given less significance by the investors [table 7].

Survey of selected 'futuristic items of information' to be disclosed in the annual report has revealed that most of the investors favour disclosure of information on forecast of profits, forecast about general performance of the company, forecast of dividends, information on diversification and foreign collaboration plans etc. A small segment (33.33 percent) of investors is interested in disclosure of information on forecast of share price [table 8].

Analysis of 'investor's awareness on emerging concepts' shows that 31.67 percent to 75 percent investors are aware on these concepts. Only 31.67 percent of the investors are aware of the concept of 'Brand Valuation'. 75 percent of the investors are aware and satisfied with the disclosure of information by companies on these concepts.

Analysis of requirement of investors reveals that 52.30 percent of the investors like to have 'summary report' only, if given option. 30.83 percent of the investors have reported in favour of annual report accompanied by a separate summary report. Only 16.67 percent of the investors are in favour of receiving reports in its present form i.e. detailed annual report [table 9].

Analysis of 'Adequacy of Disclosure' reveals that 72.5 percent of the investors who read annual report are satisfied with the information disclosed in annual reports. On the other hand, there are still 27.5 percent of the investors who are not satisfied with adequacy of disclosure in the annual reports. From the whole discussion it can be concluded that there exist some gaps between the information reported in the annual reposts and information required by the investors [table 10].

CONCLUSION & SUGGESTIONS

The study of analysis of investors reveals that there exists some gap between the type of information demanded and that which is actually presented by corporate. Disclosure on information and presentation of financial statements in accordance with US GAAPS has possessed special importance in this era of globalization. Although some companies in both the sectors have disclosed Adjusted Profit and Loss Account in accordance with US GAAPs, International Accountants Report, and impairment of long-lived assets etc there is scope of improvement in both the sector on this aspect. Keeping in view this era of globalization and significance of corporate disclosure, it becomes imperative to establish some sort of benchmarking against which the Indian corporate disclosure practices can be compared. It is worth mentioning that US corporate disclosure practices are considered best in the world. It can act as standard against which disclosure practices of India companies can be compared. The study of analysis of investors reveal that there exists some 'information gap' between the data that companies release externally, and what the investors wants and needs to know. The gist of suggestions as revealed by the investors to make the reporting useful and relevant is as follows:

1. Reports must be simple, precise, easy to understand by common investors, not complex. Besides these aspects, it must be presented in such a manner that it must attract the investor to read it.
2. It must present futuristic information relating to expected future profits, dividends, expected earnings per share, expected dividend per share, future plans, strategies, diversification, risks etc. This futuristic information should be presented with sufficient disclosure of presumptions on which this futuristic information is based.
3. It must show summary financial and operating results of at least last 5 years.
4. Information on emerging concepts should be adequately disclosed by companies to educate and make aware the investors/researchers about recent developments in the field of corporate reporting.
5. Separate summary report of size 15-20 pages highlighting selected useful items should be made available to the shareholders, and detailed annual report should either available on demand or on internet.
6. Companies are disclosing all the information whether required by investors or not. Investors should not only be provided the information what the company/managers like but it should also disclose the information required by investors. Further, companies should disclose relevant information for investors in nut-shell in a separate section of the annual report.
7. Companies should present latest information to investors earliest possible. Besides annual report, copies of quarterly as well as half yearly reports, and expected future results should also be made available to investors, as desired by some of them. Interim reporting helps users identify, on a timely basis, trends and changes in trends affecting a company.
8. Voluntary disclosure should cover not only good news but also disappointments.
9. Management should provide information that helps users forecast a company's financial future.

To conclude, traditional methods of corporate reporting and disclosure have shortcomings which can be overcome through a more open, progressive approach. For corporate reports to remain relevant in present times, it requires no less than a revolutionary change in how management views its reporting responsibility to the company's stakeholders. To bridge this gap, we propose a forward-looking corporate reporting approach that focuses on open communication with shareholders and stakeholders, thus broadening the scope of corporate reports. For these forward-looking companies that will implement this measure to close the information gap, the key benefits will be- better management credibility, and the increased ability to secure long term investors rather than speculators. To meet users' changing needs, business reporting must :

Provide more information with a forward-looking perspective.

Focusing on users' information needs and finding cost-effective ways of better aligning reporting with those needs.

Developing and maintaining a comprehensive model of business reporting reflecting the kinds of information that users need.
Adopting a longer term focus by developing a vision of the future business environment and users' future needs for information.

SCOPE FOR FURTHER RESEARCH

A number of studies have been conducted on the subject of corporate disclosure. This subject still offers a lot of scope for further research on the following aspects in the current scenario :

1. Around the world an ever-increasing number of companies have World Wide Web (Web) sites on the Internet. Web-based reports have great potential to be more than simply an electronic version of traditional paper reports. In this era of globalilsation, the Web represents a totally new reporting environment with many implications for both the content and form of corporate reports. The study may be conducted on 'Web-based Business Reporting'.
2. As a result of liberalization, privatisation and globalisation, several new accounting standards have been framed to ensure proper disclosure and protect the interest of investors and other users. These and various other changes in the economy indicate that their complexity will continue to increase. Thus, a study of 'Impact of Current Economic and Business Environment on Corporate Reporting' may also be conducted.
3. A step has already been initiated to harmonise the domestic accounting standards (AS) with International Accounting Standards (IAS). "Harmonization of Accounting Standards" has also emerged as innovative area of research and development.
4. More research is needed by the academic community and others about the relationship between informative disclosures, cost of capital and its impact on share prices.

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TABLES

Table 1: Purposes of Investment

Purposes of Investment	Ranks I	II	III	IV	Wt.Avg*	Ranks**
(1) Appreciation of Funds	**79**	**26**	**14**	**1**	**42.3**	**1**
(2) Regular extra/additional Income	**6**	**53**	**55**	**6**	**29.9**	**3**
(3) Liquidity& Safety of Funds	**35**	**40**	**43**	**2**	**34.8**	**2**
(4) Availing Tax Benefits	**0**	**1**	**8**	**111**	**13**	**4**

Notes:
1. *Weights equal to 4,3,2,1 have been assigned to Ranks I, II, III, and IV respectively to compute weighted average.
2. ** Ranks have been assigned in the descending order to the weighted average scores.

Table 1(a): Correlation between Preferences/ranks to Purposes of Investment by investors of different education levels

Education level	Undergraduate	Graduate	Post-graduate	Professional
Graduate	**1.000***	**1.000**	**0.800**	**0.800**
Post-graduate	**0.800**	**0.800**	**1.000**	**1.000***
Professional	**0.800**	**0.800**	**1.000***	**1.000**
Undergraduate	**1.000**	**1.000***	**0.800**	**0.800**

* Correlation is significant at the 0.01 level (2-tailed).

Table 1(b): Correlation between Preferences / ranks to Purposes of Investment by investors of different Occupations

Occupation	Service	Business	Profession
Service	**1.000**	**1.000***	**0.800**
Business	**1.000***	**1.000**	**0.800**
Profession	**0.800**	**0.800**	**1.000**

* Correlation is significant at the 0.01 level (2-tailed).

Table 1(c): Correlation between Preferences to Purposes of Investment by investors of diverse experience groups

Experience	Up to 2 years	2-5 years	5 years & above
Up to 2 years	**1.000**	**0.800**	**0.800**
2-5 years	**0.800**	**1.000**	**1.000***
5 years & above	**0.800**	**1.000***	**1.000**

* Correlation is significant at the 0.01 level (2-tailed).

Table 1(d): Correlation between Preferences/ranks to Purposes of Investment by investors having diverse Amount of Investment

Investment Amount	Up to Rs.1 lakh	Rs.1 lakh to Rs.1.5 lakh	Rs.1.5 lakh to Rs.2 lakh	Rs.2 lakh & above
Up to Rs. 1 lakh	**1.000**	**1.000***	**1.000***	**1.000***
Rs. 1 lakh to Rs. 1.5 lakh	**1.000***	**1.000**	**1.000***	**1.000***
Rs. 1.5 lakh to Rs. 2 lakh	**1.000***	**1.000***	**1.000**	**1.000***
Rs. 2 lakh & above	**1.000***	**1.000***	**1.000***	**1.000**

* Correlation is significant at the 0.01 level (2-tailed).

Table 2: Sources of Information

Sources	Ranks							Wt.Avg.*	Ranks**
	I	II	III	IV	V	VI	VII		
(1) Brokers Information	**12**	**33**	**5**	**20**	**10**	**17**	**23**	**17**	**4**
(2) Business Journals/Periodicals	**23**	**37**	**19**	**18**	**18**	**5**	**1**	**22**	**2**
(3) Newspapers (Fin. & others)	**47**	**27**	**32**	**4**	**7**	**3**	**0**	**25**	**1**
(4) News Bulletins	**2**	**10**	**46**	**28**	**17**	**14**	**2**	**18**	**3**
(5) Annual Reports	**13**	**6**	**11**	**36**	**20**	**26**	**8**	**16**	**5**
(6) Inf. from Friends and Relatives	**19**	**7**	**5**	**4**	**31**	**29**	**25**	**14**	**6**
(7) Inf. from Internet Browsing	**4**	**0**	**2**	**10**	**17**	**26**	**61**	**9**	**7**

Notes:

1. * Weights 7,6,5,4,3,2,1 have been assigned to ranks I, II, III, IV, V, VI and VII respectively to compute weighted average.
2. ** Ranks have been assigned in the descending order to the weighted average scores.

Table 2(a): Correlation between Preferences/ranks to Sources of Information by investors having diverse levels of education

Education Level	Under-Graduate	Graduate	Post-Graduate	Professionally Qualified
Under-Graduate	**1.000**	**0.991****	**0.847***	**0.937****
Graduate	**0.991****	**1.000**	**0.893****	**0.964****
Post-Graduate	**0.847***	**0.893****	**1.000**	**0.964****
Professionally Qualified	**0.937****	**0.964****	**0.964****	**1.000**

** : Correlation is significant at the 0.01 level (2-tailed)
* : Correlation is significant at the 0.05 level (2-tailed)

Table 2(b): Correlation between Preferences/ranks to Sources of Information by investors of different Occupations

Occupations	Serviceman	Businessman	Profession
Serviceman	**1.000**	**0.821***	**0.893****
Businessman	**0.821***	**1.000**	**0.571**
Profession	**0.893****	**0.571**	**1.000**

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

Table 2(c): Correlation between Preferences/ranks to Sources of Information by investors having diverse experiences

Experiences	upto 2 years	2-5 years	5 years & above
upto 2 years	**1.000**	**0.786***	**0.964****
2-5 years	**0.786***	**1.000**	**0.893****
5 years & above	**0.964****	**0.893****	**1.000**

**.Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2(d): Correlation between Preferences/ranks to Sources of Information by investors having diverse Amount of Investment

Investment Amount	Up to Rs.1 lakh	Rs.1 lakh to Rs.1.5 lakh	Rs.1.5 lakh to Rs.2 lakh	Rs.2 lakh & above
Up to Rs. 1 lakh	**1.000**	**0.893****	**0.893****	**0.893****
Rs.1 lakh to Rs.1.5 lakh	**0.893****	**1.000**	**1.000****	**1.000****
Rs.1.5 lakh to Rs.2 lakh	**0.893****	**1.000****	**1.000**	**1.000****
Rs.2 lakh & above	**0.893****	**1.000****	**1.000****	**1.000**

**. Correlation is significant at the 0.01 level.

Table 3: Reasons for Not use of Annual Reports

Reasons	Number of Investors	%age
1. Non-Receipt of Reports	**7**	**8.75**
2. No Interest in reading Reports	**0**	**0**
3. Not Understanding of most of content of Reports as they are very complex	**34**	**42.5**
4. Understand certain items vaguely but no time to study AR	**10**	**12.5**
5. Contents of AR are not related to Share Price Increase/ Decrease	**15**	**18.75**
6. Not contain futuristic information required by Investors	**6**	**7.5**
7. Other reasons-unnecessary details	**8**	**10**
Total	80	100

Table 4: Investors views regarding selected Components of Annual Reports

Components	**Highly useful**	**Useful**	**Less useful**	**Not useful**	**Can't Say**	**Wt.* average**	**Ranks****
1. Board of Directors	**0**	**44**	**73**	**3**	**0**	**26.73**	**12**
2. Report of Directors	**66**	**45**	**9**	**0**	**0**	**35.80**	**6**
3. Chairman's Communication	**0**	**47**	**73**	**0**	**0**	**27.13**	**11**
4. Auditors' Report	**0**	**10**	**70**	**40**	**0**	**22.00**	**16**
5. Management Discussion and Analysis	**66**	**49**	**5**	**0**	**0**	**36.07**	**5**
6 Balance-Sheet	**90**	**30**	**0**	**0**	**0**	**38.00**	**1.5**
7. Profit and Loss Account	**90**	**30**	**0**	**0**	**0**	**38.00**	**1.5**
8. Statement Relating to Subsidiary Co.	**0**	**38**	**62**	**12**	**8**	**24.67**	**13**

9. Cash Flow Statement	62	36	22	0	0	34.67	7
10. Ten Years Performance Highlights	77	40	3	0	0	36.93	4
11. Financial Ratios	75	45	0	0	0	37.00	3
12. Significant Accounting Policies	0	42	60	0	18	24.40	14
13. Report on Corporate Governance	15	75	21	4	5	30.07	9
14. B/S Abstracts & Co's Gen Business Profile	40	61	10	3	6	32.40	8
15. Graphs, Charts and Diagrams	25	47	36	12	0	29.67	10
16. Adj. Financial Statements in Acc. With US GAAP	0	0	21	72	27	15.60	17.5
17. International Accountants Report	0	0	21	72	27	15.60	17.5
18. Schedules and Notes	0	10	72	38	0	22.13	15

Notes:

1. *Weights 5,4,3,2,1 have been assigned to highly useful, useful, less useful, not useful and can't say items respectively to compute weighted average.
2. **Ranks have been assigned in the descending order to the weighted average scores

Table 5: Investors Views Regarding Selected Accounting Policies

Accounting Policies	Highly useful	Useful	Less useful	Not useful	Can't Say	Wt.* average	Ranks**
1. System of Accounting	0	26	58	12	24	21.73	11
2. Fixed Assets	0	44	58	0	18	24.53	6
3. Depreciation Accounting	0	35	60	7	18	23.47	7
4. Investments	24	60	18	0	18	28.80	2
5. Valuation of Inventories	0	25	58	17	20	21.87	10
6. Revenue Recognition	0	54	46	0	20	24.93	5
7. Retirement Benefits	0	23	60	15	22	21.60	12
8. Foreign Currency Transactions	0	25	60	17	18	22.13	9

9. R&D	23	58	21	0	18	28.53	3
10. Contingent Liabilities	12	52	32	6	18	26.27	4
11. Proposed Dividends	25	60	17	0	18	28.93	1
12. Deferred Revenue Expenditure	0	24	60	6	30	21.20	13
13. Lease Accounting	0	34	60	0	26	22.80	8
14. Prior Period Items	0	20	52	0	48	18.93	14
15. Segment Reporting	10	32	11	0	67	18.53	15

Note:
*. Weights 5,4,3,2, and 1 have been assigned to highly useful, useful, less useful, not useful and can't say items to compute weighted average score.
**. Ranks have been assigned in descending order to the weighted average scores.

Table 6: Investor's Views Regarding Financial Ratios

Ratios	Highly useful	Useful	Less useful	Not useful	Can't Say	Wt.* average	Ranks**
1. Profitability Ratios	76	40	0	0	4	36.27	1
2. Balance-Sheet Ratios	75	41	0	0	4	36.20	2
3. Efficiency Ratios	51	62	0	3	4	34.20	4
4. Dividend payout (%)	70	47	0	0	3	36.07	3
5. Employees Related Ratios	0	30	82	3	5	25.13	5

Note:
*. Weights 5,4,3,2 and 1 have been assigned to highly useful, useful, less useful, not useful and can't say items to compute weighted average score.
**. Ranks have been assigned in descending order to the weighted average scores.

Table 7: Importance of Selected Items useful in making Investment Decision

	Highly useful	Useful	Less Useful	Not Useful	Can't Say	Weighted Average*	Ranks**
1.Price of Share(H/L)	72	48	0	0	0	36.80	3
2.Dividend Per Share	76	44	0	0	0	37.07	2
3. Earnings Per Share	77	43	0	0	0	37.13	1
4. Book value (Rs)	50	70	0	0	0	35.33	5
5. Profit or Loss	49	71	0	0	0	35.27	6
6. Change in Profit or Loss	62	53	3	0	2	35.53	4
7. Sales	33	76	9	0	2	33.20	9

8. Products of the Company	**35**	**70**	**15**	**0**	**0**	**33.33**	**8**
9. Total Assets of the Company	**37**	**75**	**7**	**0**	**1**	**33.80**	**7**

Note :

*. Weights 5,4,3,2 and 1 have been assigned to highly useful, useful, less useful, not useful and can't say items to compute weighted average score.

**. Ranks have been assigned in descending order to the weighted average scores.

Table 8: Requirements of Investors regarding Futuristic Items of Information

Items	No. of Investors (Response in Yes)	Percentage
1. Forecast of share prices	**40**	**33.33**
2. Forecast of dividends	**112**	**93.33**
3. Forecast of profits	**117**	**97.5**
4. Past EPS and its forecast	**113**	**94.17**
5. Forecast about general performance(prod., sales)	**117**	**97.5**
6. Diversification & Foreign collaboration plans	**104**	**86.67**
7. Change in shareholding pattern	**76**	**63.33**
8. Any other item, if any, please specify	**-**	**-**

Table 9: Requirement of Investors regarding Annual/Summary Report

Report	No. of Investors (Response in Yes)	Percentage
1. Annual Report Only	**20**	**16.67**
2. Summary Report Only	**63**	**52.30**
3. Annual Report with a separate summary report	**37**	**30.83**
Total	**120**	**100.00**

Table 10: Investor's Views on Adequacy of Disclosure in Annual Reports

Response of Investors	No. of Investors	Percentage
Yes	**87**	**72.5**
No	**33**	**27.5**
Total	**120**	**100.00**

A STUDY OF THE IMPACT OF TRAIT ANXIETY AND SEX ON THE ACADEMIC MOTIVATION OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

Anxiety is the most pervasive psychological phenomenon of our time. It is a common psychological disorder in this age of speed and tension and it appears as one of the major mental health problems today. The importance and pervasiveness of anxiety in the different cultures and its ubiquitous influence on human behavior is being increasingly recognized. Anxiety has become the concern of not only psychologists, learning theorists, but the science, art, religion and literatures also deem to be overpowered with the thought. Anxiety is beyond the boundaries of time, space, country, religion, language, and caste. Anxiety has a bad name. No one wants to be anxious. Millions of tranquilizers are consumed each day to reduce anxiety and tension. An evolutionary viewpoint, anxiety must have some functional value for it to have evolved as an inherent response potential in all human species. Man's effort to escape anxiety is a major theme in human thought and experience. The importance of anxiety as a powerful influence, in contemporary like is increasingly recognised, and manifestations of current concern with anxiety phenomena are ubiquitously reflected in literature, arts, science and religion as well as in many other facets of our culture.

KEY WORDS

Anxiety, Trait Anxiety, State Anxiety, Academic Motivation

INTRODUCTION

Anxiety is the most pervasive psychological phenomenon of our time. There is hardly any systematic conception of personality, specifically in relation to its development, which does not attribute anxiety, a role of great significance. Anxiety is a common psychological disorder in this age of speed and tension and it appears as one of the major mental health problems today. The importance and pervasiveness of anxiety in the different cultures and its ubiquitous influence on human behavior is being increasingly recognized. Anxiety has become the concern of not only psychologists, learning theorists, but the science, art, religion and literatures also deem to be overpowered with the thought.

Anxiety is beyond the boundaries of time, space, country, religion, language, and caste. Though anxiety is timeless, it is the twentieth century, which has been termed as the" age of anxiety". Every nook and corner of human endeavor seems to be affected somehow by anxiety.

The feeling of anxiety is an intrinsic part of the condition of human being. It is a natural response, built into the human design, to certain environmental and psychological factors. Presumably, man has always experienced anxiety, as long as he has existed as a species, though the contents of his anxieties, and the ways in which these affects are felt and categorized phenomenally, as well as the kinds of circumstances that give rise to them, are, to a considerable degree, a function of the assumptions of the cultures in which he has lived.

CONCEPT OF ANXIETY

Anxiety is a multisystem response to a perceived threat or danger. It reflects a combination of biochemical changes in the body, the patient's personal history and memory, and the social situation. As far as we know, anxiety is a uniquely human experience. Other animals clearly know fear, but human anxiety involves an ability, to use memory and imagination to move backward and forward in time, that animals do not appear to have. The anxiety that occurs in post-traumatic syndromes indicates that human memory is a much more complicated mental function than animal memory. Moreover, a large portion of human anxiety is produced by anticipation of future events. Without a sense of personal continuity over time, people would not have the "raw materials" of anxiety.

Anxiety is a bodily response to a perceived threat or danger. It is triggered by a combination of biochemical changes in the body, the patient's personal history and memory, and the social situation.

Although anxiety is a commonplace experience that everyone has from time to time, it is difficult to describe concretely because it has so many different potential causes and degrees of intensity. Doctors sometimes categorize anxiety as an emotion or an affect depending on whether it is being described by the person having it (emotion) or by an outside observer (affect).

CONCEPT OF TRAIT-STATE ANXIETY

Spielberger (1972) distinguish between two different anxiety constructs: State Anxiety (A-state) and Trait Anxiety (A-trait). A-state is defined as a transitory emotional state that varies in intensity, fluctuates overtime, and is characterized by furling of tension and apprehension, and by heightened activity of the automatic nervous system. A- Trait refers to relatively stable individual differences in the disposition to respond to situations perceived as threatening with elevations in the intensity of state anxiety.

Trait-state anxiety theory provides a conceptual frame of reference for classifying the major variable that should be considered in anxiety research and suggest possible interrelationships among these variables. The theory is especially concerned with classifying the properties of A-state and A-trait as psychological constructs, and with specifying the characteristics of stressful stimulus condition which evoke differential levels of A-state in persons who differ in A-trait. The theory also recognizes the centrality of cognitive appraisal in the evocation of an anxiety state, and the importance of cognitive and motored processes (defense mechanisms) that serve to eliminate or reduced anxiety states.

ANXIETY AS A TRAIT

In general, personality traits have been described as relatively enduring individual differences among people in specifiable tendencies to perceive the world in a certain way and in disposition to react or behave in a specified manner with predictable regularity. Personality traits reflect individual differences in the frequency and intensity with which certain emotional states have been manifested and in the probability of occurrence of such states in future. Frequency and intensity of an emotional state depend upon the strength of personality traits (Spielberger, 1972, 1975).

Specifically, anxiety personality trait (A-trait) has been defined in terms of stable individual differences in anxiety proneness i.e. to perceive a variety of situations as threatening and to respond to these situations with differential elevations in state anxiety (Spiel Berger, 1972, 1975). A-trait may also be regarded as reflecting individual difference in the frequency and the intensity with which A-state have been manifested in the part, and the probability that such states will be experienced in the future.

SIGNIFICANCE OF THE STUDY

The investigators, after having realized the dearth of empirical researches in the field of academic motivation, considered it worthwhile to undertake the present investigation. There is ample evidence that anxiety and sex have impact upon academic motivation. Studies are needed to explore the effect of these factors in great details so that effective remedial procedures and techniques may be developed for reducing anxiety levels and increasing academic motivation of the students. The knowledge of dynamics of these factors is very important in the area of education where little work has been done. Tensions in the family and control exercised by the parents over the children in the family, the discrimination between rights and duties of male and female offspring in a family, rejection and punishment to children by their parents is a phenomenon which is like wild file even in our so called progressive society. Thus, the present study is all the more relevant

OBJECTIVES OF THE STUDY

Following are the objectives of the present investigations:

1. To study the levels of trait anxiety among the secondary school boys and girls of Yamuna Nagar.
2. To study the impact of trait anxiety on the academic motivation of low trait anxiety and high trait anxiety of secondary school students of Yamuna Nagar.
3. To compare the trait anxiety of Boys and girls students of Yamuna Nagar.

METHOD USED

In order to collect requisite data for research problem, the investigators employed descriptive survey method.

SAMPLE

Random sample was taken for the conduct of the study.

AGE -WISE DISTRIBUTION OF SAMPLE

Table 1.1 A shows age-wise distribution of sample. As is clear from the table, most of the students selected in the sample were of the age group 15 to 18.

Table 1.1 A: Age-wise distribution of Sample

Sr. No.	Age	No. of Boys	No. of Girls
1	15 Years	07	04
2	16 Years	53	60
3	17 Years	46	18
4	18 Years	09	03
Total		**115**	**85**

SEX-WISE DISTRIBUTION OF THE SAMPLE

Table 1.2B shows the sex-wise distribution of the sample. As is clear there were 85 girls and 115 boys. Hence it may be seen that there were for more boys than the girls

Table 1.2 B Sex-wise distribution of the sample

BOYS	115
GIRLS	85
TOTAL	200

TOOLS

Following tools were used for the collection data:
Keele's Academic Motivation Inventory.
State-Trait Anxiety Inventory by Spielberger.

STATISTICAL TECHNIQUES

The following statistical techniques were employed to analyze the data of the present study:
t-test

ANALYSIS OF DATA

Table 1.1 A: Comparison of Trait Anxiety of High School Boys and Girls

Comparison Groups	N	Mean	S.D.	't'
Boys	115	47.4	5.13	1.24
Girls	85	48.3	4.89	

df = 198, t = 1.96 at 0.05 level

Table 1.1A shows the mean, S.D. and 't' value of scores for boys and girls obtained on State-Trait -Anxiety Inventory. It is clear from the table that the value of 't' for comparison group is 1.24 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Thus is may be said that both the groups do not differ significantly as for as their level of trait anxiety is concerned. Therefore, the hypothesis is rejected.

Table 1.2 B: Comparison of Academic Motivation of Boys having high Anxiety and boys having low anxiety

Comparison Groups	N	Mean	S.D.	't'
Boys High Trait Anxiety	30	61.33	6.73	0.53
Boys Low Trait Anxiety	30	60.50	5.49	

df = 58, t = 2.00 at 0.05 level

Table 1.2B shows the mean S.D. and 't' value of scores for boys having high trait anxiety and girls low trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.53 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Thus it may be said that both the groups do not differ significantly as for as their academic motivation is concerned. Therefore, the hypothesis is rejected.

Table 1.3 C: Comparison of Academic Motivation of Students having High Trait Anxiety and Students having Low Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'
Students High Trait Anxiety	54	47.22	5.86	1.06
Students Low Trait Anxiety	54	48.26	4.21	

df = 106, t= 1.98 at 0.05 level.

Table 1.3C shows the mean, S.D. and 't' value of scores for students having high trait anxiety and students having low trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 1.06 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Thus it may be said that both the groups do not differ significantly as for as their academic motivation is concerned. Therefore, the hypothesis is rejected.

Table1.4 D : Comparison of Academic Motivation of Girls having High Trait Anxiety and Girls having Low Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'
Girls High Trait Anxiety	25	47.68	5.89	0.32
Girls Low Trait Anxiety	25	48.16	5.58	

df = 48, t= at 2.01 at 0.05 level.

Table 1.4D shows the mean, S.D. and 't' value of scores for girls having high trait anxiety and girls having low trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.32 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Therefore, the hypothesis is rejected.

Table 1.5 E: Comparison of Academic Motivation of Boys having High Trait Anxiety and Girls having High Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'
Boys High Trait Anxiety	30	48.17	5.89	0.30
Girls High Trait Anxiety	25	47.68	5.89	

df = 53, t= at 2.00 at 0.05 level.

Table 1.5E shows the mean, S.D. and 't' value of scores for boys having high trait anxiety and girls having high trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.30 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Therefore, the hypothesis is rejected.

Table 1.6 F: Comparison of Academic Motivation of Boys having High Trait Anxiety and Girls having Low Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'
Boys High Trait Anxiety	30	48.17	5.89	0.0
Girls Low Trait Anxiety	25	48.16	4.58	

df = 53, t= at 2.00 at 0.05 level.

Table 1.6F shows the mean, S.D. and 't' value of scores for boys having high trait anxiety and girls having low trait anxiety obtained on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.0 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Therefore, the hypothesis is rejected.

Table1.7 G : Comparison of Academic Motivation of Boys having Low Trait Anxiety and Girls having High Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'

Boys Low Trait Anxiety	30	47.68	3.69	
Girls High Trait Anxiety	25	47.68	5.89	0.06

df = 53, t= at 2.00 at 0.05 level.

Table 1.7G shows the mean, S.D. and't' value of scores for boys having low trait anxiety and girls having high trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.06 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Therefore, the hypothesis is rejected.

Table 1.8 H: Comparison of Academic Motivation of Boys having Low Trait Anxiety and Girls having Low Trait Anxiety

Comparison Groups	N	Mean	S.D.	't'
Boys Low Trait Anxiety	30	47.68	3.69	
Girls Low Trait Anxiety	25	48.16	4.58	0.50

df = 53, t= at 2.00 at 0.05 level.

Table 1.8H shows the mean, S.D. and 't' value of scores for boys having low trait anxiety and girls having low trait anxiety on academic motivation. It is clear from the table that the value of 't' for comparison groups is 0.50 which is not significant at 0.05 level of confidence. This means that both the means do not differ significantly. Therefore, the hypothesis is rejected.

FINDINGS

1. There was no significant difference in trait anxiety of boys and girls.
2. There was no significant difference in academic motivation of boys having high anxiety and boys having low anxiety.
3. There was no significant difference in academic motivation of students having high trait anxiety and students having low trait anxiety.
4. There was no significant difference in academic motivation of girls having high trait anxiety and girls having low trait anxiety.
5. There was no significant difference in academic motivation of boys having high trait anxiety and girls having high trait anxiety.
6. There was no significant difference in academic motivation of boys having high trait anxiety and girls having low trait anxiety.
7. There was no significant difference in academic motivation of boys having low trait anxiety and girls having high trait anxiety.
8. There was no significant difference in academic motivation of boys having low trait anxiety and girls having low trait anxiety.

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Hoping an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Editor