



INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE AND MANAGEMENT

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**OPERATIONS RISK MANAGEMENT IN CENTRALIZED PROCESSING UNITS
THE NEED TO CREATE AN OPERATIONAL DIAGNOSTICS MODEL FOR INTERNATIONAL /
OUTSOURCED / CENTRALIZED OPERATION UNITS**

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ABSTRACT

The motivation for this research is to propose a new model to depict the operations framework as a set of nodes/activities and relations. Upon centralization, a subset of nodes/activities would be removed from the initial framework. This study encompasses the comparison of operations efficiency of firms with a dominant CPU (Captive / Third Party) and emphasizes the need to coordinate a complex multitude of horizontal, collaborative inter-firm relations. This paper would shed a new light on the need for increasing efficiency of outsourced functions, formulating effective control & monitoring strategies, pricing, being able to respond to changing market conditions, processing transactions cost-effectively, resolving inquiries quickly, and moving to support the growing customer demands. After two decades of rapid growth in centralization / outsourcing, senior managers now emphasize refining, rationalizing and integrating operations technology architectures to support improved global financial risk management, better capital utilization, and higher transaction volumes. This study also examines how senior managers can accomplish these goals by re-engineering pre-migration procedures, transitioning methodology and post-migration activities. It presents a framework that utilizes basic concepts from management science and microeconomics to illustrate the variety of impacts that re-engineering can have on improving firm revenues and controlling or reducing costs. It also presents a series of managerial recommendations based on the framework.

KEYWORDS

Business Process Outsourcing, Financial Risk Management, Operations Risk Management.

KEY THEMES OF THIS PAPER

- To run Centralized Operations Units (CPU's) in an efficient and effective manner in an ever increasing legal and regulatory compliance frame.
- Plan the unit on an open platform that assists and accommodates enhancements in a cost efficient manner. (be it systems, processes, optimizing work force, managing attrition - almost everything that has a dollar impact)
- To have a better day-to-day oversight by way of MIS generation, regulatory reporting, compliance adherence and wealth maximization.

Amongst contemporary business environments, intra-organizational alliances and networks are promoted as a means of: accessing scarce resources, fast-tracking the development of new capabilities; sharing the costs and risks of innovation and responding to the emergence of new competitive threats. Within the variety of collaborative forms, outsourcing alliances continues to grow rapidly, with both the scope and depth of services increasing globally. Estimates of outsourcing industry size and growth vary, but include predictions and global demand for Business Process Outsourcing (BPO) services of approximately \$ US 173 billion by end 2007 (Gartner, 2004). In addition, off-shoring is estimated to reach nearly \$ US 18 Billion in 2005 (Qu & Brocklehurst 2003, p53). However, there is also growing evidence of failure amongst these arrangements, initiating a renewed concern about the mechanisms that govern and control inter-organizational networks and alliances (Langfield-Smith and Smith, 2003; Dekker; 2004). In relation to outsourcing alliances, there is significant customer dissatisfaction (Barthelemy, 2001; PA, 2004). Major sources of this include: limited understanding of the product, process & systems at the centralized / outsourced partner, untrained personnel servicing high net-worth customers & diluted controls & monitoring functions. The inability to deliver on promises where "over half of benefits rated as highly important had not been fully realized" (PA, 2004 p6); and, increased risk (Willcocks & Lacity,1999). The efficacy of control and coordination of outsourcing alliances is thus of concern to practitioners and researchers alike. However, despite a significant amount of research on the topic, a number of gaps still exist in the literature. This study investigates these gaps, specifically the one's within the

Operations Management function and attempts to characterize the relationship and the need for separation of operations management and real risk management and frames a model (hypothetical) which can assist large financial organizations

NEED FOR THE STUDY

The strategic importance of outsourcing in today's business environment has been recognized by managers and scholars (Quinn 1999, Nellore and Söderquist 2000, Globberman and Vining 2006). In the context of economic globalization and increasing organizational and technological capacity of companies (especially multinational companies, off-shoring, i.e. offshore outsourcing, has recently received significant attention (Farrell 2005, Levy 2005). Subsequently, one critical challenge faced by managers is not only to ascertain the need for systematic analysis of the strategic off-shoring decision but also to evaluate the operations management structure in the existing units.

This study introduces a framework based on an Operations Diagnostic Model, (ODM) that could effectively and synthetically incorporate broad-based set of relevant factors for superior customer service and enhanced monitoring / control activities from a donor perspective. ODM is a generalized form of the widely used multi-criteria decision making technique the Analytical Hierarchy Process (AHP) (Saaty 1980). Given the limitations of AHP such as sole consideration of one way hierarchical relationships among factors, failure to consider interactions among the various factors and "rank reversal", ODM is applied as a more realistic modeling method for operations management, albeit the disadvantage of AHP may arise when the number of factors and respective interrelationships increases, requiring much more effort by analysts and decision makers (Sarkis and Talluri 2002, Jharkaria and Shankar 2007).

Although any generalization of such a broad area of literature is doomed to be partly incorrect, this study focuses to address (elaborately)

1. Existing framework of the Operations Management prevalent in existing centralized / BPO Firms? (Local & Global)
2. The efficacy of control and coordination of outsourcing alliances has always been a concern to practitioners and researchers alike, despite a significant amount of research on the topic, a number of gaps still exist in the literature. This study attempts to draw out the gaps, specifically related to Operations Management and attempts to address these gaps in a quantitative manner.

This study attempts to shed a new light on the process of creating a robust operations management framework by integrating the Relational View and network-/graph-theory. We intend to show that greater organization size, heavier reliance on non-authoritative coordination and knowledge-intensive production processes reinforce outsourcing complexity in subtle ways, whereas offshore outsourcing usually entails an over-proportional increase in complications as compared to domestic outsourcing and captive off-shoring (FDI). The findings would yield plausible explanations of outsourcing failure that are quite different from the well-known incentive alignment and core competence lines of reasoning. A modular organizational design may reduce the complexity of inter-organizational relations and thus facilitate outsourcing. Yet there are situations in which refraining from outsourcing altogether may be a prudent strategy, since modularization is neither costless nor risk-free.

MANAGERIAL RELEVANCE

Despite the continuing growth of the Business Process Outsourcing (BPO) markets, there is a consistent pattern of outsourcing failure, marked by an increasing share of premature contract terminations and frequent dissatisfaction with outsourcing results. However, insights into the reasons for outsourcing failure are sparse. Outsourcing theorists and practitioners often stress the importance of aligning client and provider interests (e.g., through incentive contracts) to ensure outsourcing success. In contrast, we propose complex coordination and knowledge exchange across multiple collaborative inter-organizational relations between client and provider employees as a significant cause of failure – even if interests are aligned. We find that centralization of operations tends to be more complex in larger organizations, where there is heavier reliance on non-authoritative coordination and where production processes are knowledge or communication-intensive (which applies to a growing share of BPO deals). We find that complications increase over-proportionally for offshore outsourcing compared to domestic outsourcing and captive off-shoring. While we conclude that understanding the true complexity of inter-firm relations may lead managers to refrain from outsourcing altogether, we suggest that managers may consider implementing modular organization design to limit complexity and thus facilitate outsourcing.

ACADEMIC RELEVANCE

Operations Management of centralized units has a profound impact on organizations viability in the marketplace and thus production output is directly linked to the internationalization on home and host country employment and thus subjecting the same to considerable academic research. The debate on the employment side of internationalization of Multi-national Corporations (MNC's) often contains an ideological bias against the operations of large MNC's, which leads to the fact that the whole debate is conducted in less precise language and focused on the short term effects. The debate on employment generation (linked to performance output) in host countries as a result of inward foreign direct investments that tends to focus on the qualitative spin-offs of this employment (skills, training, R&D), with relatively little attention to the numerical employment contribution of MNC's and not the circumstances under which these arise. On the other hand, the academic debate on the home country employment effects of internationalizing MNC's tends to be hijacked by two diametrically counter-poised claims. From a business perspective it is often argued that, operational efficiency is a pre-requisite for the economic survival of the MNC, while labor representatives claim that all foreign investments could have been maintained and conducted in the domestic market. The reality of internationalizing MNC's is far more complex than the two opposing assumptions.

METHODOLOGY

PAPER OUTLINE

Part - I: The section identifies how Risk Management can "add value". – A suggested 4 pillar control mechanism.

Part-II: This section stresses on how BPO's should define their risk appetite and how risk management practices can be better facilitated. Although many BPO's have already adopted Enterprise Risk Management (ERM) solutions, others are still using detective methods rather than preventive methods of risk monitoring and analysis of trends (Successes & Failures).

Part-III: Conclusions and Suggestions emphasizing on the need for effectiveness in Operations Management, providing a view of the threshold (minimum) of risk factorization that would ensure seamless operations.

PART I - RISK MANAGEMENT: VALUE ADDITION AND CONTROLS PERSPECTIVE

In the backdrop of mounting concerns regarding the lack of transparency and complexity of Business Process Outsourcing firms, this industry continues to grow at an unprecedented 33% rate (NASSCOM BPO report, Q4 2009). Fueled by the prospect of double- and triple-digit returns and an unprecedented Global outsourcing market, Large Institutions have already committed nearly \$450 billion in assets to alternative investments, and major Global firms such as the trend-setting General Electric. However, many institutional investors are not yet convinced that current day migrations (of processing activities) with a reasonably homogeneous set of activities. We have witnessed in the last decade that each activity (industry specific) for example the Finance Firms have been defined by a common set of legal, institutional, and analytical properties and the nuances are a mongrel categorization that include private equity, risk arbitrage, Derivatives, convertible arbitrages, emerging capital market equities, statistical arbitrage, FOREX speculation, and many other strategies, securities, and styles. Therefore, the need for a set of risk management protocols specifically designed for BPO's has never been more pressing.

Part of the gap between "DONOR LOCATION" and "RECIPIENT LOCATION" is the very different perspectives that these two groups have on the end-to-end activity of a particular process.

The typical DONOR's perspective can be characterized by the following statements:

- The Donor is the best judge of the appropriate risk/reward trade-of the portfolio, and should be given broad discretion in making the final migration decisions.
- Migration pattern / strategy is highly proprietary and, therefore, must be jealously guarded lest they be reverse-engineered and copied by others.
- Monetary save / Cost reduction is the ultimate and, in most cases, the only objective.
- Risk management is not central to the success of a Migration Strategy.
- Regulatory constraints and compliance issues are generally a drag on performance; the whole point of setting up a BPO is to avoid these issues.
- There is little intellectual property transfer involved in the migration; the general purpose of the migration is to hire local country personnel.

Contrast these statements with the following views of the Recipient Location's management team.

As fiduciaries, local institutions need to understand the end-to-end process (Downstream & upstream) before committing to process only a part of it.

- Institutions must fully understand the risk exposures of each manager, and, on occasion, may have to circumscribe the manager's strategies to be consistent with the migration objectives.
- Performance is not measured solely by return, but also includes other factors such as risk, tracking error relative to a benchmark, and peer-group comparisons.
- Risk management and pre-migration risk transparency are essential.
- Institutions operate in a highly regulated environment, and must comply with a number of federal and state laws governing the rights, responsibilities, and liabilities of pension plan sponsors and other fiduciaries.
- Migrant location institutions desire structure, stability, and consistency with well-defined roles that are consistent with the parent organization and needs to be institutionalized, not dependent on any single individual.

While there are, of course, exceptions to these two sets of views, they do represent the essence of the gap between hedge-fund managers and institutional investors. However, despite these differences, hedge-fund managers and institutional investors clearly have much to gain from a better understanding of each other's perspectives, and they do share the common goal of generating superior investment performance for their clients.

The 4 pillar control mechanism illustrated. – Donor & Recipient Locations included

- Inherent Controls: Identification of key inherent risks; and the formulation, implementation and documentation of significant control policies, procedures, and mechanisms that are intended to prevent, mitigate or detect control breakdowns (e.g. Credit Risk Policy, Code of Conduct, Anti Money Laundering etc)
- Assessment of controls: The periodic assessment and documentation of risks and controls including testing of controls at a frequency commensurate with the underlying risk, as defined in the Operational Management Policy of the Firm. (e.g. Objective of testing, test frequency, technique, sampling etc)
- Corrective Action: Timeliness and completeness of corrective action when control breakdowns or deficiencies are detected. (e.g. Function unit, description of control weakness, action plan for resolution path etc)
- Reporting: Periodic reporting to management regarding the status of control and accuracy of the rating of the overall quality and status of the control environment for the audited entity.

Having explored the basic components of the firm-wide risk management, an integration of the identified frames and the broad managerial issues surrounding the development emphasizes the need to implement a risk management system for the firm. Risk reduction has the potential to increase firm value. Whether risk reduction actually increases firm value depends upon the cost of that reduction. As a thumb-rule, managers should eliminate all risks that need not be borne by the firm in order to capture the positive net present value of its activities and that are costless to shed. If, however, risk reduction is costly, managers must evaluate whether the benefits of elimination justify the costs. Such an analysis requires that managers estimate the effect of each risk on firm value, understand how each risk contributes to total firm risk, and determine the cost of reducing each risk. To formally calculate the value-maximizing risk management strategy, this information must be incorporated into a model of firm value. This model encompasses managers' knowledge about the economics underlying the firm and its competitive environment, as well as management's beliefs about the ways in which risk potentially affects firm value. By varying the inputs to the model, managers can observe how firm value changes when various risks are hedged or not. In this fashion, managers will be able to determine the optimal level of total risk for the firm, the configuration of risks constituting this level of risk (i.e. the risks to be divested, and the risks to be retained and the best way to achieve the desired risk profile). Of course, creating such a valuation model requires extensive knowledge about consumer demand and the nature of competition in the industry. Building such a model is a process of constant refinement.

Some of the information needed to construct such a model will already reside in the firm. Other information will need to be amassed over time, as managers become more aware of what information is necessary, and begin to collect the required data.

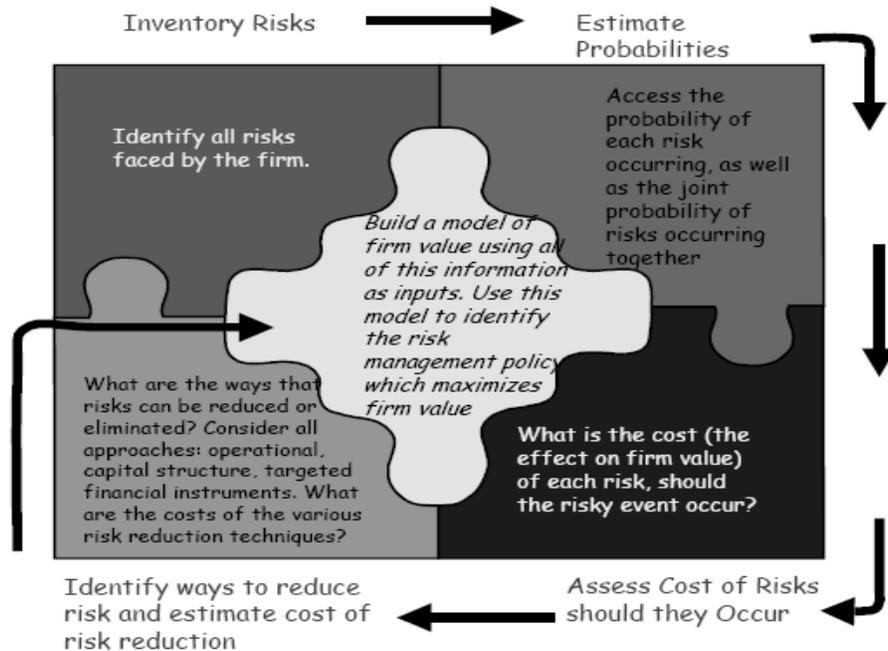


Figure 1. Building a risk management system

PART– II: A FUNCTIONAL APPROACH TO THE ERM FRAMEWORK

To design the Operational Diagnostics model the corporate & the academic world have been extensively discussing about Enterprise Risk Management (ERM) for the last ten years. A multitude of papers and books have been authored on this topic providing specific guidelines and theoretical background. Taking the Financial BPO's as a representative sample, few banks have tried to implement ERM and even less have been successful in embedding it in the bank's risk management culture. The ERM concept is relatively simple. Risks that may affect the value of an organization are numerous and multifaceted with a dynamic nature and their sum does not give the total inherent risk. Several stochastic methods like correlations and co-variances should be considered when different risks are assimilated and analyzed. ERM is a methodical approach to assess and address the risks from all sources that threaten the achievement of an organization's mission statement. A well-implemented ERM approach should be able to provide a complete and symbiotic view of the risks that an institution is exposed to, allowing senior executives to focus on the complete picture and not on separate variables.

Following relevant Risk management methodology (COSO Framework), we can ascertain and identify "inherent" risks (or hazard risks) and perceived risks. While the former can only generate a loss, with the latter there is also the possibility of a gain. Traditional risk management used to focus on inherent risks until financial risk management became predominant in the 90's developing specific tools, techniques and terms. As of date, the aggregation of these various different types of risks is definitely the main challenge that financial institutions willing to implement an ERM approach need to address. However, an ERM MIS report that would list-out only the financial risks would not be fulfilling its scope comprehensively and would leave out some potential source of loss or value destruction (Time bound). The first step in institutionalizing ERM is to identify the risks the firm is exposed to. A common approach is to identify all / most of the types of risks that can be measured. Initially, financial institutions need to stay focused on market and credit risks. Eventually, operational risks can be added. For such an approach to capture all the risks the firm is exposed to, operational risk has to include all the risks that are not market and credit risks. For banks, the definition of operational risk that is used by the new Basel Accord is much narrower, e.g., it ignores reputational risks.

Consequently, there will be a strained line between measurement of operational risk for regulatory purposes and measurement of operational risk from the perspective of ERM. Many firms have gone beyond measuring market, credit, and operational risks. In particular, in recent years, firms have also attempted to measure liquidity, reputation, regulatory and strategic risks. If a firm follows the approach of classifying risks into market, credit, and operational risks, it then has to ascertain and measure how it is exposed to these risks. This asks for the identification and measurement of the exposures across the institution using unbiased approaches. For a comprehensive list of risks within an organization to be completed and made useful, it is important that all the information be collected, made comparable, and updated. Firms that have grown through mergers or without IT hubs, individual units typically face the problem that they have some systems that are not compatible.

Organizations need to be able to aggregate common risks across all of their businesses to effectively analyze and manage those risks. The objective is to capture almost all risks, quantify them and employ a consistent approach and aggregate specific risk exposures across the entire firm as well as analyze the aggregate risk profile considering risk co-relations. Ideally, a good ERM framework should be able to summarize all risks into a rational level of available capital.

Firms that implement ERM can hence, have an amount of capital that substantially overshoots its regulatory requirements because it aims at wealth maximization. In a nut-shell, the challenge to aggregate various risks remains the main challenge for all firms intending to implement an ERM approach and for Financial Institutions in particular. At most banks, IT systems are still unable to dialogue between them and the

semantics used to evaluate risks are so very different that it is almost impossible to reconcile them in one single pattern. Ignoring these main issues providing ERM reports that address risks “by quantum numbers” is useless and dangerous. It might take some more time to build the right infrastructure to implement an ERM framework, but financial institutions should be convinced that this is the best way to avoid mistakes as the ones that generated the current Financial Crisis.

PART-III: STOCHASTIC MEASUREMENT OF EFFECTIVENESS OF OPERATIONS RISK MANAGEMENT

In contrast to historical risk management practices many Financial firms have rather different risk management objectives. Most Financial BPO’s expect high level of similarity of operations at donor and recipient locations and their corresponding risks that they are expected to bear. As a paradox, financial firms are taken for granted that their operations are riskier, and very few financial BPO’s investors and even fewer captive firm’s managers seem to devote much attention to active risk management. BPO managers often dismiss risk management as secondary, with completion of task (performance) as the main objective. However, if there is one lasting insight that modern finance has given us, it is the inseparable trade-off between risk and expected return, hence one cannot be considered without reference to the other. Moreover, it is often overlooked that proper risk management can, by itself, be a source of stability. This is summarized neatly in ancient wisdom that one of the best ways to make money is not to lose it”.

More formally, consider the case of a manager with a fund that has an annual expected return ER [N] of 15 % and an annual volatility AV [R] of 70%, a rather new entrant into the BPO space that few established firms would take seriously. Now suppose that such a manager layered a risk management process on top of his investment strategy that eliminates the possibility of returns lower than (-20%), i.e., his return after implementing this risk management protocol is R* where : $R^* = \text{Max} [R, -20\%]$.

Under the assumption of lognormally distributed return values, it can be reflected that the estimated value ER [R*] of R* is 20.9 % by ignoring the left tail of the distribution of R below - 20%, the estimated value of the strategy is doubled. Risk management can be a significant & methodical source of measurement. However, the volatility SD[R*] of R* is 66.8%, lower than the volatility of R, hence risk management can simultaneously increase stability and decrease risk. Basic Log tables report the E[R*] and SD[R*] for various values of E[R*] and SD[R*] and the truncation levels and illustrate the direct impact that risk management can have on organizational performance. Of course, risk management at times takes the simple form of a guaranteed floor for returns. Indeed, such “blanket insurance” is often at a high premium if it can be obtained at all and is equivalent to the premium of a “PUT OPTION” on the value of the portfolio.

For example, the Black-Scholes premium for the put option inherent is equal to 15.4% of the value of the “underlying” to be insured. But this only highlights the applicability and economic value of risk management according to the Black-Scholes formula, the ability to manage & handle risks in such a way as to create a floor of -20% for annual performance is worth 15.4% of assets under management. The more effective a manager’s risk diagnostics methodology the more it will contribute to risk management.

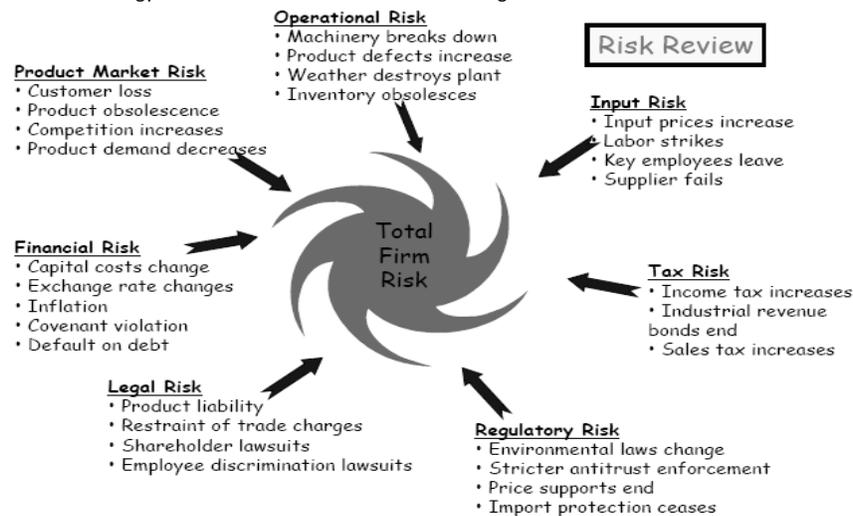


Figure 2. A representative illustration of a typical BPO Firm – Captive or Third-party – With services being rendered from cross-border multi-site locations.

THE VALUE TABLE FOR RISK MANAGEMENT

SD[R]	E[R]						E[R]					
	-5%	0%	5%	10%	15%	20%	-5%	0%	5%	10%	15%	20%
	K = -50%						K = -20%					
5%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%
10%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
25%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-4.8%	0.0%	5.0%	10.0%	15.0%	20.0%
50%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	9.6%	9.9%	10.0%	10.0%	10.0%	10.0%
75%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-1.6%	2.2%	6.3%	10.7%	15.4%	20.2%
90%	24.9%	25.0%	25.0%	25.0%	25.0%	25.0%	21.2%	22.3%	23.2%	23.9%	24.4%	24.7%
	-3.5%	1.0%	5.7%	10.4%	15.3%	20.2%	5.6%	8.6%	11.9%	15.4%	19.2%	23.1%
	48.3%	48.8%	49.2%	49.4%	49.6%	49.8%	41.6%	42.7%	43.8%	44.8%	45.7%	46.5%
	-0.5%	3.5%	7.8%	12.1%	16.6%	21.2%	12.0%	14.8%	17.8%	20.9%	24.3%	27.8%
	71.4%	72.0%	72.5%	73.0%	73.4%	73.7%	64.2%	65.0%	65.9%	66.8%	67.6%	68.5%
	2.5%	6.3%	10.3%	14.4%	18.7%	23.0%	17.3%	20.0%	22.9%	25.9%	29.1%	32.4%
	95.2%	95.7%	96.2%	96.7%	97.1%	97.5%	88.2%	88.8%	89.4%	90.0%	90.7%	91.4%

	K = - 40%						K = - 10%					
5%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-4.6%	0.0%	5.0%	10.0%	15.0%	20.0%
	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.4%	4.9%	5.0%	5.0%	5.0%	5.0%
10%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-3.1%	0.7%	5.2%	10.0%	15.0%	20.0%
	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	7.8%	8.9%	9.6%	9.9%	10.0%	10.0%
25%	-4.7%	0.1%	5.1%	10.0%	15.0%	20.0%	2.2%	5.1%	8.5%	12.3%	16.4%	20.8%
	24.5%	24.8%	24.9%	25.0%	25.0%	25.0%	18.3%	19.8%	21.1%	22.2%	23.1%	23.8%
50%	-1.5%	2.6%	6.8%	11.3%	15.9%	20.6%	10.7%	13.2%	15.9%	18.9%	22.2%	25.7%
	46.6%	47.3%	47.9%	48.5%	48.9%	49.2%	38.7%	39.9%	41.0%	42.2%	43.3%	44.4%
75%	2.8%	6.4%	10.2%	14.2%	18.3%	22.6%	17.7%	20.2%	22.7%	25.5%	28.4%	31.5%
	69.3%	70.0%	70.7%	71.3%	71.9%	72.4%	61.5%	62.5%	63.2%	64.1%	65.0%	66.0%
100%	6.7%	10.2%	13.8%	17.5%	21.4%	25.4%	23.5%	25.9%	28.5%	31.2%	34.0%	37.0%
	93.0%	93.6%	94.2%	94.7%	95.3%	95.8%	85.7%	86.2%	86.8%	87.5%	88.2%	88.9%
	K = -30%						K = -5%					
5%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-3.0%	0.4%	5.0%	10.0%	15.0%	20.0%
	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	3.0%	4.4%	4.9%	5.0%	5.0%	5.0%
10%	-5.0%	0.0%	5.0%	10.0%	15.0%	20.0%	-1.0%	1.9%	5.7%	10.2%	15.0%	20.0%
	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	6.2%	7.8%	8.9%	9.6%	9.9%	10.0%
25%	-3.8%	0.7%	5.3%	10.2%	15.1%	20.0%	4.8%	7.3%	10.2%	13.5%	17.3%	21.4%
	23.4%	24.0%	24.4%	24.7%	24.9%	24.9%	16.8%	18.3%	19.7%	21.0%	22.1%	23.0%
50%	1.5%	5.1%	8.9%	12.9%	17.1%	21.5%	13.6%	15.8%	18.3%	21.1%	24.1%	27.3%
	44.3%	45.2%	46.1%	46.9%	47.6%	48.2%	37.2%	38.4%	39.6%	40.8%	41.9%	43.1%
75%	7.0%	10.2%	13.6%	17.1%	20.9%	24.8%	20.9%	23.1%	25.5%	28.0%	30.8%	33.7%
	66.8%	67.6%	68.4%	69.2%	69.9%	70.7%	60.1%	60.9%	61.8%	62.7%	63.7%	64.6%
100%	11.7%	14.7%	18.0%	21.4%	24.9%	28.5%	26.7%	29.0%	31.4%	34.0%	36.7%	39.5%
	90.7%	91.2%	91.9%	92.5%	93.1%	93.8%	84.4%	84.9%	85.5%	86.2%	86.9%	87.6%

Table 1. Expected values E[R*] (first rows) and standard deviations SD[R*] (second rows) of R* = Max[R; k] for lognormally distributed return R with expectation E[R], standard deviation SD[R], and truncation point k.

LIMITATIONS OF THE STUDY & FURTHER RESEARCH RECOMMENDATIONS

The scope of this paper is broad. The advantage is that an integral view of operations management is pursued, leaving ample room to observe and analyze other interesting events and/or episodes which otherwise would have been left out of the analysis. The broad scope is also the limitation of this study. Investigating a large number of processes of multiple delivery objectives with services spread across the Globe over a longer period prohibits a rigorous single econometrical approach, due to non-homogeneous services across industries.

The purpose of the research design is to investigate and to measure the relationships between the measures representing Product, Process, People, Policies & Training relate aspects coupled with the ability of Business Recovery (Continuity of business aspect) and hence is limited to process specific functions only and does not deal with broad strategic concepts like the decision to Centralize / Migrate the process, Quality of Hiring, Validation of employee back grounds, promotions, error identification/resolution, management style, attrition, transportation of employees, mismanagement or occurrences of frauds.

Research directly linking the strategies of firms to internationalization developments coupled with operational efficiency and measurement is in a nascent stage and requires further research.

Four broad lines of further research can be identified:

- Interrelationships between banks, firms and other financial services,
- Increase of in depth knowledge,
- Expand on negative performance differential, and
- Interaction between regulation, bank strategy and change.

Also, the relationship between changes in financial systems and internationalization of processing outfits would be addressed in this study but can be analyzed in more detail separately. Is there some causality observable; for example are organizations with a high degree of internationalization catalysts for changes in the financial systems of their home countries? Similarly, the impact of financial crises on internationalization strategies would be touched upon briefly in the study, but could be extended further. In generally, outsourced firms who retreated from internationalization were triggered by financial crises. However, case studies that would be presented in the study, would suggest that during financial crises some organizations loss has been another's gain; a considerable portion of mergers and acquisitions might take place between the largest organizations themselves.

CONCLUSION

Since the 1980s, many of the large firms in the world have increased centralization of their activities dramatically. Currently, international capital and banking markets are more intertwined than ever, making a correct assessment of the costs and benefits of internationalization a serious matter for bank management, regulators as well as shareholders. This study contributes to a better understanding of the internationalization of services. The study appraises to what extent organizations are internationalized because of internal, institutional or sectoral incentives. The internationalization strategies of the world's largest organizations in UK, USA & European countries between 1980 and 2008 would be described and analyzed.

European firms have dominated the internationalization of centralized studies and this study draws strategic commonalities and differences are identified on the basis of a strategic typology developed for this study. The central research question deals with the effectiveness of internationalization. Using a self constructed internationalization database, differences would be estimated between foreign and domestic operations performance, and the effects on customer service & legal compliance. For example, a higher degree of internationalization / outsourcing / centralization has on average would not have contributed to a firm's performance. Similarly, most stakeholders might not have gained by more internationalization.

The study also tries to address the future outlook for centralization of services - how will the internationalization of firms proceed? The potential for further financial deregulation in the home country, uncertainty on the international regulatory regime, and the business mix of the firm are likely drivers for the firm's future internationalization strategy and profitability enhancement.

The study suggests that a business process migration strategy should be thoroughly defined for the short and long term using a risk management framework. This should specify the organization's risk capacity (maximum risk tolerance) and risk measurement viability (desired risk tolerance) following the guidelines proposed by the Operations risk management team.

Periodic metrics (MIS reports) should be defined based on the commonly used activity selection strategies in terms of expected dynamics and volatility of legal breaches. Line of authority and responsibility delegation should be imposed with a scalar chain approach and monitored through the operational diagnostics methodology. Designing and embedding a good risk diagnostics framework is the only way for BPO's to provide clarity to internal and external stakeholders regarding the way they want to maximize wealth. Operations risk and lines of business need to work cohesively to create a new, more conscious risk culture within BPO firms. In this work, we also point out that the way risks have been aggregated and reported so far is sub optimal. A substantial amount of literature explores how BPO's can implement an Enterprise Risk Management framework, but few BPO's have tried to implement it and even less have been successful. IT systems for different risks that cannot share information and the lack of methodology to make them comparable are among the primary challenges related to this failure. Implementing a sound ERM approach to monitor and report risks is going to be the main challenge for BPO's in the next future. Large investments in infrastructure will be needed if BPO's are intending to succeed. Moreover, in the long run, benefits are likely to scale and overcome costs. Last, we argue that the risk governance structure may have also played a fundamental & primary role in the failure of risk management practices at most outsourced firms.

Weak reporting lines and lack of visibility at senior management level are, in our opinion, are the main issues that should be solved in order to ensure the independence of the operations risk function. Eventually, the list of issues that we have analyzed in this article may not be comprehensive, but they definitely present a good starting point for outsourced firms that want to use the current financial crisis as the best opportunity to reshape and improve their risk management processes and practices.

- Operations Risk diagnostics by the firm can facilitate risk management by the firm's equity holders.
- Operations Risk diagnostics by the firm can create value in ways that investors cannot duplicate for themselves.
- Operations Risk diagnostics can increase firm value by decreasing financial distress costs.
- Operations Risk diagnostics can add value by lowering the risk faced by important non-diversified investors.
- Operations Risk diagnostics can increase firm value by reducing taxes.
- Operations Risk diagnostics can lead to easier and better performance evaluation, thereby reducing external monitoring costs and consequently, the firm's capital costs.
- Operations Risk diagnostics can add to firm value by providing internal funding for investment projects.

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VALUE RELEVANCE OF ACCOUNTING INFORMATION: EVIDENCE FROM SRI LANKA

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ABSTRACT

The purpose of this paper is to investigate the value relevance of accounting information at Colombo Stock Exchange (CSE) in Sri Lanka. The study use earnings per share (EPS), book value per share (BVPS) and return on equity (ROE) as the independent variables and market price per share (MPS) as the dependent variable. Sample of the study includes 129 companies selected from 6 major sectors at CSE. Cross sectional and time series cross-sectional regressions are used for the data analysis. Study finds that EPS, BVPS and ROE have positive value relevance on market value of securities. However, the explanatory power of combined variables is below average. Value relevance of EPS and ROE has slightly increased when the sample include only accounting variables with positive values. But, BVPS does not comply with that finding. EPS is the most value relevant variable out of the three variables, in Sri Lanka. Further, explanatory power of EPS and ROE has considerably improved after the new information technology adoption at CSE. However, reverse trend is visible for BVPS. This study is unique because this is the first study which examines the impact of technological advancements on value relevance of accounting information related to the CSE.

KEYWORDS

Accounting information, Book value per share, Earnings per share, Return on equity, Value relevance.

INTRODUCTION

The main objective of financial reporting is to assist investors in valuing equity. For financial reporting to be value relevant, it is a condition that accounting numbers should be related to current company value. If there is no association between accounting numbers and company value, accounting information cannot be termed as value relevance.

The concept of value relevance can be defined in a number of ways. For instance, Francis and Schipper (1999) discuss four different interpretations of value relevance (see, section 3 - different perspectives on value relevance). This study follows the their forth definition: "A statistical association between accounting information and market values or returns, particularly over a long window, might mean only that the accounting information in question is correlated with information used by investors". According to the above definition, value relevance is measured as the degree of statistical relationship between information included in accounting statements and market values (prices) or returns. Further, this study focuses value relevance on long term yearly observations.

Value relevance research in Sri Lankan context goes back to mid 1990s. In 1997, Nimal as well as Samarakoon in their individual attempts to test the validity of Capital Asset Pricing Model (CAPM), find as a by-product that earnings to price ratio is positively related with the stock returns. Further, they find that book value to market value has no significant relation with value of securities. Since 1997, there was no evidence found to investigate the value relevance of accounting information in Sri Lanka. In the mean time accounting environment has drastically changed by the adoption of the information technology to accounting process as well as to deliver accounting information to end users.

Nowadays, most of the firms use software packages like QuickBooks to improve the accounting performance. Unlike in manual accounting system under a computerized system, regular financial reports generate automatically. Therefore, the quality of the accounting information has significantly increased during the recent past. Further, financial accounting information delivery system has been affected by information technology (IT). CSE introduced a new website in October 2007 to provide quick, more accurate and timely market based and other public information of each company. With this facility, all investors could access to financial statements of each company through the new website and earlier, financial reports were transferred by mail. Therefore, it is important to re-examine the value relevance of accounting information in Sri Lanka.

Value relevance researchers are interested in identifying the significance of accounting information on market values of equity. Hence, this study has three objectives. First, to study how accounting information is related to market value of equity. The second objective is to study how much accounting information explains the variation in equity values and the third objective is to see the impact of new technology adoption at CSE on value relevance of accounting information. The pooled data analysis regression is used to analyze the data.

This study is important to many stakeholders. It provides new knowledge to investors to make and revise their investment portfolios. The value relevance of accounting information in Sri Lanka may have direct implications for other stakeholders such as financial accountants, standard setters, educators, and auditors whose common goal is to improve the value relevance of accounting information by altering the current financial reporting models.

The remaining of the paper is organized as follows. Section 2 gives a brief description of CSE while Section 3 explains different perspectives to value relevance. The Section 4 presents the review of literature. Section 5 explains sample and methodology and Section 6 contains results of the analysis followed by discussion. The last Section is conclusion of the study.

COLOMBO STOCK EXCHANGE (CSE)

Although share trading in Sri Lanka commenced in 1896, formalization of the market was started with the establishment of the "Colombo Securities Exchange (GTE) Limited" in 1985, which took over the operations of the stock market from the Colombo Share Brokers' Association. It was renamed as 'Colombo Stock Exchange' (CSE) in 1990. The CSE is a company limited by guarantee, established under the Companies Act No. 17 of 1982 and is licensed by the Securities and Exchange Commission of Sri Lanka (SEC).

The Colombo Stock Exchange (CSE) has 234 listed companies representing 20 business sectors as at September 2010. CSE recorded its highest market capitalization of Rs. 1380.9 billion (approx. US \$ 12 billion) on the May 2010. At present CSE is one of the best performing markets in the

world. During the period 1990 to 2009 All Share Price Index (ASPI) recorded an average annual return of 23.04 percent and in the last year (2009) it was 103.10 percent which is one of the highest when compared with worldwide exchanges.

The CSE was one of the first Exchanges in the region to successfully automate its clearing and settlement functions in 1991, with the installation of a Central Depository and an Electronic Clearing and Settlement System for share transactions, and an Automated Trading System (ATS) in 1997. Further in 1991 CSE took measures to liberalize the investment in the stock market with the abolition of 100 percent transfer of property tax on share purchase by non-nationals. In the year 2009 foreign trading was 54 percent of the total value of annual transactions.

Internet trading was started by one brokerage firm in June 2003. At present internet trading at the CSE is facilitated via eighteen broker firms. The new CSE website, www.cse.lk, was launched in October 2007. This web site provides access to a comprehensive array of real time market information, order book information and includes charts and graphs of market and company financial statements in order to help existing and potential investors to make investment decisions. The new website is designed with the view of making primary communication channel for the CSE and most information with downloadable facilities with the formats of Excel, Concurrent System Versions (CSV) and Hyper Text Mark-up Language (HTML). With the introduction of this new web site, the annual financial reports of listed companies are provided online for investors. Before the introduction of this facility investors get annual reports of listed companies after longer time of the financial year. Further, under the new technology adoption, investors can access to financial information of all the listed companies even if they have not invested money. Therefore, this technology adoption should increase the value relevance of financial information.

DIFFERENT PERSPECTIVES ON VALUE RELEVANCE

Francis and Schipper (1999) and Nilsson (2003) define value relevance from four perspectives: (a) Fundamental analysis view of value relevance - intrinsic value of the firm is measured without referring to market value. According to this approach value relevance focuses on the usefulness of accounting information in equity valuation. Information in financial statements is relevant for valuation if portfolios based on this information generate abnormal returns. This study does not follow fundamental analysis view because this interpretation assumes that prices do not reflect intrinsic values but it is done accounting numbers and the measures of intrinsic values are not readily available. Therefore, the author believes that prices reflect intrinsic value. (b) The predictive view of value relevance – the accounting number is relevant if it can be used to predict future earnings, dividends, or future cash flows. According to this interpretation, accounting numbers are used to predict the variables in a valuation model. Since this is not directly relating to value measures of accounting information, this interpretation does not adopt in this study. (c) The information view of value relevance – where the value relevance of accounting information is measured in terms of market reactions to new information. In order to test this interpretation some specific accounting news information should be related firm value. Since it is out of the scope of the study to test the impact of specific accounting news on share prices, this interpretation is also kept aside. (d) The measurement view of value relevance – the financial statement is measured by its ability to capture or summarize information that affects equity value. Both price and returns can be used for value relevance under measurement view approach. Nilsson (2003, p. 5) states that “If an accounting item has a reliable association with a market matrix, then the accounting matrix captures or aggregates the information that is used by market participants to determine prices or returns”. According to this interpretation, value relevance is measured as the ability of financial statement information to capture and summarize information, irrespective of their source, that reflect in share prices. The author adopts this interpretation because it is not necessary to use specific first hand accounting information for the analysis.

REVIEW OF LITERATURE

Most of the early empirical studies in the field of market based accounting research focus on BVPS and EPS and are usually concern with response coefficient that relates to returns and prices. Lev (1989) reports that earnings have generally very low explanatory power, and he suggests that the practical values of reported earnings are in doubt.

Hayn (1995) examines the effect of loss cases on the returns–earnings relation and its cross-sectional validity. Sample of the study consists of all firm years which earnings data are available on the Compustats, primary, supplementary and tertiary active and research files. It contains 85919 pooled observations over the period 1962-1990. The results of the study show that the overall sample earnings are positively associate ($\beta = 0.95$, $R^2 = 9.3\%$) with stock returns. When pooled data of only profitable firms are considered, stock price movements are much more strongly linked to current period earnings. Excluding loss cases results in almost a tripling of both the one year response coefficients (2.62) and its explanatory power ($R^2 = 16.9$) of annual earnings with respect to contemporaneous returns. However, when the sample consists of only of loss cases, the magnitude of reported losses do not correlate at all with the returns ($\beta = 0.01$, $R^2 = 0.00$).

Collins, Maydew and Weiss (1997) examine the value relevance of earnings and book values of equity over 40 years from 1953-1993. The sample includes 119383 firm-yearly observations from NYSE, AMEX and NASDAQ. They decomposed the explanatory power of earnings and book value in to: (1) the incremental explanatory power of earnings, (2) the incremental explanatory power of book values, and (3) the combined explanatory power of both earnings and book values. They find that both earnings and book value significantly relate with the market value and combined coefficient of determination (R^2) is 54%.

Frankel and Lee (1998) explore relationships between share prices and accounting variables using data from 20 countries including US and Japan. They use current earnings, current book value and earnings forecasts to see the value relevance of accounting information including dependent variable as share prices. The explanatory power of the model is high, 88% for US and 72 for other countries combined. They find that all the variables significantly relate with the market price.

King and Langli (1998) examine relationships between share prices with BVPS and EPS variables with data from Germany, Norway and the United Kingdom. Their findings reveal that both BVPS and EPS are significantly related to share prices in all three countries. However, the combined explanatory power of three variables is about 70% in the United Kingdom, 60% in Norway and 40% in Germany. They further find that explanatory power of variables are differs in the accounting systems of the three countries. Book values explain more than earnings in Germany and Norway but less than earnings in United Kingdom.

Barth, Beaver and Landsman (1998) examine whether the relative roles of BVPS and EPS depend on the financial health using data from US. They find that the relative explanatory power of the BVPS increases and explanatory power of EPS decline. Further, the authors find that explanatory power of earnings and book value variables systematically varies across industries.

Bao and Chow (1999) examine the relative value relevance of two sets of accounting information of listed Chinese companies called B-shares. The two sets of accounting information are: (1) financial statements based on Chinese accounting regulations domestic (GAAPs) and the other

based on International Accounting Standards (IASs). The authors adopt Ohlson (1995) model with BVPS and EPS as main independent variables and stock price as the dependent variable. Extreme left and right 1% in the sample for either EPS or BVPS ratios is removed from the sample to control for outliers. Using 213 firm-yearly observations from 1992 to 1996, the study finds that both earnings ($\beta = 2.84, t = 5.50$) and book value ($\beta = 0.35, t = 1.97$) based on domestic GAAPs are significantly associated with B-share prices explaining jointly 21% of the variation of stock price. The reported earnings based on IASs are significantly related ($t = 6.31$) to share prices but book value based on IASs is not significant at conventional level ($t = 0.814$). However, the joint explanatory power of both variables is 24%.

In another study of international accounting differences, Graham and King (2000) examine relationships between share prices and accounting variables in Indonesia, Malaysia, Philippine, South Korea, Taiwan and Thailand. They use MPS as dependent variable with BVPS and current residual income as explanatory variables. They find that coefficients of these variables are statistically significant for all the countries. The explanatory power of the model ranges from 24% in Thailand to 90% in Philippines.

Oyerinde (2009) examines the value relevance of accounting data in the Nigerian Stock Market. His model uses average price per share as dependent variable with EPS, earnings yield and ROE as independent variables. The sample consists of top 30 companies from 2001 to 2004 in Nigerian Stock Market. The author finds that the relationship between share price and EPS is high but the ROE is very low. However, combined model of all the variables reflects very high level of R^2 value of more than 95% each year.

Among Sri Lankan findings, Nimal (1997), Samarakoon (1997) and Perera and Thrikawala (2010) are worth to notice. Nimal (1997), investigates the relationships between stock return and selected fundamental variables (Beat, Size, E/P and B/M) in the CSE using yearly data for the period 1991 to 1996. He finds that only E/P is significantly relate with the stock returns. Samarakoon (1997) also verify the above finding. Perera and Thrikawala (2010) examines the value relevance of accounting information on CSE taking 6 commercial banks listed in CSE from 2005-2009. Using the model used by Oyerinde (2009), they find that EPS and ROE are significantly related with share price and only EPS reflect higher explanatory power on market price.

The following papers examine the changes in value relevance of accounting information over time. Collins, Maydew and Weiss (1997) find that both EPS and BVPS have a joint explanatory power of 54% and the combined value relevance has not declined during the 40 years period but increased slightly. However, incremental value relevance of earnings has declined but it is overcome by the incremental value relevance of book value. This view is accepted by the Francis and Schipper (1999). They also report that value relevance has declined (increased) for earnings (book value) getting R^2 value 27% (22%) in 1952 (1953) to 16% (54%) in 1994. Brown, Kim and Lys (1999) find that value relevance as measured by R^2 has declined significantly when controlling for different scale effect. Lev and Zarowin (1999) suggest that the value relevance of book value, earnings and cash flows have decreased over the past 20 years. They further report that value relevance deterioration more pronounced for cash flows than earnings.

SAMPLE AND METHODOLOGY

SAMPLE

Total sample of the study consists of 129 companies from 6 largest sectors in terms of number of companies at CSE. Companies selected for the study under each sector and percentage of sector market capitalization out of total is given in table 1.

Table 1: Classification of the sample

Sector	No of companies	% of market capitalization
Bank, Finance and Insurance	27	17.88
Food and Beverage	15	11.96
Hotel	27	9.89
Manufacturing	28	5.88
Plantation	17	1.73
Land and Property	15	1.77
Total	129	49.11

Source: CSE data library 2009

METHODOLOGY

The idea of value relevance research is to establish a relationship between market values of equity and accounting variables. This can formally expressed as follows.

$$MVE = f(AI) \tag{1}$$

Where

MVE = market value of equity

AI = accounting information

This study adopts the Ohlson model framework (1995) and concluded association tests between share price and three sets of variables. The following valuation model is consisting of the variables used by Collins, Maydew and Weiss (1997), Bao and Chow (1999) and Oyerinde (2009). In order to ascertain the joint impact of accounting variables on marker price, the following cross-sectional time series model is specified.

$$P_{it} = \beta_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_4 ROE_{it} + \varepsilon_{it} \tag{2}$$

Where,

BVS= book value per share

EPS= earnings per share

ROE= return on equity

i = company

t = time (year)

In order to avoid look-ahead bias problem recognized by Banz and Breen (1986) the dependent variable is taken as price of shares 3 months after the end of financial year. Look-ahead is a bias caused by using data which are not yet available but assumes to be available. Actually, accounting information will come to investors' hand when they receive the annual report of the company and not at the last date of financial year.

In order to test the relation between stock price and each variable in isolation, the following regression models are established.

$$P_{it} = \beta_0 + \beta_1 BVPS_{it} + \varepsilon \tag{3}$$

The equation 3 examines the relationship between price of share and BVPS.

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \varepsilon \tag{4}$$

The equation 4 examines the relationship between price of share and EPS.

$$P_{it} = \beta_0 + \beta_1 ROE_{it} + \varepsilon \tag{5}$$

The equation 5 examines the relationship between price of share and ROE.

RESULTS

Prior research has shown that negative earnings are less value-relevant than positive earnings (e.g. Hayn, 1995 and Basu, 1997). Therefore, this section presents findings on overall sample as well as on the subsample of companies with only positive earnings and book value.

DESCRIPTIVE STATISTICS

Table 2 and 3 provide the pooled 2005-2008 minimum, average, maximum and standard deviations and correlation matrix for the variables used in the study.

As per Collins, Maydew and Weiss (1997), to control the outliers for all tests, observations having standardized residuals greater than 4 are removed. The following table shows the descriptive statistics after controlling for the outliers.

Table 2: Descriptive statistics

	BV	EPS	ROE	MPS
Mean	55	6	9	65
Standard deviation	59.88	11.31	20.41	81.56
Maximum	352	70	95	673
Minimum	-49	-49	-127	1

Source: Annual reports of each company and CSE data library 2009

Table 3 provides correlation matrix for the independent variables. As indicated in the table 3, BVPS is marginally positively correlated with EPS (r = 0.53). Further, correlation between EPS and ROE is below average (r=0.42). Therefore, the correlation matrix appears to suggest that there is no serious multicollinearity problem among independent variable.

Table 3: Correlation among independent variables

	BV	EPS	ROE
BV	1	0.53461271	0.11650601
EPS		1	0.42086143
ROE			1

VALUE RELEVANCE OF BOOK VALUE PER SHARE

This section reports the findings of value relevance equation 3. Panel A of the table presents regression parameters for the total sample while the Panel B presents regression findings for the sample of companies with only positive accounting figures.

Panel A as well as panel B of the table 4 show that BVPS has a positive impact on the market value of shares. All the regression coefficients are statistically significant at 1% level of significance. The aggregate period regression coefficient (β) is 0.758 with the explanatory power of adjusted $R^2 = 30.88\%$. The explanatory power of the model ranges from 24.42% in 2009 to 38.75% in 2007.

Panel B of the table shows that all the regression coefficients are positive and statistically significant at 1% level for the sub sample with positive accounting variables. For the aggregate sample explanatory power is 27.07% which is little lower than that of the total sample in Panel A (adjusted $R^2 = 30.88\%$). The explanatory powers of the model reported in panel B range between 17.95% in 2009 to 32.92% in 2008.

Table 4: relationship between BVPS and market value

Year	Number of observations	β	Adj-R ²
Panel A			
2006	129	0.876***	32.47
2007	127	0.780***	38.75
2008	126	0.595***	33.28
2009	123	0.820***	24.42
Aggregate	505	0.758***	30.88
Panel B			
2006	109	0.848***	29.74
2007	106	0.715***	31.38
2008	102	0.630***	32.92
2009	83	0.746***	17.95
Aggregate	400	0.739***	27.07

Notes: * p<.05, ** p<.01, *** p<.001

VALUE RELEVANCE OF EARNINGS PER SHARE

Panel A of the table 5 shows the regression results for the equation 4 where the independent variable is EPS. For the total sample, regression coefficients in all years are extremely high. It seems that EPS highly associate with market value of share. For the aggregation of all years, regression coefficients are 4.48 with the explanatory power of 38.55%. Further, explanatory power of the model has continuously increased from 28.71% in 2006 to 69.38% in 2009.

Table 5: Relationship between EPS and market value

Year	Number of observations	β	Adj-R ²
Panel A			
2006	129	4.03***	28.71
2007	127	3.20***	19.66
2008	126	3.93***	53.68
2009	123	7.33***	69.38
Aggregate	505	4.48***	38.55
Panel B			
2006	109	4.00***	25.86
2007	106	4.51***	31.15
2008	102	4.17***	54.03
2009	83	8.31***	73.27
Aggregate	400	5.05***	41.76

Notes: * p<.05, ** p<.01, *** p<.001

As in the panel A, regression coefficients for the sub-sample of positive accounting numbers also large and statistically significant at a conventional significance level of 1%. The regression coefficient for the aggregate sample is 5.05 and it is higher than regression coefficient of aggregate sample in panel A ($\beta = 4.48$). The explanatory powers of the model in panel B are always higher than that in the panel A except for the year 2006. The explanatory power of aggregate sample in panel B is higher than that of Panel A by 3.21%.

Both panel A and B show that value relevance of EPS has gradually increased over the time. This trend is clear in the panel B. Where, the explanatory power of the model has increased consistently from adjusted $R^2 = 25.86\%$ in 2006 to 73.27% in 2009.

VALUE RELEVANCE OF RETURN ON ASSTES

Panel A and Panel B of the table 6 show that the regression results of equation 5 which explain the relationship between ROE and MPS. Panel A of the table reports the regression results for the total sample where as panel B reflects the regression results only for the companies with positive accounting numbers.

Table 6: Relationship between ROE and market value

Year	Number of observations	β	Adj-R ²
Panel A			
2006	129	0.87***	4.93
2007	127	0.82***	4.28
2008	126	1.39***	15.05
2009	123	2.40***	18.30
Aggregate	505	1.18***	8.58
Panel B			

2006	109	1.17**	3.02
2007	106	1.02**	3.06
2008	102	2.04***	13.45
2009	83	2.93***	12.02
Aggregate	400	1.53***	6.18

Notes: * p<.05, ** p<.01, *** p<.001

All the regression coefficients are positive and statistically significant in the panel A and it implies that there is a positive impact of ROE on MPS. However, not like other two variables (BVPE and EPS) explanatory powers of the model are relatively low (for example, the aggregate companies in panel A adjusted R² is 8.58%).

Panel B of the table also confirm the same results as in the panel A. The regression coefficient of aggregate firms is 1.53 with the adjusted R² of 6.18%.

Table 7 presents the regression results of the combined independent variables of BVPS, EPS and ROE as per equation 2. Similar to table 4, 5 and 6, panel A reports regression results for the total sample and panel B shows the regression results for the sub-sample with only positive accounting figures.

Table 7: Relationship between combined variables and market value

Year	Number of observations	β			Adj-R ²
		BVPS	EPS	ROE	
Panel A					
2006	129	0.61***	2.06***	0.21	37.71
2007	127	0.69***	1.00*	0.53**	43.06
2008	126	0.24***	2.82***	0.53**	57.37
2009	123	0.25***	6.54***	0.12	70.81
Aggregate	505	44.58***	2.96***	0.34***	45.99
Panel B					
2006	109	0.82***	1.85**	0.49	34.43
2007	106	0.55***	2.39***	0.90**	43.45
2008	102	0.23**	2.90***	1.31***	58.71
2009	83	0.27***	7.18***	1.61***	76.94
Aggregate	400	0.39***	3.50***	0.82***	46.59

Notes: * p<.05, ** p<.01, *** p<.001

Panel A shows that all the regression coefficients for BVPS, EPS and ROE are positive and statistically significant except for ROE in 2006 and 2009. Explanatory power of the aggregate sample is 45.99%. The explanatory powers in yearly models have gradually increased from 37.71% in 1996 to 70.81% in 2009.

Almost all of the regression coefficients in the panel B of the table are positive and statistically significant for all the independent variables. As in panel A, explanatory powers of yearly models have gradually increased from 34.43% in 2006 to 76.94% in 2009.

Further, the table reflects that in almost all the cases explanatory powers of the sample with positive accounting numbers are higher than the explanatory powers of the total sample. The explanatory power of aggregate companies in the total sample is 45.99% but the explanatory power of aggregate companies with only positive accounting numbers is 46.59%.

CHANGES IN VALUE RELEVANCE OVER TIME

This section examines how value relevance of accounting information has changed over the four years time from 2006-2009. The sample period has been divided into two for the analysis of change in value relevance of accounting information. 2006 and 2007 is identified as the period before new information technology adaption at CSE and the period of 2008 and 2009 is identified as the period after new information technology adaption at CSE. Table 8 presents average adjusted R²s (in %) of regression equation 3, 4, 5, and 2 for the independent variables BVPS, EPS, ROE and the combination respectively.

The panel A of the table shows that average explanatory powers of the four models for the total sample and the panel B shows average explanatory powers of the four models for the subsample of companies with only positive accounting numbers.

Table 8: Incremental value relevance after technology adoption

Period	BV	EPS	ROE	Combined
Panel – A				
2006-2007 (1)	35.61	24.19	4.61	40.38
2008-2009 (2)	28.85	61.53	16.68	64.09
Difference (2-1)	-6.76	37.35	12.07	23.71
Panel –B				
2006-2007 (1)	30.56	28.50	3.04	38.94
2008-2009 (2)	25.44	63.65	12.74	67.83
Difference (2-1)	-5.12	35.15	9.70	28.89

Table 8 shows that average explanatory power of BVPS for the total sample (for the sample with only positive accounting figures) has decreased by 6.76% (5.12%) after the new website is launched. Contrary to BVPS average explanatory power of EPS has increased substantially for the total sample after the new website is launched. Average explanatory power of EPS has increased by 37.35% from 24.19% to 61.53% after the new website was launched by the end of the year 2007. This value relevance increment is 35.15 for the sub sample of companies with only positive accounting figures. The change in value relevance of ROE is also as same as the change in value relevance of EPS. The combination of the variables also reports that value relevance of the combined accounting variables has substantially increased after the adoption of new information technology at CSE.

DISCUSSION

Both panels A and B of the table show that BVPS has a positive relationship with the MPS. This finding is contrary to the earlier Sri Lankan finding of Nimal (1997) and Samarakoon (1997). However, agree with the Perera and Thrikawala (2010). All the reported literature in the study except Bao and Chow (1999) in their IASs study, find the same results. The explanatory power of the variable is well below average. Perera and Thrikawala (2010) found that BVPS has a very high explanatory power on MPS. However, their sample is extremely few companies to generalize findings.

Similar to the BVPS both panels A and B of the table show that EPS has a statistically significant positive relationship with the MPS. Nimal (1997), Samarakoon (1997) as well as Perera and Thrikawala (2010) also find the same results. Findings of this study are inconsistent with Lev (1989) who reports that value relevance of earnings is negligible. All the international studies reported find the same positive relation between EPS with MPS or stock returns.

ROE also has a significant relationship with MPS in total sample as well as the sub-sample with only positive accounting variables. However, the explanatory power of the variable is very low. This is similar to the Oyerinde (2009).

The joint explanatory power of the combined model of all the independent variables is 45.99% for the total sample and 46.59 for the sample of companies with only positive accounting variables. This result is somewhat similar to the Collins et al Maydew and Weiss (1997) who find that joint value relevance of earnings and book values is 54% for the US listed companies and King and Langli (1998) for their Norway sample ($R^2 = 40\%$) However, some studies find that value relevance of accounting information is very low. (Bao and Chow,1999; Lev, 1989;Hayn , 1995). At the same time, there are studies, Frankel and Lee (1998), King and Langli (1998) in their US and UK sample, Oyerinde (1999), Perera and Thrikawala (2010), reflect high value relevance of accounting information.

Hayn (1995) reveals that the value relevance of positive earnings information is much higher than that of the negative earnings. This study also finds that value relevance of EPS is always higher for the sample of companies with only positive earnings than value relevance of EPS of the total sample. However, this pattern is reversed for the BVPS and ROE variables.

This study finds that value relevance of accounting information has dramatically changed during the sample period concerned. Value relevance of EPS and ROE has substantially increased in the years 2008 and 2009 than in the previous two years. This is contrary to the results of Collins, Maydew and Weiss (1997), Francis and Schipper (1999) and Lev and Zarowin (1999) they find that value relevance of earnings has declined over the period. However, the increasing value relevance of earnings in this study may be due to the impact of new information technology adoption at CSE. But, the value relevance of BVPS has decreased over the time and this is contrary to the Collins, Maydew and Weiss (1997) and Francis and Schipper (1999). However, Lev and Zarowin (1999) find that value relevance of BVPS has decreased over the period.

SUMMARY AND CONCLUSION

Value relevance is one of the key major areas in market based accounting research. Past studies have shown that among other variables book value and earnings have significantly related with the market price of stocks. Some studies have shown that value relevance of accounting information has changed over the time due to changes in accounting as well as business environment.

This paper examines the value relevance of BVPS, EPS and ROE for selected 129 companies at CSE over the period 2006-2009. This paper has three main objectives. The First objective is to study how accounting information is related to market value of equity. Second, how much accounting information explains the variation in equity values and the third objective is to see the time varying pattern of value relevance specially the impact of new technology adoption at CSE on value relevance of accounting information.

Study uses cross-sectional regression as well as pooled regression techniques for the analysis. This study finds that BVPS, EPS and ROE have a positive and statistically significant relationship with market price per share. However, their explanatory powers differ from each other (Adjusted R^2 s are 30.88%, 38.35% and 8.58% respectively for the total sample). New technology adoption has considerably increased the value relevance of accounting based earning information (EPS and ROE) in Sri Lanka. However, the incremental value relevance of the BVPS is negative during the period considered for the study. This study has not been designed to examine the possible reason for the negative trend in BVPS. Among the three variables most sensitive and most value relevant variable is EPS for the Sri Lankan data.

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RECENT TRENDS AND DEVELOPMENTS IN APPAREL MARKETING IN INDIA**DR. K. RAJESH KUMAR****HEAD****DEPARTMENT OF MANAGEMENT STUDIES****AMC ENGINEERING COLLEGE****18TH KM, BANNERGHATTA ROAD****BANGALORE – 83****MR.C.KANDASAMY****RESEARCH SCHOLAR****ANNA UNIVERSITY COIMBATORE****COIMBATORE****N.MANJUNATH****RESEARCH SCHOLAR****ANNA UNIVERSITY COIMBATORE****COIMBATORE****ABSTRACT**

India has become the sought after destination for global brands and retailers owing to escalating consumerism, unprecedented awareness and youth centric customer base. The apparel retail sector in India has really emerged as a successful venture owing to its more than 35% share in the overall retail sector in India. The study Recent Trends and Developments in Apparel Retailing in India is mainly dealing with apparel retailing covering some of the popular malls in India.

KEYWORDS

Apparel, Marketing, consumerism, retail & consumer preferences

INTRODUCTION

Retailing in India, is probably, as old as the Indus valley civilisation. With a retail density of 5.5 outlets for every 1000 people and a per-capita retail space of 2square feet per person, India is truly a nation of shopkeepers. But organised retailing, as a professional, service oriented set-up, to provide the consumers with a whole new shopping experience, is a phenomenon in the 1990's. With factors, such as families getting nuclearized, a younger Indian consumer, exposure to global lifestyles, lifting of import curbs and increasing interest of corporate sector in retailing, the retail revolution has begun.

The apparel retail industry comprises sales of all men's wear, women's wear and children's wear. The men's wear sector retails the outer and under garments for men and boys. The women's wear sector consists of the sale of all women's and girls' garments including dresses, suits and coats, jackets, tops, shirts, skirts, blouses, sweatshirts, sweaters, underwear, etc. The children's wear sector includes sales of garments for children between the ages of 0-2 years.

Apparel retailing together with accessories and luxury goods sales, formed 74.5% of the market for the global apparel and textiles industry, which generated total revenues of USD1.3 trillion in 2008. In comparison, the unprocessed textiles retailing sector (cotton yarn, rayon and acetate, synthetic fibres and wool yarn) was worth USD221.1 billion, which represented 13.7% market share of the global apparel and textiles industry.

Indian's apparel retail industry has generated total revenues of USD27 billion in 2008, representing a CAGR of 10.9% for 2004-2008. Apparel is the second largest retail category in the country, representing 10% of the retail market. In India, Western-style branded apparel merchandising is gathering momentum in the country's apparel retail industry. India's Gen Y is increasingly being exposed to Western culture through films and cable television. A large, young working population, growing numbers of working women and emerging opportunities in the services sector are all boosting the average spending of affluent consumers on branded clothing

RETAIL INDUSTRY: APPARELS

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acetate, synthetic fibres and wool yarn) was worth USD221.1 billion, which represented 13.7% market share of the global apparel and textiles industry.

Changes in consumer preferences and limited consumer spending power in some developed markets in the US, Germany and Japan have slowed down growth of the global apparel and textiles industry. Asia-Pacific apparel retailing grew by 3.1% to reach a value of USD224.4 billion, contributing 32.8% to the size of the world market. The region is forecast to have an apparel retail market value of USD259.6 billion by 2013. Women's wear retailing accounted for 52.1% of the region's market, generating total revenues of USD116.8 billion in 2008. Sales of men's wear form 30.1% of the region's market value with USD67.5 billion.

Internet retailing is growing in popularity among consumers. Consultants from Retail Forward Inc. reported that 25% to 30% of online consumers purchase some type of online clothing every month. Online retailers provide payment options such as credit cards, debit cards, bank transfers, and other electronic payment systems such as Paypal. Many consumers cited convenience and cheaper prices as being among the reasons they shop online. Online retailing for clothes is expected to grow over the next few years. There is a huge potential for Internet retailing to become a viable alternative distribution channel in the clothing sector.

Large retailers in hypermarkets or large-scale retail store formats are rapidly expanding their market share in the Asia-Pacific apparel retail industry. Large retailers offer lower prices and a greater range of products and allow consumers to shop in one place. For the clothing and footwear market, displays are very important as they enable consumers to get to know the products quickly. Good displays require large spaces and large department stores and unique specialty stores are in the best position to provide this. In Singapore, specialist retailers account for more than 40% of total sales for clothing retail. Specialist retailers sell more branded products. Though brands are also available in department stores, there has been a growing trend towards brand manufacturers developing their own retail stores. Private label products are also popular in apparel retailing at department stores in Singapore.

Apparel retailing in Indian and Chinese markets have achieved rapid growth since their WTO admission. With retail market liberalisation in Asia, many leading European and American apparel retailers including Mango and Ga have expanded their presence in the region. The Asia-Pacific region's top apparel retailing players come from Japan, China, Taiwan and South Korea. Stronger Asian players include Giordano International, SOGO, Wang Fujung, and the Japanese leading retail chain AEON. Giordano International operates 1,100 stores in China alone, selling casual apparel and accessories. It also has stores in Taiwan, Singapore, Japan and South Korea. The retailer has developed a chain of Bluestar Exchange discount stores. Asia's second tier of major apparel retailers come from India, Indonesia and Thailand.

China's apparel retail industry is the fastest growing in the world, together with Brazil and India. The Chinese industry's compound average growth rate (CAGR) is at 7.9% for 2004–2008, driven by the country's rapid economic expansion and subsequent increase in consumer purchasing power. AT Kearney highlighted that an affluent middle class that regularly buys mid- to high-end apparel is emerging in the country's urban areas. With gradual liberalisation of the country's retail markets, and having steadily opened up the market to foreign giants, the potential for further growth in the Chinese apparel retail industry is immense. However, the increased competition will lead Chinese apparel retailing to lower prices and a possible deceleration in the near future. The market value is expected to reach USD106.2 billion by the end of 2013.

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TRENDS AND INFORMATION TECHNOLOGY IN RETAIL SECTOR

Over the years, as the consumers demand increased and the retailers geared up to meet this increase, technology evolves rapidly to support this growth. The hardware and software tools that have now become essential for retailing can be categorised as follows:

Bar coding and scanners

Point of sale systems use scanners and bar coding to identify an item, use pre-stored data to calculate the cost and generate the total bill for a client. Tunnel scanning is a new concept where the consumer pushes the full shopping cart through an electronic gate to the point of sale. In a matter of seconds, the items in the cart are hit with laser beams and scanned. All that the consumer has to do is to pay for the goods.

Payment

Payment through credit cards has become quite widespread and this enables a fast and easy payment process. Electronic cheque conversion, recent development in this area, processes a cheque electronically by transmitting transaction information to the retailer's and customer's bank, rather than manually process a cheque, the retailer avoids it and hands it back to the customer along with a receipt, having digitally captured and stored image of the cheque, which makes the process very fast.

Internet

Internet is also rapidly evolving as a customer interface, removing the need of a consumer physically visiting the store.

CRM systems

The rise of loyalty programs, mail order and the internet has provided retailers with real access to customer data. Data warehousing and mining technologies offer retailers the tools they need to make sense of their consumer data and apply it to business. This along with the various

available CRM (Customer Relationship Management) systems, allow the retailers to study the purchasing behaviour of customers in detail and grow the value of individual consumers to business.

Advanced Planning and Scheduling Systems

APS systems can provide improved control across the supply chain, all the way from raw material suppliers' right through to the retail shelf. These APS packages complement existing (but often limited) ERP packages. They enable consolidation of activities such as long term budgeting, monthly forecasting, weekly factory scheduling and daily distribution scheduling into one overall planning process using a single set of data.

Store Site Location

Demographics and buying patterns of residents of an area can be used to compare various possible sites for opening new stores. Today, software packages are helping retailers not only in their location decisions but in decisions regarding store sizing and designing.

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STUDY

RESEARCH DESIGN

To know the recent trends and developments in apparel retailing it was necessary to get feedback from the apparel retailers. For this it was decided that the right mode of approach could be a combination of surveys which is a mix of exploratory and descriptive research. This result is based on both primary and secondary data.

SAMPLE DESIGN

Universe: All the apparel retailers of Indian market mostly malls and exclusive outlets. Universe is all about the total size of population; it covers the whole area of apparel retail market.

Sample Size: 150 apparel retailers. Sample size of study shows the number of retailers selling apparels in the Indian market.

Sampling Method: The sample has been collected by the questionnaire, which were given to the respective retailers in person. The respondents who filled the response sheets were the people who were operating their own retail outlet or working as manager there.

SOURCES OF DATA

1. **Primary data** – Primary data was collected through a well structured questionnaire designed separately for apparel retailers. A pilot study was conducted to test the utility of the questionnaire and necessary changes were being made.
2. **Secondary data** – Secondary data are collected from various books, websites, magazines and journals.

DATA ANALYSIS AND INTERPRETATION

- 1). 96.67% of the apparel retailers are satisfied with the sales happening in their stores. So they are having good sales
- 2). Discounts and freebies are one of the important techniques of attracting customers to the apparel stores. 95.33% of apparel retailers are providing discounts and freebies to their customers.
- 3). Every retailer have give importance to feedback received from the customers, as they increase the confidence of the customers regarding the retailers. 96% of apparel retailers give importance to customer feedback.
4. Every apparel retailer should maintain a customer database of their regular customers. This helps the retailers to offer customised service each and every customer. But unfortunately only 8% of the apparel retailers in India maintain customer database.
5. Every apparel retailer should intimate their customers about the annual, seasonal, festive sale etc. This helps to customers to know about sale going on in the particular shop. But unfortunately only 16% of the Indian apparel retailers are intimating their customers about the annual, seasonal, festive sale etc.
6. Every retailer should extend greetings to their customers on special occasions like festivals, this makes them feel important. But only 40.67% of Indian apparel retailers are greeting their customers on special occasions.
7. Every apparel retailer should cope up with the latest trends to suit the changing preference of the customers. 96% of the Indian apparel retailers are coping up with the latest trends to suit the changing customer preference.
8. This survey shows that today almost 90.33% of Indian customers prefer branded products compared to local products.
9. Today more than 94% of Indian customers in cosmopolitan cities are influenced by mall culture than shopping in exclusive outlets.
10. 86% of Indian apparel retailers think that retail industry has more customers from urban areas than from rural and semi rural areas.
11. According to Indian apparel retailers 88.97% of people visiting malls are youngsters and working women.
12. Apparel retailers in India should facilitate EMI facility to salaried class to induce them to try branded apparels. But unfortunately less than 0.67% is providing this facility to their customers.
13. All the retailers should promote the use of eco-friendly reusable paper bags which helps in protecting our environment. But unfortunately only 6.67% of Indian apparel retailers are using eco-friendly reusable paper bags.
14. Apparel retailers should offer the exchange and buyback offers to the customers to keep them at ease while shopping. But unfortunately only 4% of the Indian apparel retailers are providing this facility.
15. Apparel retailers should provide seasonal clothing line to suit the needs and trends of those seasons. 91.33% of Indian apparel retailers are offering different range of clothing during different seasons.
16. Indian apparel retailers should offer gift vouchers to attract and retain customers. But only 16.67% of Indian apparel retailers are managing to provide gift vouchers.
17. Apparel retailers should offer membership cards to their regular customers for enduring customer relationship. But unfortunately only 2.67% of Indian apparel retailers are offering membership cards to their regular customers.
18. FDI is bringing vast opportunities for development of retail sector. But only 51.33% of the Indian apparel retailers agree with this.

FINDINGS

1. Most of the apparel retailers in India are convinced with the sales in their outlets.
2. Most of the apparel retailers in India are not intimating their customers about the annual sale, seasonal sale, festive sale etc., in their outlets.
3. The apparel retailers in India are not giving importance to greet their customers on the festive occasions.
4. The Indian apparel retailing sector is neglecting the customers from rural and semi-rural areas.
5. The malls and retail outlets in India today are youth centric.
6. Most of the apparel retailers in India are not offering easy instalment facility to the customers.
7. Majority of apparel retailers in India are not aware of the usage of eco-friendly reusable paper bags.
8. Most of apparel retailers in India are not offering exchange and buyback offers to their customers.
9. Majority of the apparel retailers are not providing gift vouchers and discount coupons to their customers.
10. Most of the apparel retailers in India are not offering membership cards to their regular customers.
11. Most of the small apparel retailers in India are of the impression that FDI in retail sector is not beneficial to them.
12. In most of the apparel retail outlets in India, variety and colours are not available for plus sizes.

SUGGESTIONS

1. Customer database has to be maintained by the Indian apparel retailers as it is facilitating customised service to the customers. It even serves the purpose of intimating the customers regarding annual, seasonal, festive sale etc.
2. Apparel retailers in India must also consider the rural and semi-rural customers as most of them today have purchasing power and can afford to buy.
3. Malls and retailers in India must also concentrate on styling products for middle aged people.
4. Apparel retailers in India must provide easy instalment facility to salaried class as this induces them to try branded apparels.
5. Apparel retailers in India must advocate the usage of eco-friendly reusable paper bags to promote green marketing.
6. Apparel retailers in India must offer exchange and buyback offers to their customers, to make them feel at ease.
7. Small apparel retailers in India have to consider FDIs in expanding their horizons.
8. Apparel retailers in India must concentrate on the plus sized customers by offering wider varieties and colours in plus sized apparels.
9. Apparel retailers in India must provide opportunities for the customers to avail membership cards, gift vouchers, discount coupons etc., to provide customer delight.

10. Apparel retailers in India must provide personal touch to their regular customers in the form of seasonal and festive greetings.

CONCLUSION

Indian apparel retail sector has become one of the important sectors in the Indian retail industry. More than 35% of Indian retail sector comprises of apparel retailing. This sector is also bringing in new trends in retailing and is the most developing and profitable sector. Based on the interpretation of my study, I have come to the conclusion that the apparel retailers are happy with their sales, they are prioritizing customer feedback and offering discounts and freebies to the customers. They must try to lay emphases on green marketing, promote usage of eco-friendly products to make this world a better place to live. FDI must be encouraged for sustainability and enrichment of Indian retail market.

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**PERFORMANCE MEASUREMENT OF MUTUAL FUNDS IN INDIA IN THE POST LIBERALISATION
ERA – AN ECONOMIC REVIEW
(A STUDY BASED ON SAMPLE OF 100 ACTIVELY TRADED OPEN ENDED FUNDS WITH GROWTH OPTION)**

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ABSTRACT

Mutual fund came out to a good investment option to medium and small investors who do not excel at stock market due to lack of professional knowledge, limited resources and failure to diversify. Though the industry has been operational so long, it still not able to win the trust of investors. The figure shows that in the year 2008, out of total financial savings of household sector only 7.7% goes to mutual fund industry as compare to 56.5% to bank deposit and 17.5% to insurance sector. As on march 2009, the industry was comprising of 39 asset management companies, managing financial assets of over 493,285 crs contributed by more than 4.76 crs investors spread all over the country. The performance evaluation of mutual funds is an important area for financial economists. The assessment of fund manager's performance influences the investors to allocate their resources into different mutual funds. The present study is an attempt to analyze the performance of Indian mutual fund industry since the liberalization of economy till now. (i.e. form the year1993 to the year2009).

KEYWORDS

Mutual Funds, Investment, finance, fund management & performance.

INTRODUCTION

The economic development of a nation is reflected by the progress of the various economic units, broadly classified into corporate sector, government and household sector.

A financial system facilitates the transformation of savings of individuals, government as well as business in to investment and consumption. A vibrant and competitive financial system is necessary to sustain reforms in the structural aspect of the economy. Financial system in India has made commendable progress in extending its geographical spread and functional reach during last two decades. The Indian financial sector in general and the mutual fund industry in particular continue to take turnaround from early 1990s when government has opened the economy for private and foreign players. The reform process has sent signal to the waves of changes in saving and investment behavior adding a new dimension to the growth of financial sector. Mutual fund came out to a good investment option to medium and small investors who do not excel at stock market due to lack of professional knowledge, limited resources and failure to diversify.

Indian mutual fund industry is as old as four decades but its growth, performance and awareness has reached to the present level only since last few years. SEBI as regulator issued the first set of regulations governing the transparency of operations, investor's protection and disclosure standard of mutual fund industry in 1993.

Though the industry has been operational so long, it still not able to win the trust of investors. The figure shows that in the year 2008, out of total financial savings of household sector only 7.7% goes to mutual fund industry as compare to 56.5% to bank deposit and 17.5% to insurance sector. As on march 2009, the industry was comprising of 39 asset management companies managing financial asset of over 493,285 crs contributed by more than 4.76 crs investors spread all over the country. The assets have grown at a compounded annualized growth rate of 48 percent over a period of four decades, which is an evidence of growing popularity of mutual funds in the country (as per figure made available by Association of Mutual funds in India). The impressive growth can be attributed to entry of private players in the industry coupled with rapid growth of capital market after economic liberalization and globalization

The performance evaluation of mutual funds is an important area for financial economists. The assessment of fund manager's performance influences the investors to allocate their resources into different mutual funds. After reviewing the various work on performance evaluation a need of the study on performance measurement of Indian mutual fund industry covering the entire period since liberalization was felt and it was realized under this perspective that there are potential areas in which research can be attempted. The present study is an attempt to analyze the performance of mutual fund industry in India since the liberalization of economy till now (i.e.1993-2009).

OBJECTIVES OF THE STUDY

1. To assess the financial performance of Indian mutual funds in terms of risk & return in a post liberalization period.
2. To compare the performance of funds with a bench mark portfolio (market index) and risk free return.
3. To develop the relationship between fund return and market return.

SCOPE OF THE STUDY

1. The time span of study is post liberalization period i.e. beginning from year 1993 and ends with year 2009.
2. The study is limited to open ended mutual fund scheme with growth option in India.
3. The time span is very long period about seventeen years & therefore is quite sufficient to study the performance of the mutual fund industry in India.

REVIEW OF LITERATURE

Several researchers have undertaken lots of study on mutual funds and its performance evaluation from many years .Brief of few of them is given below-

Benchmark comparison is important performance measure as it indicates to what extent the fund managers were able to produce better performance of managed portfolio compared to the market or index portfolios. Haslem, J.A., (1988) in his paper evaluated fund performance by comparing the fund return with the return on market portfolio with the comparable risk. Portfolio performance without reckoning the risk exposure do not provide fair & true picture. Various studies in the past have not only examined performance in terms of rate of return but also evaluated portfolio performance in terms of risk-adjusted rate of return (Treynor & Sharpe's indices).

Equity mutual funds assume higher risks compared to gilts, bonds or other government securities. Hence, they are expected to produce returns not only higher than the returns offered by gilts, bonds or other government securities but also high enough to match the risk level of a given equity fund .The McDonald. J.G., (1974), had measure performance in terms of Shape & Treynor's index as also in terms of Jensen's alpha. The study revealed that 54 percent of the funds had positive alphas. Mean alpha for the sample was found to be 0.052. Statically significance was not reported in his study.

Kon, S.F., (1983), in his paper evaluated performance in terms of selectivity & timing parameters over a period, January 1960 to June 1976. The sample was 37 funds. The study concluded that individually few funds have shown positive selectivity & timing skills but collectively mutual funds failed to perform satisfactorily.

Sarkar, J. & Majumdar S., (1995) evaluated financial performance of five close-ended growth funds for the period February 1991 to August 1993, concluded that the performance was below average in terms of alpha values (all negative & statistically not significant) & funds possessed high risk. No reference was provided about the timing parameters in their study.

Jaydev. M., (1996) evaluated performance of two schemes during the period, June 1992 to March 1994 in terms of returns/benchmark comparison, diversification, selectivity & market timing skills. He concluded that the schemes failed to perform better than the market portfolio (ET's ordinary share price index). Diversification was unsatisfactory. The performance did not show any signs of selectivity & timings skills of the fund managers.

Gupta, O.P. & Sehgal, S., (1997) evaluated mutual fund performance over a four year period, 1992-96. The sample consisted of 80 mutual fund schemes. They concluded that mutual fund industry performed well during the period of study. The performance was evaluated in terms of benchmark comparison, performance from one period to the next & their risk-return Characteristics. Gupta & Sehgal in another paper "Investment Performance of Mutual Funds: The Indian Experience," "presented at UTI-ICM Second Capital Market Conference, Dec" has reported that Mutual Fund Industry had performed reasonably well during their period of study.

RESEARCH METHODOLOGY

The data used in the study is secondary data. On 31 march 2009 there were 1001 mutual funds schemes floated by various mutual funds companies with total of 417300 crs asset under management, in which 293 schemes are equity mutual funds schemes, 509 schemes are income schemes and 35 schemes are balanced schemes. Out of these available schemes 100 actively traded open ended schemes with growth option are selected for study. The study period is post liberalisation period which start from 1993. Thus the study period is 17 years beginning from December 1993 to June 2009. (The list of 100 sample mutual funds selected for the study is given in the annexure in table A.)

Net Asset Value (NAV)

The average logarithmic return on mutual fund is calculated by taking month end NAVs. The source of the data is website of association of mutual fund of India (AMFI). The net asset value is the mirror image depicting the worth of the investment per unit. It is an indicator of the capital appreciation of the funds under the schemes as on date of NAV. NAV represented funds per share market value. The NAV is calculated by dividing the aggregate value of the net assets of a scheme by the number of outstanding units under the scheme.

Benchmark portfolio-

Mumbai stock exchange index (BSE-100) index is used as a bench mark in present study and is considered as market portfolio .The average logarithmic return is used as a return from market portfolio.

Risk-Free asset

A risk free asset is that asset which has zero variability of return. Investor buys an asset at the beginning of the holding period with the none terminal value, such type of asset can be considered as risk free asset. Government securities and nationalized bank deposits fall under this category as the Government securities are not easily available to the common man, Nationalized bank deposits are considered as risk free asset and interest rate on such deposit are considered as risk free return. The interest rate on bank deposits is collected from the website of RBI and logarithmic returns are calculated to find mean return.

Performance evaluation-

Following tools are used for Performance evaluation—

For each mutual fund scheme in the sample, return have been calculated by taking month end NAVs .The return for the sample schemes are calculated by using the following equation--

Rpt = Log (NAVt/NAVt-1)

Where Rpt is the annual return on mutual fund portfolio for the period t.

NAVt = net asset value for the (t) Period.

NAVt-1= net asset value for the (t-1) Period

The returns on the fund portfolio are averaged as follows

$$R_p = \frac{\sum_{t=1}^n R_{pt}}{n}$$

Rp is average return on the mutual fund portfolio.

Standard Deviation of fund return is used to calculate total risk of mutual fund portfolio.

Unique risk (unsystematic risk) –

The unsystematic risk is one which can be eliminated by diversification. This risk represents the fluctuation in return of security due to factors specific to the particular firm only and the market as a whole. These factors may be such as strike, worker unrest, change in market demand etc.

The unique risk of a security is computed as follows—

$$\begin{aligned} \text{Unique risk} &= \text{variance}(R_p) - \beta^2 * \text{variance}(R_m) \\ &= \sigma_p^2 - \beta^2 * (\sigma_m)^2 \end{aligned}$$

Measurement of BETA- Beta calculation requires covariance of the scheme returns & market returns..

$$\text{Beta} = \frac{\text{Cov}(R_p, R_m)}{\text{Var}(R_m)}$$

Where, Cov(R_p, R_m) = Covariance between the index's return & the mutual fund scheme's return. Var(R_m) = Variance in the index return.

Coefficient of determination-measure of diversification- The potential advantage of mutual fund investment is the diversification of portfolio. Diversification reduces the unique or unsystematic risk and thus improves the return and performance of funds.

The diversification extent can be measured by the value of coefficient of determination (r²). A low coefficient of determination indicates that portfolio of mutual fund is not properly diversified and fund has large scope for diversification. For such portfolio, fund manager need to take effort for proper diversification and minimizing the unique risk.

Coefficient of variation- A measure of variability or consistency in performance (C.V.)-

The standard deviation is absolute measure of variation and the corresponding relative measure is known as the coefficient of variation. It is very useful tool for measuring the variability in more than one series. A series in which coefficient of variation is higher have greater variation than the one in which it is lower. That is the series for which coefficient of variation is high is more variable, less consistent, less uniform, less stable and less homogeneous. The coefficient of variation is denoted by C.V. and calculated as follows—

$$\text{C.V.} = (\text{standard deviation}/\text{mean}) * 100$$

In the current research study coefficient of variation is used to find the variability in return or consistency in performance of various mutual fund schemes.

Sharpe Ratio: - This ratio given by William Sharpe in 1996 & is one of the most useful tool for determining a fund's performance. It is a ratio indicating the relationship between the portfolio additional return over risk free return & total risk of the portfolio measured in terms of standard deviation. As the standard represents the total risk experienced by a fund, the Sharpe ratio reflects the returns generated by undertaking all possible risk.

Sharpe ratio for mutual fund portfolio-

$$\begin{aligned} \text{Sharpe Ratio} &= \frac{R_p - R_f}{\sigma_p} \\ &= \text{Risk Premium} / \text{Total Risk} \end{aligned}$$

Where: R_p = Average Return of the fund, R_f = Average Risk Free Return

σ_p = Standard Deviation i.e. total risk of the portfolio

& Benchmark Comparison = $\frac{R_m - R_f}{\sigma_m}$

Where R_m = Average Return of the benchmark portfolio & σ_m = Standard Deviation of Market Portfolio.

A fund with the higher Sharpe ratio in relation to another fund or market portfolio is preferable as it indicates that the fund has higher risk premium for every unit of total risk. The major limitation of Sharpe ratio is that it is based on the capital market line.

Treynor's Ratio: - Jack Treynor in 1965 conceived an Index of portfolio measure called as reward to volatility ratio. He assumes that the investor can eliminate unsystematic risk by holding a diversified portfolio. Hence this performance measure adjusts excess return over the risk free return for systematic risk. The Treynor ratios for the sample schemes have been computed by using the following formula:

$$\begin{aligned} \text{Treynor Ratio} &= \frac{\text{Risk Premium}}{\text{Systematic Risk}} \\ &= \frac{R_p - R_f}{\beta_p} \end{aligned}$$

Where, R_p = Return of Portfolio, R_f = Risk Free Return, β_p = Systematic Risk of Portfolio.

As the β of the market portfolio is equal to 1.

Treynor Ratio for Benchmark Portfolio = $(R_m - R_f)$

Where R_m = Return on Market Portfolio.

If Treynor ratio of the mutual fund schemes is greater than (R_m-R_f), then scheme has outperformed the market.

Jensen Measure- Sharpe & Treynor ratio rely mainly on ranking of portfolio in comparison to the market portfolio but they are unable to evaluate that whether the fund has given return more/less than expected return. Hence there is a need for a better performance measure. Michael Jensen has developed another method for evaluate of performance of a portfolio. This measure is based on differential return & is known as Jensen's Ratio, the Jensen's Ratio measures the differences between the actual return of a portfolio & expected result of a portfolio in view of the risk of the portfolio. The model based on Capital Asset Pricing Model (CAPM), where expected return of the portfolio is measured as:-

$$R_e = R_f + \beta_p (R_m - R_f)$$

Where R_f = risk free return, β_p = beta coefficient of the portfolio, R_m = return from benchmark portfolio.

The differential return gives an indication, how well portfolio has performed. The performance measure or differential return is measured by the factor J_p & is defined by the equation.

$$J_p = \text{Portfolio return} - \text{expected return of the portfolio} \\ = R_p - \{ R_f + \beta_p (R_m - R_f) \}$$

If J_p is positive, it shows that the portfolio has performed better & it has outperformed the market & lies above the security market line.

If J_p is negative, it means that the portfolio has under performed as compared to the market & lies below the security market line.

If J_p is zero, it indicates that the portfolio has just performed what it's expected to & expected return & actual return of the portfolio both would be on the Security Market Line (SML).

Sharpe differential measure — Sharpe differential return measure is used to know the ability of the fund manager in both security selection and diversifying the portfolio.

The equilibrium return is given by capital market line (CML) as the risk premium expected to be earned by the portfolio is in relation to the total risk of the portfolio rather than the systematic risk. Differential returns are computed by the following formula-

$$R_p = R_f + (R_p - R_m) \sigma_p / \sigma_m$$

If a portfolio well diversified, the two measures (Jensen and Share) should indicate same quantum of differential return. In case the portfolio is not fully diversified, the Sharpe differential return would be small in magnitude. The difference can be interpreted as decline in performance resulting from lack of diversification

Fama Measure- Fama's Model attempts to measure the performance in terms of the components of risk of portfolio. In view of Capital Asset Pricing Model, the return of a portfolio is consisting of risk free returns & risk premium.

$$R_p = R_f + \text{risk premium.}$$

Whereas, Risk Premium = Reward for Risk + Rewards for Selection.

The reward for stock selection is for the better selection of stock for the portfolio. It's the return earned on a portfolio over & above the return. As Fama's measure is based on total risk,, so the reward for risk can be decomposed into reward for systematic risk & reward for unsystematic risk. Thus the Fama component breakdown the risk as follow-

Thus, Fama breakdowns the observed return in to four components.

- 1- Risk free return (R_f)
- 2- Reward for Systematic Risk (R_p)-- $\beta (R_m - R_f)$
- 3- Reward for unsystematic Risk (R_{id}) -- $(R_m - R_f) - \{(\sigma_p/\sigma_m) - (\beta)\}$
- 4- Reward for Stock Selection- $(R_p - R_f) - (\sigma_p/\sigma_m) (R_m - R_f)$

Fama says that the portfolio performance can be judged by the net superior returns due to selectivity. His performance measure denoted by F_p is defined by equation,

$$F_p = \text{Portfolio return} - \text{risk free} - \text{returns due to all risk} \\ = (R_p - R_f) - \{(\sigma_p/\sigma_m) (R_m - R_f)\}$$

Where F_p = Fama's measure for portfolio, R_p = portfolio return, R_f = risk free return

σ_p = standard deviation of portfolio return, σ_m = standard deviation of the market return

A positive value of F_p indicates that the fund earned return higher than expected returns & lies above Capital Market Line, & a negative value indicates that the fund earned returns less than expected returns & lies below Capital Market Line.

DATA ANALYSIS AND INTERPRETATION

Performance Evaluation On The Basis Of Risk And Return

Table 1: Statistical measures of risk and return of sample mutual fund schemes

Particulars	Maximum value	Value in %	Minimum value	Value in %	Mean value	Value in %
Risk free rate of return (Rf)	0.05135	5.13	-0.0102	-1.02	0.004130	0.41
Return on mutual fund portfolio (Rp)	0.20463	20.46	-0.02069	-2.06	0.052277	5.23
Return on market portfolio (Rm)	0.51682	51.62	0.04017	4.01	0.063420	6.34
Total risk on mutual fund portfolio (σ_p)	0.43216	43.16	0.006779	0.67	0.152147	15.24
Total risk on market portfolio (σ_m)	0.208485	20.84	0.001322	0.13	0.187420	18.74
Systematic risk of mutual fund portfolio β_p	1.5569	-	-0.18776	-	0.615194	-
Coefficient of variation	27.82	-	-24.64	-	5.05	-

Table B (Annexure) presents the risk and return statistics for sample funds and benchmark portfolio .The compiled results of table B is presented in table 1 .Table 1 show that the average return of the 100 selected funds is 0.054523 i.e 5.4% and the average total risk of portfolio is 15.21 %. As many as 35 schemes have above average return. Out of 100 selected schemes 29 schemes are in conformity with the linear relationship of above average return with above average and vice versa. Six schemes have above average return with a risk less than average and 23 schemes have less return than the average with higher risk.

On comparing the average minimum and maximum return of funds with market portfolio from the above table, it is clear that variation in return of the mutual fund portfolio is lesser as compare to stock market fluctuations, but they are not able to perform as per market portfolio or benchmark portfolio.

The mean total risk of portfolio is 15.21 %, lesser than market portfolio which is containing average total risk of 18.74% ,where as average market risk of fund portfolio is 0.6151 which is lesser then the market risk of benchmark portfolio which is always one. Out of 100 schemes only 10 schemes have beta more than 1, indicating that mutual fund portfolio are less risky than market portfolio.

Thus it is observed form the above analysis that average return (Rp), total risk (σp) and market risk (βp) on sample mutual fund port folio is lower as compare to risk & return of bench mark port folio. This concluded that mutual fund investment are subject to lower risk as compare to investment in stock market through equity shares because diversification in investment helps in reducing the risk of the portfolio but at the same time portfolio managers are not able to manage their port folio efficiently so as to provide better return than shares. There are only 35 mutual fund schemes which are showing higher return than average return of funds. The reason may be that in the sample funds there are only fifty equity schemes & 9 tax planning funds. The other are balance, Debt & Gilt funds.

Coefficient of variation- The average coefficient of variation of the sample mutual fund schemes is 5.05 varying between the ranges of 27.82 to -24.64. This shows that consistency in return of some schemes is very low.

Table 2: Number of mutual funds showing higher / lower rate of return than risk free rate of return during the period of study 1993 to 2009

Particular	No. of Funds	% of Funds
$R_p > R_f$	93	93
$R_p < R_f$	7	7

Table 2 (compiled from table B of annexure) shows that out of 100 selected fund, 93 schemes (93%) have earned higher return than risk free rate of return (R_f), 7 schemes have shown return (R_p) lower than risk free rate & they are Baroda Pioneer ELSS fund, Canara Robeco tax saver fund , Kotek income plus fund, Baroda Pioneer income fund , J.M. MIP fund , LIC MF balance fund and Sahara income fund i.e. 4 funds are income fund, 2 schemes are tax planning & one is balance schemes.

Table 3: Number of mutual funds showing higher/lower rate of return than market rate of return (R_m) during the period of study 1993 – 2009

Particular	No. of Funds	% of Funds
$R_p > R_m$	32	32
$R_p < R_m$	68	68

Out of 100 sample fund, 33% (33 funds) have shown return (R_p) higher than return on market port folio (R_m) and 67% funds have shown lesser return than market port folio. That is only 33 funds have outperformed the market which is even less than half of the fund selected. (The above results are drawn from table B which is shown in annexure)

Relationship between fund return, risk and market return is evaluated and is given below-

Correlation between fund total risk and fund return-

Correlations		fund_return	fund_risk
fund_return	Pearson Correlation	1	.148
	Sig. (2-tailed)		.141
	N	100	100
fund_risk	Pearson Correlation	.148	1
	Sig. (2-tailed)	.141	
	N	100	100

The Correlation between Fund Return and Fund Risk as per table shown above is 0.148, which shows that they have positive association with each other. In other words, higher the risk better is the return of investment scheme. Again, since the degree of relationship is 0.148, which shows that the relationship is not of much significance, which in turn concludes that investor should take into consideration the factors other than risk while investing in Mutual fund schemes

Correlation between market return and fund return-

Correlations		Fund return	Market return

fund_return	Pearson Correlation	1	.108
	Sig. (2-tailed)		.281
	N	101	101
market_return	Pearson Correlation	.108	1
	Sig. (2-tailed)	.281	
	N	101	101

On the basis of above table the correlation between fund return and Market return is calculated as 0.108. The positive relationship means that higher the market return more will be the return of the mutual fund portfolio. However, as the magnitude of the correlation is very low this simply means that relationship is not of much significance, which in turn means that fund return is more influenced by factors other than Market return.

Unique Risk and Diversification

Risk and return are the two basic factors for construction of a portfolio is to maximize the return and to minimize the risk. The risk can be reduced by diversification. Therefore the present research work tries to examine that as to what extent Indian mutual fund managers have been able to diversify their portfolio. It has been observed, through table B (annexure) that average unique risk of sample mutual fund schemes is 61.38% p.m. while the average diversification comes to 60.33%. Of the 100 schemes 85 schemes show less than average unique risk. However 7 schemes have lower unique risk than the average unique risk but have a higher degree of diversification, as it was higher than average, 6 schemes have higher than average unique risk, but have lower degree of diversification. However 35 schemes reflect less than the average degree of diversification.

Performance evaluation using Sharpe and Treynor ratio-

Table 4: Compiled results of Sharpe ratio

Particulars	No. of funds	Particulars	No. of funds
Sp>Sm	61	Tp>Tm	48
Sp<Sm	39	Tp<Tm	52
Total	100	Total	100

On evaluating the performance of sample mutual funds by Sharpe measure (as per table C of annexure) it is found that out of 100 mutual funds 61 funds outperform the market in terms of total risk and shows that have shown better excess return per unit of risk over benchmark portfolio, where as 39 funds have shown poor performance as compare to benchmark portfolio. Top five performers are Baroda Pioneer income fund, Reliance income fund, Tata Income fund, LIC MF MIP, Tata monthly income fund.

The Treynor ratio measures the excess return per unit of market risk. In terms of Treynor ratio only 48 schemes have superior return per unit of market risk as compare to benchmark portfolio.

Relationship between fund ranking as given by Sharpe measure and Treynor ratio

Correlation analysis refers to the degree of relationship between two or more variables.

Correlations

	rank_treynor	rank_sharpe
Rank_treynor Pearson Correlation	1	.260**
Sig. (2-tailed)		.009
N	100	100
Rank_sharpe Pearson Correlation	.260**	1
Sig. (2-tailed)	.009	
N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The above table shows the correlation between Rank1 and Rank2. Rank 1 is calculated on the basis of Treynor ratio whereas Rank 2 is calculated on the basis of Sharpe ratio. Both the ratios, however, incorporates fund return and fund risk despite the fact that they use different mechanisms to arrive at absolute figure.

The correlation between rank 1 and rank 2 on the basis of table shown above is 0.26, which implies these two ranks are highly associated and for an investor, more or less, both give same message regarding concern mutual fund scheme that is higher the rank, better the scheme.

Performance evaluation Using Jensen and Sharpe differential return measure-

Results of Jensen differential return measure are given in table D (Annexure).

The compiled results of table D are presented below in the table 5.

Table 5:Compiled results of Jensen and Sharpe differential measure for funds

Particulars	No. of funds	Particulars	No. of funds
Jp positive	71	Positive_Sharpe differential return	58
Jp negative	29	Negative Sharpe differential return	42
Total	100	Total	100

Table 5 indicates that out of sample of 100 funds 71 funds have positive Jensen Performance measure showing superior performance. Hence 71% of the funds are giving higher return than the equilibrium return. 29% funds are not able to give the return which is at least required at a level of systematic risk they possess.

Of the 100 sample schemes, 58 schemes (50%) reflect positive differential returns, thereby indicating superior performance, 42 schemes (42%) show negative differential returns indicating that they could not commensurate with the level of risk they possess. The top five performers are ICICI prudential growth fund, Franklin Templeton India tax shield fund, SBI magnum equity fund, LIC MF index fund & Birla Sun Life Basic industries fund. Average differential return is - 0.95% per annum. This indicates that on an average no mutual fund is earning more than expected return which they are expected to give at a given level of total risk. Out of 100 sample schemes 59 schemes have more than the average differential returns. These are the schemes which are giving positive differential return & earning more than they should have earned at a given level of total risk.

PERFORMANCE EVALUATION BY FEMO MEASURE

Sharpe, Treynor and Jensen measures evaluate the overall performance of the portfolio. Femo's model attempt is to measure the performance in terms of components of a risk of portfolio. The analysis of Femo components of performance (as per table D in the annexure) is as follows –

(1) Risk free rate of Return

Since mutual fund investment is subject to risk, both systematic and unsystematic risk thus mutual fund schemes must give return more than risk free return in order to compensate the risk they assume. It is observed through analysis that 93% of the funds are giving return more than risk free return. Only 7% schemes are giving such a poor performance that they are not able to give return even higher than risk free return. The average risk free return is 0.42% for the study period where as, average return of the fund portfolio is 5%. Thus on an average mutual fund schemes are giving risk premium.

(2) Reward for systematic risk -

The performance on risk assesses return being generated by fund managers due to their decision to take risk. They assume risk in the hope of generating extra returns on their portfolio. Table D shows that only 83 schemes out of 100 sample schemes have positive performance on account of risk bearing activity of their fund managers. Only 17 mutual fund schemes suffered from negative performance on account of risk assumed by fund manager in order to generate extra return.

(3) Reward for diversification

The performance attributed to selectivity can be attributed to diversification and net selectivity. Diversification measures additional return that compensates the fund manager for bearing diversifiable or unsystematic risk. Therefore an attempt has been made to examine fund managers performance on diversification, and it is found through Femo measure that except 6 schemes ICICI prudential child care, ICICI Prudential FMCG, SBI magnum equity, JM MIP, LIC MF balance Taurus discovery fund all the other mutual fund schemes have positive diversification and justify the fund managers ability to generate additional return for bearing diversifiable return.

(4) Return due to selectivity

The reward for stock selection is for the better selection of stock for the portfolio. It is the return earned on a portfolio over and above the return in view of the risk of the portfolio. If net selectivity is positive it indicates superior performance and return from portfolio is more than what is warranted by the risk level of the portfolio. However in case net selectivity is negative then it means that fund managers have taken diversifiable risk that has not been compensated by extra returns. This shows that return is not sufficient because of poor selection of stock by fund manager.

Table D (Annexure) indicates that 58 schemes out of a sample of 100 mutual fund schemes have positive net selectivity indicate superior stock selection ability of their fund managers, this reflects that for 58% mutual fund schemes, the diversifiable risk assumed by fund managers is compensated by extra return earned by their superior stock selection ability.

42% mutual fund schemes have negative net selectivity & indicate the poor stock selection ability of their fund managers. Top five performers with regard to selectivity are ICICI prudential growth funds, Franklin Templeton India blue chip fund, SBI magnum equity fund, LIC MF index funds fund and Birla Sun Life basic industries fund.

CONCLUSION

The study reported the following results- Sample Mutual Fund's are able to provide better return than any return on risk free securities but unable to outperform the benchmark portfolio in terms of average return. The correlation between fund return and fund risk justifies the fact that higher the returns, high the risk. There is also positive association between fund return and market return. The sample funds are not adequately diversified with a diversification of about 60.3%. Due to inadequate diversification, a substantial part of the variation in fund return is not explained by market and the fund is exposed to large diversification risk.

In terms of Sharpe ratio, 61 funds outperformed the relevant benchmark while 48 funds outperformed the relevant benchmark portfolio in case of Treynor ratio. In terms of Jensen differentiation measure 71 funds reflected superior performance. For Sharpe differential ratio 58 funds had shown superior performance. The high difference between these two ratios indicates that mutual funds are able to earn higher return due to selectivity but proper balance is not maintained between selectivity and diversification.

In terms of Femo Company of investment performance, only 17 mutual fund schemes suffered negative performance on account of risk assumed by fund manager in order to generate extra return. Except 6 schemes all the other sample schemes have positive diversification and justify the fund managers' ability to generate additional return for bearing diversifiable risk. Thus on the whole it can be concluded that, there is

no conclusive evidence that indicates that performance of mutual fund industry in India is superior to the market portfolio during the study period.

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ANNEXURE

Table A: LIST OF SAMPLE MUTUAL FUND SCHEMES

S.no.	Name of the funds	S.no.	Name of the funds
1	Baroda Pioneer ELSS	51	Kotak gilt investment regular - G
2	Birla Sun Life – 95	52	Kotak Bond Deposits - G
3	Birla Sun Life Front Line equity fund -G	53	Kotak income plus - G
4	Birla Sun Life advantage fund - G	54	Canara robeco income - G
5	Birla Sun Life freedom fund - G	55	Canara robeco gilt - PGS – G
6	Birla Sun Life Buy india fund - G	56	Baroda Pioneer income - G
7	Canana Robeco balance fund - G	57	JM balanced - G
8	Canara.Robeco. equity diversified - G	58	JM equity - G
9	Canara.Robeco. equity diversified tax saver	59	JM MIP - G
10	D.B.S. chola growth fund - G	60	JM G- sec regular - G
11	D.B.S. chola triple ace - G	61	LIC MF balance – G
12	DSP black rock - G	62	LIC MF equity - G
13	DSP black rock top 100 equity reg - G	63	LIC MF govt sec - G
14	Escort growth - G	64	LIC MF growth - G
15	Escort balanced - G	65	LIC MF MIP - G
16	Franklin tempelton india balance	66	LIC MF tax plan – G
17	Franklin tempelton india blue chip - G	67	LIC MF index sensex - G
18	Franklin tempelton India prima - G	68	UTI MNC - G
19	Franklin tempelton india Taxshield - G	69	UTI balance - G
20	Franklin pharma - G	70	UTI equity - G
21	HDFC equity - G	71	UTI equity tax saving plan - G
22	HDFC capital builder - G	72	UTI mastar index - G
23	HDFC LT advantage – G	73	UTI master plus (91) - G
24	HDFC tax saver - G	74	UTI master value - G
25	HDFC income fund-G	75	UTI service industry - G
26	HDFC growth - G	76	UTI nifty index fund - G
27	HSBS equity - G	77	UTI master share - G
28	ICICI prudential child care – G	78	Morgan stanley growth - G
29	ICICI prudential FMCG - G	79	Reliance growth - G
30	ICICI prudential growth - G	80	Reliance income
31	ICICI prudential balanced - G	81	Reliance vision- G
32	ICICI prudential income - G	82	Sahara tax gain - G
33	SBI magnum balanced - G	83	Sahara income - G
34	SBI magnum contra fund - G	84	Sahara growth - G
35	SBI magnum equity - G	85	Tata balanced fund –G
36	SBI magnum FMCG	86	Tata growth - G
37	SBI magnum global - G	87	Tata income fund - G
38	SBI magnum income - G	88	Tata monthly income fund - G
39	SBI magnum MIP - G	89	Taurus bonanza - G
40	SBI magnum index - G	90	Taurus discovery - G

41	SBI magnum multiplier plus - G	91	Taurus tax shield – G
42	SBI magnum taxgain - G	92	Taurus income-G
43	SBI magnum pharma - G	93	ING care equity - G
44	Sundaram BNP paribas balanced	94	ING income - G
45	Principal balanced - G	95	Nifty benchmark ETS –G
46	Principal child benefit carrer builder	96	UTI CCP balanced – G
47	Principal growth - G	97	UTI pharma health care - G
48	Principal index - G	98	Birla Sun Life Basic Industries - G
49	Principal income - G	99	Canara robeco MIP – G
50	Kotak - 30 - G	100	DBS chola gilt investment - G

Table- B: RISK AND RETURN STATISTICS FOR MUTUAL FUND VS MARKET PORTFOLIO

S. No.	Rf	Rm	σ_m	Rp	Σp	βp	Cov	unique risk	R2
1	0.00119	0.046007	0.18834	0.001153	0.1819714	0.8274	157.82	0.8274	67.46%
2	-0.00807	0.051682	0.174092	0.097593	0.159868	0.740695	1.64	0.740695	65.06%
3	0.03514	0.093169	0.20499	0.110571	0.185626	0.77441	1.68	0.77441	73.13%
4	-0.0078	0.05162	0.174092	0.078432	0.244861	1.1606	3.12	1.1606	68.11%
5	0.00119	0.46007	0.18834	0.034637	0.119289	0.532029	3.44	0.532029	70.60%
6	0.001322	0.063461	0.190994	0.114165	0.179631	0.78807	1.57	0.78807	71.69%
7	-0.00212	0.041957	0.167399	0.036136	0.115336	0.58703	3.19	0.58703	72.64%
8	0.051355	0.065215	0.208485	0.066752	0.189964	0.75709	2.85	0.75709	69.04%
9	0.00119	0.046007	0.18834	-0.02069	0.179462	0.83095	-8.67	0.83095	76.09%
10	0.007881	0.085846	0.191144	0.055684	0.228367	0.662978	4.1	0.662978	62.74%
11	-0.0102	0.056554	0.18787	0.02557	0.026921	-0.026066	1.05	-0.026066	3.32%
12	0.00119	0.046007	0.18834	0.082054	0.13799	0.6497	1.68	0.6497	78.68%
13	0.051355	0.065215	0.208485	0.085996	0.175707	0.69782	2.04	0.69782	68.56%
14	0.007881	0.08584	0.191144	0.086203	0.20452	0.91263	2.37	0.91263	72.76%
15	0.007881	0.085946	0.19114	0.084584	0.161592	0.719056	1.91	0.719056	72.37%
16	0.00119	0.046007	0.18834	0.058456	0.128861	0.607369	2.2	0.607369	78.86%
17	-0.00502	0.040582	0.173181	0.057661	0.215864	1.029	3.74	1.029	68.19%
18	-0.00502	0.04058	0.173181	0.062078	0.241817	1.1546	3.9	1.1546	68.39%
19	0.00119	0.046007	0.18834	0.075539	0.164876	0.76513	2.18	0.76513	76.40%
20	0.00119	0.046007	0.18834	0.032558	0.131742	0.53064	4.05	0.53064	57.56%
21	-0.00502	0.040582	0.173181	0.084156	0.196342	0.836684	2.33	0.836684	54.46%
22	-0.00502	0.040582	0.173181	0.048237	0.18817	0.922	3.9	0.922	72.03%
23	0.007881	0.063461	0.190994	0.105434	0.190396	0.81522	1.81	0.81522	68.00%
24	-0.00727	0.057269	0.17989	0.093685	0.20742	0.961341	2.21	0.961341	69.52%
25	0.001322	0.063461	0.190994	0.033194	0.028411	-0.083063	0.86	-0.083063	31.18%
26	0.001322	0.063461	0.190994	0.086794	0.185767	0.84722	2.14	0.84722	75.87%
27	0.03514	0.093969	0.204962	0.127797	0.207831	0.82321	1.63	0.82321	65.90%
28	0.007881	0.08584	0.191144	0.069337	0.20044	0.90921	2.89	0.90921	75.18%
29	0.00119	0.046007	0.18834	0.048894	0.159776	0.95036	3.27	0.95036	65%
30	-0.00308	0.07808	0.192751	0.089982	0.21239	0.94272	2.36	0.94272	73.22%
31	0.00119	0.046007	0.18834	0.041197	0.144668	0.6667	3.51	0.6667	75.35%
32	-0.00308	0.067808	0.192751	0.040186	0.030576	-0.090706	0.76	-0.090706	32.73%
33	-0.00807	0.051682	0.174092	0.043059	0.209325	0.9675	4.86	0.9675	64.75%
34	0.00119	0.046007	0.18834	0.05374	0.185688	0.805192	3.46	0.805192	66.97%
35	-0.00212	0.041957	0.167399	0.0095	0.22857	1.5569	24.06	1.5569	71.66%

36	0.00119	0.046007	0.18834	0.006434	0.151804	0.58468	23.59	0.58468	52.62%
37	-0.00807	0.051682	0.174092	0.049759	0.237163	1.2207	4.77	1.2207	80.29%
38	-0.00308	0.067808	0.192751	0.030423	0.027207	-0.029608	0.89	-0.029608	4.40%
39	0.007881	0.085846	0.191144	0.02937	0.022131	0.08342	0.75	0.08342	50.24%
40	0.03574	0.093969	0.20496	0.08088	0.19088	0.797	2.36	0.797	73.25%
41	-0.00212	0.040582	0.173181	0.034329	0.240781	1.2309	7.01	1.2309	78.42%
42	-0.00502	0.040582	0.173181	0.029039	0.247929	1.19129	8.54	1.19129	10.29%
43	0.00119	0.046007	0.18834	0.027057	0.16766	0.73505	6.2	0.73505	68.20%
44	0.001322	0.063461	0.190994	0.06433	0.13259	0.60924	2.06	0.60924	77.04%
45	0.00119	0.046007	0.18824	0.039146	0.144942	0.68045	3.7	0.68045	79.32%
46	0.007881	0.085846	0.191144	0.082451	0.145336	0.65371	1.76	0.65371	73.91%
47	0.001322	0.063461	0.190994	0.06734	0.211987	0.95866	3.15	0.95866	74.62%
48	0.00119	0.046007	0.18834	0.041138	0.16383	0.60927	3.98	0.60927	49.07%
49	0.001322	0.063461	0.190994	0.010166	0.079389	-0.18547	7.81	-0.18547	18.33%
50	-0.00308	0.067808	0.192751	0.080141	0.209683	0.96197	2.62	0.96197	78.32%
51	-0.00308	0.067808	0.19275	0.04328	0.43216	-0.12946	9.99	-0.12946	33.35%
52	0.00119	0.046007	0.18834	0.036907	0.02922	-0.103182	0.79	-0.103182	44.28%
53	0.05135	0.06521	0.20848	0.020155	0.039675	0.14554	1.97	0.14554	58.51%
54	0.03574	0.09396	0.20496	0.036801	0.03523	-0.13092	0.96	-0.13092	58.02%
55	0.00119	0.046007	0.18834	0.039898	0.046618	-0.17676	1.17	-0.17676	50.99%
56	0.03514	0.09396	0.20496	0.017257	0.006779	-0.00833	0.39	-0.00833	6.43%
57	-0.00807	0.05168	0.17409	0.0219	0.15085	0.58588	6.89	0.58588	45.72%
58	-0.00807	0.05768	0.17409	0.038696	0.2014	1.0601	5.2	1.0601	83.98%
59	0.05135	0.065215	0.20848	0.02025	0.03337	0.12635	1.65	0.12635	60.92%
60	0.00119	0.046007	0.18834	0.04412	0.04683	-0.187759	1.06	-0.187759	57.01%
61	0.05135	0.065215	0.20848	0.04655	0.170158	0.66446	3.66	0.66446	81.42%
62	0.00119	0.046007	0.18834	0.030588	0.19514	0.92686	6.38	0.92686	89.46%
63	0.00119	0.046007	0.18834	0.033698	0.042813	-0.13588	1.27	-0.13588	35.76%
64	0.00119	0.046007	0.18834	0.03077	0.21507	0.99495	6.99	0.99495	75.93%
65	-0.00308	0.0678	0.19275	0.04263	0.030128	0.112564	0.71	0.112564	58.26%
66	-0.0102	0.05655	0.18787	0.03185	0.189674	0.78776	5.96	0.78776	60.99%
67	0.03574	0.09396	0.20496	0.06167	0.18225	0.74272	2.96	0.74272	69.76%
68	-0.00308	0.0678	0.19275	0.04343	0.14584	0.65774	3.36	0.65774	75.57%
69	-0.00807	0.051682	0.174092	0.05434	0.108104	0.51989	1.99	0.51989	83.72%
70	-0.00212	0.04957	0.167399	0.018664	0.14675	0.791866	7.86	0.791866	81.84%
71	0.00119	0.046007	0.18834	0.04708	0.17499	0.76789	3.72	0.76789	68.33%
72	-0.00308	0.0678	0.19275	0.060704	0.17284	0.80698	2.85	0.80698	81.01%
73	-0.00212	0.04195	0.16739	0.023	0.15315	0.821461	6.66	0.821461	80.60%
74	-0.00308	0.0678	0.192751	0.040021	0.19893	0.8305	4.97	0.8305	64.77%
75	0.00119	0.046007	0.18834	0.030472	0.20986	0.88142	6.89	0.88142	62.58%
76	0.001322	0.06346	0.19099	0.06054	0.17196	0.79834	2.84	0.79834	78.83%
77	-0.00212	0.04195	0.16739	-0.0106	0.261218	0.50628	-24.64	0.50628	10.52%
78	-0.00502	0.04058	0.17318	0.04323	0.18444	0.96235	4.27	0.96235	81.65%
79	-0.00807	0.05768	0.17409	0.106603	0.2224	1.1307	2.09	1.1307	78.38%

80	-0.0102	0.05655	0.18787	0.039929	0.026073	-0.0729	0.65	-0.0729	31.62%
81	-0.00807	0.05168	0.17409	0.09053	0.19275	0.9701	2.13	0.9701	76.81%
82	-0.0102	0.056554	0.18787	0.03544	0.34576	0.8002	9.76	0.8002	18.89%
83	0.03514	0.09396	0.20496	0.02764	0.03134	-0.1002	1.13	-0.1002	43%
84	0.03514	0.09396	0.20496	0.111759	0.171919	0.71003	1.54	0.71003	71.68%
85	-0.00807	0.05168	0.17409	0.05502	0.14454	0.74907	2.63	0.74907	81.42%
86	-0.00807	0.05168	0.17409	0.035329	0.17925	0.77207	5.07	0.77207	56.25%
87	-0.0102	0.05655	0.18787	0.034361	0.02586	-0.03881	0.75	-0.03881	7.95%
88	-0.0102	0.056554	0.18787	0.01872	0.019079	0.05048	1.02	0.05048	24.72%
89	-0.00807	0.051682	0.17409	0.03846	0.181035	0.885178	4.71	0.885178	72.46%
90	-0.00502	0.04017	0.17283	0.00907	0.24905	1.24884	27.46	1.24884	73.75%
91	-0.00727	0.05726	0.17989	0.03219	0.21564	0.97784	6.7	0.97784	66.54%
92	0.007881	0.08584	0.19114	0.02004	0.01972	-0.02955	0.98	-0.02955	8.25%
93	0.00119	0.046007	0.18834	0.012957	0.0206679	0.93789	1.6	0.93789	73.05%
94	0.00119	0.046007	0.18834	0.034601	0.027322	-0.0974	0.79	-0.0974	45.22%
95	0.007881	0.08584	0.191144	0.204632	0.38067	0.593	1.86	0.593	8.86%
96	0.00119	0.046007	0.18834	0.003892	0.048386	0.17605	12.43	0.17605	46.96%
97	0.00119	0.046007	0.18834	0.023392	0.094886	0.41715	4.06	0.41715	68.56%
98	0.001322	0.063461	0.190994	0.114754	0.22261	0.9822	1.94	0.9822	71.03%
99	0.007881	0.085846	0.191144	0.047106	0.049299	0.2068	0.1	0.2068	64.35%
100	0.001322	0.063461	0.190994	0.03205	0.047714	-0.1406	1.49	-0.1406	31.68%

Table C: SHERPE AND TREYNOR RATIO FOR SELECTED FUNDS AND THEIR RANK SPONSOR WISE

S.NO.	Sp	Sm	Rank	Tp	Tm	Rank
1	-0.00019	0.23795	92	-0.000044	0.044817	80
2	0.66093	0.34322	17	0.142653	0.059487	12
3	0.40636	0.28698	40	0.097404	0.058829	26
4	0.352184	0.341696	44	0.006548	0.059487	79
5	0.28038	0.237957	54	0.062866	0.044817	43
6	0.628186	0.54623	19	0.143189	0.104314	11
7	0.331691	0.263305	46	0.065168	0.044077	42
8	0.081052	0.06647	86	0.06789	0.01386	38
9	-0.121919	0.237957	96	-0.026331	0.044817	83
10	0.209325	0.40788	71	0.0721034	0.077965	35
11	1.3287	0.843955	7	-1.37228	0.158554	100
12	0.586004	0.23795	21	0.124463	0.044817	13
13	0.191752	0.066479	73	0.67453	0.01386	2
14	0.382949	0.407886	42	0.08582	0.077965	30
15	0.47467	0.40878	32	0.107947	0.078136	18
16	0.4444	0.237957	37	0.094285	0.044817	28
17	0.29037	0.26331	51	0.06091	0.045602	44
18	0.277474	0.263319	55	0.058113	0.045602	47
19	0.45093	0.23795	35	0.097171	0.044817	27
20	0.228263	0.237957	68	0.59112	0.044817	3
21	0.454187	0.2633198	34	0.097719	0.045602	25
22	0.28302	0.263319	52	0.057762	0.045602	48
23	0.51236	0.291	27	0.007881	0.05558	76
24	0.486717	0.358769	30	0.105014	0.064539	19
25	1.121819	0.325345	10	-0.41004	0.062139	95
26	0.4601	0.325345	33	0.10088	0.062139	23
27	0.44582	0.28702	36	0.11255	0.058829	17
28	0.306602	0.407886	49	0.06759	0.077965	39
29	0.298567	0.237957	50	0.0501957	0.044817	59

30	0.438165	0.36776	38	0.098716	0.68118	24
31	0.27654	0.244217	56	0.06007	0.045417	45
32	1.41503	0.36776	6	0.476991	0.07088	5
33	0.24425	0.34322	61	0.052848	0.059752	56
34	0.28302	0.23795	53	0.06527	0.044817	41
35	0.05083	0.263305	89	0.00746	0.044077	77
36	0.034544	0.23795	91	0.008968	0.044817	75
37	0.243836	0.34322	62	0.04737	0.059752	61
38	1.231411	0.35749	8	-1.1315	0.35749	98
39	0.97099	0.407886	11	0.257587	0.077965	8
40	0.23963	0.287023	65	0.05738	0.058829	49
41	0.151378	0.24657	77	0.0296116	0.042702	69
42	0.137374	0.263319	82	0.02859	0.045602	70
43	0.154282	0.23795	76	0.03519	0.044817	64
44	0.4752	0.325345	31	0.103425	0.062139	20
45	0.26187	0.23795	58	0.05578	0.044817	53
46	0.51308	0.407886	26	0.11407	0.077965	16
47	0.31143	0.32534	48	0.06886	0.062139	37
48	0.24383	0.23795	63	0.06556	0.044817	40
49	0.1114	0.32534	84	-0.047684	0.062139	84
50	0.39688	0.36776	41	0.086509	0.07088	29
51	0.107279	0.36776	85	-0.35809	0.070888	94
52	0.85561	0.23795	13	-0.24235	0.044817	91
53	-0.78638	0.066479	99	-0.214371	0.01386	86
54	0.04714	0.28702	90	-0.012686	0.058829	81
55	0.83032	0.23795	14	-0.21898	0.044817	88
56	2.6379	0.28702	1	2.14656	0.058829	1
57	0.19866	0.34322	72	0.057153	0.059752	50
58	0.2322	0.34322	67	0.044115	0.059752	62
59	-0.931691	0.06647	100	-0.246118	0.01386	92
60	0.91664	0.23795	12	-0.22866	0.044817	89
61	-0.02823	0.06647	93	0.007229	0.01386	78
62	0.15064	0.23795	78	0.031717	0.044817	66
63	0.7593	0.23795	16	-0.239181	0.044817	90
64	0.13755	0.23795	81	0.02973	0.044817	68
65	1.5172	0.051158	4	0.406088	0.00986	6
66	0.22169	0.3553	69	0.053379	0.066754	54
67	0.80719	0.28702	15	0.198075	0.05882	9
68	0.3189	0.36776	47	0.070711	0.07088	36
69	0.57739	0.34322	22	0.12006	0.05975	14
70	0.14162	0.30878	79	0.026246	0.05769	71
71	0.26226	0.23795	57	0.059767	0.044817	46
72	0.369017	0.36776	43	0.07904	0.070888	32
73	0.16406	0.2633	75	0.030586	0.044077	67
74	0.21665	0.36776	70	0.051893	0.07088	58
75	0.13952	0.23795	80	0.033221	0.044817	65
76	0.34434	0.32534	45	0.074178	0.06213	34
77	-0.04869	0.2633	95	-0.025724	0.04407	82
78	0.26163	0.26331	59	0.050143	0.045602	60
79	0.5156	0.34322	25	0.101417	0.05975	22
80	1.9226	0.35532	2	-0.64345	0.06675	97
81	0.51153	1.0463	28	0.10163	0.18216	21
82	0.13201	0.35532	83	0.05704	0.06675	51
83	-0.23912	0.287	98	0.0748	0.05882	33
84	-0.1998	0.28702	97	-0.04842	0.05882	85
85	0.43648	0.34322	39	0.084229	0.05975	31
86	0.2421	0.34322	64	0.056211	0.05975	52
87	1.723	0.35532	3	-1.14818	0.066754	99
88	1.5158	0.35532	5	0.57282	0.044561	4
89	0.251027	0.33005	60	0.052566	0.05975	57
90	0.056574	0.261508	87	0.011286	0.045798	74
91	0.18298	0.35876	74	0.040354	0.06453	63
92	0.616914	0.40788	20	-0.411177	0.077965	96

93	0.56933	0.23795	23	0.012546	0.044817	73
94	1.2228	0.23795	9	-0.34285	0.044817	93
95	0.51684	0.40788	24	0.331786	0.077965	7
96	0.05584	0.23795	88	0.015344	0.044817	72
97	0.23398	0.23795	66	0.053222	0.0422817	55
98	0.50955	0.325345	29	0.11548	62139	15
99	-0.04309	0.0368	94	0.15325	0.007036	10
100	0.644	0.32534	18	-0.2185	0.062139	87

Table D: JENSON, SHARPE DIFFERENTIAL AND FEMa MEASURES FOR SAMPLE SCHEMES

S.no.	Rp	SML	Jp	Rp-Fp	Rβ	Rid	Fp
1	0.001153	0.38263	-0.03711	0.04633	0.03708	0.00806	-0.04578
2	0.097593	0.036189	0.061404	0.0468	0.044258	0.010612	0.050793
3	0.110571	0.08071	0.029861	0.088411	0.045557	0.007714	0.02216
4	0.078432	0.06124	0.017192	0.07586	0.06904	0.014628	0.002564
5	0.034637	0.3367669	0.0096031	0.029575	0.023843	0.004542	0.005062
6	0.114165	0.083528	0.030637	0.099443	0.082206	0.015915	0.014722
7	0.036136	0.023754	0.0123814	0.028249	0.025874	0.004494	0.007887
8	0.066752	0.059295	0.007457	0.056041	0.00794	0.004688	0.010711
9	-0.02069	-0.079811	-0.059121	0.131336	0.037241	0.005463	-0.064584
10	0.055684	0.051798	0.003886	0.01034	0.051689	0.041458	0.045344
11	0.02557	-0.01433	0.0399	0.01252	-0.00413	0.02685	0.01305
12	0.082054	0.030308	0.051746	0.034027	0.029117	0.003719	0.048027
13	0.085996	0.83499	0.02497	0.063035	0.009671	0.002009	0.022961
14	0.086203	0.079034	0.007169	0.091303	0.071153	0.012269	-0.0051
15	0.084584	0.301816	-0.217232	0.073937	0.056184	0.00987	0.010647
16	0.058456	0.02841	-30046	0.031853	0.02722	0.003443	0.026603
17	0.057661	0.041905	0.015756	-0.177619	0.046924	0.009917	0.23528
18	0.062078	0.047632	0.014446	0.05865	0.058113	0.045602	0.003423
19	0.075539	0.03548	0.040059	0.040399	0.03429	0.00494	0.03514
20	0.032558	0.67953	0.007586	0.030227	0.0237819	0.007561	0.002331
21	0.084156	0.033135	0.051021	0.046681	0.03815	0.013571	0.037475
22	0.048237	0.037025	0.0112119	0.049549	0.04204	0.007509	-0.001312
23	0.105434	0.053194	0.05224	0.063281	0.045309	0.010096	0.042153
24	0.093685	-0.058965	0.15265	0.067146	0.06204	0.012375	0.026539
25	0.033194	-0.003836	0.037033	0.009376	0.0051614	0.014404	0.023818
26	0.086794	0.05397	0.03282	0.061729	0.052645	0.007761	0.025065
27	0.127797	0.083568	0.044229	0.094789	0.048428	0.011224	0.033005
28	0.069337	0.051933	0.017404	0.072321	0.070886	-0.00644	-0.002984
29	0.048894	0.043783	0.005111	0.03921	0.04259	-0.00457	0.009684
30	0.089982	0.639082	-0.5491	-0.498136	0.64216	0.10841	0.588118
31	0.041197	0.031867	0.00933	0.036487	0.030672	0.004667	0.00471
32	0.040186	0.352165	0.049695	0.008165	-0.006429	0.017673	0.032021
33	0.043059	0.050271	-0.006681	0.06109	0.05781	0.01403	-0.018031
34	0.05374	0.037272	0.016468	0.045371	0.036086	0.008099	0.008369
35	0.0095	0.0665	-0.057	0.05806	0.068623	-0.008436	-0.04856
36	0.006434	0.02739	-0.020959	0.037312	0.0262	0.00992	-0.030878

37	0.049759	0.064869	-0.0151102	0.083788	0.07293	0.008469	-0.034029
38	0.030423	-0.108925	0.139348	0.04738	-0.105845	0.1563	-0.016957
39	0.02937	0.01437	0.015	0.016908	0.006489	0.002537	0.012462
40	0.08088	0.079731	0.001149	0.95479	0.04689	0.8844	-0.87391
41	0.034329	0.050441	-0.016112	0.011408	0.05256	0.00681	0.022921
42	0.029039	-0.001267	0.030306	0.060264	0.054325	0.010959	-0.031225
43	0.027057	0.019982	0.007075	0.041086	0.032942	0.00695	-0.014029
44	0.06433	0.039176	0.025154	0.044458	0.037857	0.005282	0.019872
45	0.039146	0.031686	0.00746	0.035681	0.030495	0.003995	0.003465
46	0.082451	0.058847	0.023604	0.068443	0.050966	0.009595	0.014008
47	0.06734	0.060829	0.006511	0.070287	0.05957	0.00945	-0.002947
48	0.041138	0.028496	0.012642	0.014556	0.0273	0.011684	0.026582
49	0.010166	-0.022554	0.033214	0.02715	-0.01152	0.03735	-0.016984
50	0.080141	0.65113	0.015028	0.074036	0.068192	0.00892	0.0061049
51	0.04328	-0.01225	0.05553	0.155853	-0.009177	0.168112	-0.112573
52	0.036907	-0.00343	0.04034	0.018854	-0.00462	0.011578	0.018053
53	0.020155	0.053372	-0.033217	0.053985	0.002017	0.00062	-0.03383
54	0.036801	0.027438	0.009363	0.028349	-0.007702	0.001324	0.008452
55	0.039898	-0.006732	0.04663	0.112118	-0.00792	0.019015	-0.07222
56	0.017257	-0.000135	0.017392	0.037085	-0.00049	0.00243	-0.019828
57	0.0219	0.016863	0.005037	-0.002378	0.035	0.01677	0.024278
58	0.038696	0.055266	-0.01657	0.016339	0.06334	0.00578	0.022357
59	0.02025	0.05527	-0.03502	0.053566	0.003929	-0.00171	-0.033316
60	0.04412	-0.007227	0.051347	0.012333	-0.008414	0.01955	0.031787
61	0.04655	0.18668	-0.014013	0.20771	0.009209	-2103	-0.016116
62	0.030588	0.042729	-0.0121414	0.047626	0.04153	0.0049	-0.017038
63	0.033698	-0.004899	0.038597	0.011388	-0.00608	0.016267	0.02231
64	0.03077	0.045775	-0.015005	0.052364	0.04255	0.00862	-0.021594
65	0.04263	-0.00197	0.044602	-0.00154	0.001109	0.000432	0.04417
66	0.03185	0.04223	-0.01039	0.057194	0.05244	0.014808	-0.025344
67	0.06167	0.078832	-0.017162	-0.08396	0.043693	0.008618	0.14563
68	0.04343	0.043545	-0.0001158	0.05055	0.04662	0.007015	-0.00712
69	0.05434	0.022985	0.031355	0.029025	0.031064	0.006039	0.025315
70	0.018664	0.038811	-0.020147	0.043194	0.04093	0.00438	-0.02453
71	0.04708	0.035599	0.011481	0.02895	0.034414	0.007226	0.018126
72	0.060704	0.05412	0.006584	0.044579	0.0572	0.050766	0.016125
73	0.023	0.01192	0.01108	0.038199	0.036207	0.004118	-0.015199
74	0.040021	-0.017729	0.015775	0.070082	0.05887	0.01428	-0.0300616
75	0.030472	0.040692	-0.01022	0.020042	0.039502	0.010437	0.01043
76	0.06054	0.050924	0.009616	0.057263	0.049604	0.006335	0.003277
77	-0.0106	0.04139	-0.03079	-0.0921	0.02231	0.04646	-0.0815
78	0.04323	0.038854	0.004371	0.044593	0.04388	0.005736	-0.001365
79	0.106603	0.059493	0.047112	0.068273	0.06756	0.00877	0.03833
80	0.039929	-0.055329	0.055329	-0.000931	-0.0052	0.01446	0.04086

81	0.09053	0.01241	0.07812	1.09909	0.17672	0.93046	-1.00856
82	0.03544	0.02767	0.00777	0.11265	0.053417	0.06943	-0.07721
83	0.02764	0.08453	-0.05689	0.04413	-0.00589	0.01488	-0.016491
84	0.111759	0.187918	-0.076159	0.027952	0.04177	0.007649	0.083807
85	0.05502	0.036684	0.018336	0.04154	0.04475	0.00485	0.01348
86	0.035329	-0.038062	0.073391	0.053454	0.046132	0.015392	-0.018125
87	0.034361	0.296459	0.047157	-0.001009	-0.00259	0.011779	0.03537
88	0.01872	-0.00795	0.026672	-0.007264	0.002249	0.000688	0.025984
89	0.03846	0.04482	-0.00636	0.054063	0.05289	0.56845	-0.015603
90	0.00907	0.0514	-0.04233	0.0601	0.056424	-0.03612	-0.05103
91	0.03219	0.05583	-0.023649	0.07009	0.063109	0.014255	-0.0379
92	0.02004	0.01345	0.00659	0.015917	-0.002303	0.010347	0.004123
93	0.012957	0.04322	-0.030266	0.050367	0.042033	0.007147	-0.037413
94	0.034601	-0.003177	0.037778	0.007691	-0.004367	0.010868	0.02691
95	0.204632	0.054114	0.150518	0.399721	0.04623	0.09207	-0.195089
96	0.003892	0.009008	-0.005188	0.012702	0.00789	0.00362	-0.00881
97	0.023392	0.027275	-0.059493	0.082885	0.018695	0.003883	-0.000376
98	0.22261	0.062354	0.0524	0.147913	0.061032	0.011393	0.102039
99	0.049299	0.080265	-0.033159	0.080616	0.001455	0.000359 6	-0.03351
100	0.047714	-0.00299	0.03504	0.016842	-0.00432	0.019843	0.015208

DETERMINANTS OF CAPITAL STRUCTURE: AN EMPIRICAL STUDY OF INDIAN COMPANIES**DR. JAGANNATH PANDA****PROFESSOR****P. G. DEPARTMENT OF COMMERCE****BERHAMPUR UNIVERSITY****BERHAMPUR****DR. ASHOK KUMAR PANIGRAHI****ASSOCIATE PROFESSOR****RITEE BUSINESS SCHOOL****RAIPUR****ABSTRACT**

Factors influencing capital structure of a firm is a debatable issue which has engaged academicians for decades. Several theories have been put forward on this subject, after the landmark studies of Modigliani and Miller (1958, 1963) that established capital structure irrelevance and tax shield advantages. Amongst the several theories advanced to explain capital structure of firms, there are three major theories in the Corporate Finance literature, namely, Trade-off theory, Agency Cost theory and Pecking-Order theory that highlight different determinants of corporate capital structure. In an attempt to study the determinants of capital structure in Indian scenario and to verify whether any of the above mentioned theories can characterize the Indian corporate financing, this paper makes an empirical study of the capital financing pattern of 300 private sector Indian firms for the period 1999-2008, the period of unprecedented growth of Indian economy. The study finds out that financing with internal funds, as suggested by pecking-order theory has emerged as a major feature of corporate capital structure. Indian companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence internal funds are used first, and when that is depleted debt is issued, and when it is not sensible to issue any more debt, equity is issued. Some other determinants, however, have patterns of influences that match with the postulates of other two theories. The analysis finds out that the capital structure pattern on an average portends well for long term development of Indian corporate sector.

KEY WORDS

Capital Structure, Trade-off Theory, Pecking-Order Theory, Agency Cost Theory, Liberalization and Globalization.

JEL Classification: G32**INTRODUCTION**

How do firms choose their capital structures? In his answer to this question, Prof. Stewart C. Myers, then President of American Finance Association in 1984 said that "we don't know". Despite decades of intensive research, and hundreds of papers after Modigliani and Millers' seminal work, surprisingly there is lack of consensus even today among the finance experts on this basic issue of corporate finance. In practice, it is observed that finance managers use different combinations of debt and equity. Academicians and practitioners alike have found it difficult to find out how a firm decides its capital structure in the perfect capital markets of the west as well as in the imperfect capital markets, as in India. This has led to an upsurge in research on company finance, particularly aimed at understanding how companies finance their activities and why they finance their activities in these specific ways. A practical question therefore is: What determines the capital structure?

There are three major capital structure theories namely Trade-off Theory [Kraus, A., Litzenberger, R. (1973), Kim (1978)], Pecking-Order Theory [Myers (1984) and Myers and Majluf (1984)], Agency Cost Theory [Jensen and Meckling (1976)]. This paper undertakes study of firm level data of 300 major companies listed in BSE, taken from 20 different sectors and attempts to identify main determinants of capital structure for the period 1999-2000 to 2007-08 in the light of the above mentioned theories. Our purpose of this exercise is to verify whether any particular theory can characterize Indian corporate behavior in determining capital structure. The central issue we will address is to examine empirically the existence of inter-firm and inter-industry differences in the capital structure of Indian firms and identify the possible sources of such variation in capital structure. Efforts will be made to find out the factors that determine the financing pattern of capital structure of Indian companies, particularly in the private sector.

REVIEW OF LITRETURE

In the light of the vast literature on capital structure issues, we do not try to provide a comprehensive review, and we do not discuss theory in detail. Rather, as a starting ground, we will give a brief outline of the major theoretical ideas and the corresponding empirical implications, and present some empirical studies on capital structure issues. The focus of our discussion is on (subjectively) selected recent empirical studies.

Sound financing decisions of a firm basically should lead to an optimal capital structure. Capital structure represents the proportion in which various long-term capital components are employed. Over the years, these decisions have been recognized as the most important decisions that a firm has to take. This is because of the fact that capital structure affects the cost of capital, net profit, earning per share, and dividend payout ratio and liquidity position of the firm. These variables coupled with a number of other factors determine the value of a firm. So, capital structure is a very important determinant of the value of a firm.

Franco Modigliani and Merton Miller (hereafter called M -M) were the first to present a formal model on valuation of capital structure. In their seminal papers (1958,1963), they showed that under the assumptions of perfect capital markets, equivalent risk class, no taxes, 100 per cent dividend-payout ratio and constant cost of debt, the value of a firm is independent of its capital structure. When corporate taxes are taken into account, the value of a firm increases linearly with debt-equity (D/E) ratio because of interest payments being tax exempted. M-M'S work has been at the center stage of the financial research till date. Their models have been criticized, supported, and extended over the last 50 years.

David Durand (1963) criticized the model on the ground that the assumptions used by M-M are unrealistic. Solomon (1963) argued that the cost of debt does not always remain constant. Once the leverage level exceeds the accepted level, the probability of default in interest payments increases by which the cost of debt rises. Stiglitz (1969, 1974) proved the validity of the M-M model under relaxed assumptions whereas Smith (1972), Krause and Litzenberger (1973), Baron (1974, 1975), and Scott (1976, 1977), supported the M-M model, but only under the conditions of risk free debt and costless bankruptcy. When bankruptcy has positive costs, there exists an optimal capital structure which is a trade-off between tax advantage of debt and bankruptcy costs.

This trade-off theory was challenged by Miller (1977). He argued that bankruptcy and agency costs are too small to offset the tax advantage of debt. But when personal taxes are taken into account, this advantage is completely offset by the disadvantage of personal tax rate. Thus, in equilibrium, the value of a firm is independent of its capital structure, even when the market is imperfect. But Miller's model was rejected by DeAngelo and Masulis (1980). They argued that even if bankruptcy, agency and related costs are ignored, introduction of non-debt tax shields is enough for a firm to have an optimal capital structure. And even if these costs are taken into account, an optimal capital structure exists, irrespective of availability of non-debt tax shields. Masulis (1980, 1983), Brennan and Schwartz (1978), and Jensen and Meckling (1976) also advocated the existence of an optimal capital structure in an imperfect market, while using different mechanisms. Besides, a lot more work has been done on this problem till now, but a formal model, showing the mechanism for determining an optimal capital structure in an imperfect market, is yet to be developed.

RESEARCH METHODOLOGY

SCOPE OF THE STUDY

The proposed research is intended to examine the trend and pattern of financing the capital structure of Indian companies. The central issue we will address is to examine empirically the existence of inter-firm and inter-industry differences in the capital structure of Indian firms and identify the possible sources of such variation in capital structure in order to find out the factors that determine the financing pattern of capital structure of Indian companies, particularly in the private sector.

NATURE OF THE DATA

The nature of the data required for the purpose of study are information relating to corporate growth, mobilization of corporate finance at the national and state levels. Further, information relating to nature of industry, size and age of sample companies and their annual financial statements from 1999-2000 to 2007-08 are also needed.

SOURCE OF THE DATA

For our study purpose, only secondary data is used which is sourced from the website www.moneycontrol.com. The information relating to nature of industry, size, age, state and region, company background, value of total assets and annual financial statements of sample companies for the period 1999-2000 to 2007-2008 have been obtained from the same. Information relating to industrial and corporate growth and mobilization of corporate finance has been collected from various books, periodicals, government reports and RBI Bulletins. In some cases we have also collected the required information directly from the sampled company.

SELECTION OF SAMPLE

Keeping in view the scope of the study, it was decided to select companies on the basis of purposive sampling rather than taking the whole thing. Our sample consists of 300 firms from a heterogeneous set of 20 different sectors. For our study purpose we have taken the data of top 15 companies of each sector selected on the basis of their total assets value as on 31st March 2008. The study excludes financial and securities sector companies, as their financial characteristics and use of leverage are substantially different from other companies. As continuity and the homogeneity in the available data is a prerequisite for studying the trend of capital formation in the corporate sector, hence we had to exclude those companies whose data was not available for the entire study period or whose financial years were not in uniform.

CLASSIFICATION OF SAMPLE

The sample has been classified in terms of age, size, region and industry wise. The sample companies are classified according to their period of operation of the companies, which has been divided into three types such as very old, old and new. They are also classified under four regions i.e. north, south, east and west based upon the location of their registered offices. Under the variable of size, the companies are classified as small, medium and large sized companies. The necessity to classify the companies into different industrial groups has also been realized because the trend and source of financing differ from one industrial group to another. As it has been already mentioned earlier, we have taken our samples from 20 different sectors, where we will study the inter-industry differences in the capital structure of the sample companies.

PERIOD OF STUDY

The time period under consideration is a long time span of nine years i.e.1999-2000 to 2007-08. The idea behind selecting a period of recent past was because the corporate performance in India has under gone rapid changes during this period because the Indian economy has experienced strong growth during recent times. The acceleration in real gross domestic product (GDP) has been contributed by the sustained expansion in industry and services sector. The improvement was widespread, touching all sub-sectors of manufacturing as well as service. Higher investment in power and transport sectors with increased efficiency and trade and industrial policy reforms had resulted in turnaround. This is well reflected in the performance of the manufacturing sectors during the post reform period, especially after 2000. For example, gross profits of the companies have registered an increase of 17 per cent per annum during 2000-2006. Recent phase of enhanced profitability has raised the capital intensity of Indian companies even more. Rapid growth in the size and operation of Indian companies during the current

decade was much more as compare to the previous decade. This ultimately resulted into an increased requirement of capital, which is raised through both debt and equity. The present study is purely intended to examine whether during the period 1999-2000 to 2007-2008, companies preferred to raise the capital through equity or debt and the reason for it. Going beyond to this we will also examine whether during this period there is any change in the capital structure of Indian companies or not.

Tools and Techniques of Analysis

The data collected from the financial statements of the companies are analyzed with the help of the following accounting and statistical tools each of which is discussed below:

- (i) Funds Flow Analysis
- (ii) Ratio Analysis
- (iii) Correlation Analysis

The funds flow statement is a statement which shows the movement of funds and is a report of the financial operations of the business undertaking. In our study, the information obtained from the financial statements of the companies is analyzed with the help of historical funds flow analysis technique. From the balance sheets of sample companies, year wise funds flow statements are prepared for each company. These gives source wise details of the funds raised by the companies for asset formation under various heads during the accounting year. By and large, the increase in various items of assets and liabilities during the year represent the sources and uses of funds under respective heads.

A ratio is a simple arithmetical expression of the relationship of one number to another. To test the above mentioned hypothesis, we propose to calculate and compare various ratios of sample companies in the industry and across the industry for all the years of our study so as to know whether there exists any significant variation in different ratios from year to year.

The analysis of the trend in capital structure formation is aimed at establishing relationship between sources of funds and uses of funds. In the process we have tried to correlate each individual source with its best possible use. They are internal sources, external long-term fixed assets, current liability (short term sources) with current assets. The co-efficient of correlation are calculated for the total as well as for the classified variables. Significant tests, wherever necessary have also been undertaken to interpret the results of the analysis.

LIMITATIONS OF THE STUDY

As a concluding note, we point out some limitations of this study. First, the study relies on empirical procedures as in the corporate finance literature rather than construction of theoretical proofs on capital structure of firms in emerging markets. Thus the first main limitation of this thesis is that theoretical modeling of these issues as contained in the financial economics literature is not addressed here. Secondly, the results obtained in our study are from a sample size of 300 firms taken selectively from 20 different sectors. Our presumption of 300 firms as the representative of India Inc is one of the biggest limitation of our study because the findings of these 300 firms will be taken as the findings of Indian corporate. Complete reliance on secondary data could be also one of the limitations of our study. The empirical findings and conclusions contained in this study may be used by financial managers to inform policy decisions. However, it is not the intention of this study to generate policy-oriented findings for operation purposes.

DETERMINANTS OF CAPITAL STRUCTURE

Capital structure of a firm is determined by various internal and external factors. The macro variables of the economy of a country like tax policy of government, inflation rate, capital market condition, are the major external factors that affect the capital structure of a firm. The characteristics of an individual firm, which are termed here as micro factors (internal), also affect the capital structure of enterprises. This section presents how the micro-factors affect the capital structure of a firm with reference to the relevant capital structure theories stated earlier.

GROWTH RATE

The agency cost theory and pecking order theory explain the contradictory relation between the growth rate and capital structure. Agency cost theory suggests that equity controlled firms have a tendency to invest sub-optimally to expropriate wealth from the enterprises' bondholders. The agency cost is likely to be higher for enterprises in growing industries which have more flexibility in their choice of future investment. Hence, growth rate is negatively related with long-term debt level. Pecking order theory, contrary to the agency cost theory, shows the positive relation between the growth rate and debt level of enterprises. This is based on the reasoning that a higher growth rate implies a higher demand for funds, and, ceteris paribus, a greater reliance on external financing through the preferred source of debt. For, pecking order theory contends that management prefers internal to external financing and debt to equity if it issues securities. Thus, the pecking order theory suggests the higher proportion of debt in capital structure of the growing enterprises than that of the stagnant ones.

BUSINESS RISK

Both agency and bankruptcy cost theories suggest the negative relation between the capital structure and business risk. The bankruptcy cost theory contends that the less stable earnings of the enterprises, the greater is the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions. Similarly, as the probability of bankruptcy increases, the agency problems related to debt become more aggravating. Thus, this theory suggests that as business risk increases, the debt level in capital structure of the enterprises should decrease. Studies carried out in western countries during 1980s show the contradictory evidence in this regard. The studies carried out in India and Nepal also show the contradictory evidence on the relation between the risk and debt level.

PROFITABILITY

The static trade-off hypothesis pleads for the low level of debt capital of risky firms. The higher profitability of firms implies higher debt capacity and less risky to the debt holders. So, as per this theory, capital structure and profitability are positively associated. But pecking order theory suggests that this relation is negative. Since, as stated earlier, firm prefers internal financing and follows the sticky dividend policy. If the internal funds are not enough to finance financial requirements of the firm, it prefers debt financing to equity financing. Thus, the higher profitability of the enterprise implies the internal financing of investment and less reliance on debt financing. Most of the empirical studies support the pecking order theory.

DIVIDEND PAYOUT

The bankruptcy costs theory pleads for adverse relation between the dividend payout ratio and debt level in capital structure. The low dividend payout ratio means increase in the equity base for debt capital and low probability of going into liquidation. As a result of low probability of bankruptcy, the bankruptcy cost is low. According to the bankruptcy cost theory, the low bankruptcy cost implies the high level of debt in the capital structure. But the pecking order theory shows the positive relation between debt level and dividend payout ratio. According to this theory, management prefers the internal financing to external one. Instead of distributing the high dividend, and meeting the financial need from debt capital, management retains the earnings. Hence, the lower dividend payout ratio means the lower level of debt in capital structure.

DEBT SERVICE CAPACITY

The higher debt level in capital structure increases the probability of bankruptcy and bankruptcy costs of the enterprises. Probability of bankruptcy refers to the chances of cash flows to be less than the amount required for servicing the debt. The debt service ratio measured by the ratio of operating income to total interest charges indicates the firms' ability to meet its interest payment out of its annual operating earnings. Therefore, the higher debt service ratio shows the higher debt capacity of the enterprises. Hence, the debt capacity theory suggests the positive relation between the debt service capacity and capital structure of the enterprises. But contrary to this theoretical relation, empirical studies show the negative relation.

OPERATING LEVERAGE

The use of fixed cost in production process also affects the capital structure. The high operating leverage-use of higher proportion of fixed cost in the total costs over a period of time-can magnify the variability in future earnings. Both the bankruptcy cost theory and agency cost theory suggest the negative relation between operating leverage and debt level in capital structure. The bankruptcy cost theory contends the higher operating leverage, the greater the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions. Similarly, as the probability of bankruptcy increases, the agency problems related to debt become more aggravating. Thus, these theories suggest that as operating leverage increases, the debt level in capital structure of the enterprises should decrease.

As already stated, the main objective of this study is to find out the other factors or variables those influence the capital structure decisions, apart from those mentioned above. We will also try to characterize the capital structure theory that is in practice in Indian corporate.

DATA ANALYSIS

We started the analysis of the collected data to study the sources and application of funds and the capital structure of Indian corporate sector represented by 300 companies taken from 20 different sectors. The different sources from where the corporate sector has raised the funds and the ways and means by which the so raised funds have been utilized have been analyzed in detail. An attempt has also been made to study the relationship existing between long-term sources of funds and fixed assets and between the current assets and current liabilities. Further, the help of ratio analysis is also taken to supplement the findings. The ratio of net worth and net fixed assets i.e. net block, net worth to total assets, total debts to total equities and between current assets to current liabilities have also been computed for the purpose. The analysis on the trend in various sources of inflow of funds and their utilization is confined to nine years covering 2000 to 2008. The different sources of funds used for financing additional fixed investments and current assets formation and their proportion to the total utilization of sources are also analyzed.

During the process of data analysis, we analyzed the capital structure of all the 300 sample companies in whole as well as classifying them into different variables such as size, age, region, industry etc. The analysis of total sample companies on an aggregate basis gives only an aggregate picture of the corporate sector as a whole. Moreover, the pattern of capital structure, sources and utilization of funds of the total sample companies analyzed, which comprises the companies of different industrial activities, sizes, ages and regions.

No doubt, the ability to raise funds and the capital structure (debt equity mix) is, more or less, expected to differ for companies pertaining to different industries, regions, size-group as well as age groups. The capital structure and funds flow is expected to differ, if the industrial activity differs. Likewise, the size variable may be important if the companies take time to establish themselves and capture the market. New companies find difficulties in raising both debt and equity capital. Therefore, companies of different ages might be expected to have different degrees of capital mix and quantity of funds raised. The study implicitly assumes inter-group differences and inter-group similarities in the trend and pattern of funds flow and capital mix. Thus, if the conclusions drawn on the basis of group-wise analysis held at the group level, they may also be expected to hold at the individual level.

In attempting to study differences in funds flow and capital mix across firms, a variable-wise analysis of funds flow and capital structure of the sample companies has been undertaken. Accordingly, the sample companies were classified on the basis of region, industry or sector, size-group and age-group. An attempt has been made to analyze and interpret the trend and pattern of sources and uses of funds and the capital structure of each group of sample companies vis-à-vis the overall trend and pattern. The required data is obtained by aggregating the data of sample companies belonging to a particular group. The trend analysis of different sources of funds and their application have been made. The help of ratio analysis is taken between debt-equity, current assets, current liability etc. and their correlation.

FINDINGS & OBSERVATIONS

- Indian corporate employ substantial amount of debt in their capital structure in terms of the debt-equity ratio as well as total debt to total assets ratio. Nonetheless, the foreign controlled companies in India use less debt than the domestic companies. The dependence of the Indian corporate sector on debt as a source of finance has over the years declined particularly since the mid-nineties.
- The corporate enterprises in India seem to prefer long-term borrowings over short-term borrowings. Over the years, they seem to have substituted short-term debt for long-term debt. The foreign controlled companies use more long-term loans relatively to the domestic companies.
- As a result of debt-dominated capital structure, the Indian corporate are exposed to a very high degree of total risk as reflected in high degree of operating leverage and financial leverage and, consequently, are subject to a high cost of financial distress which includes a

broad spectrum of problems ranging from relatively minor liquidity shortages to extreme cases of bankruptcy. The foreign controlled companies, however, are exposed to lower overall risk as well as financial risk.

- The debt service capacity of a sizeable segment of the corporate borrower as measured by Interest Coverage Ratio and Debt Service Coverage Ratio is inadequate and unsatisfactory.
- Retained earnings are the most favored source of finance. There is significant difference in the use of internally generated funds by the highly profitable corporate relative to the low profitable firms. The low profitable firms use different forms of debt funds more than the highly profitable firms.
- Loan from financial institutions and private placement of debt are the next most widely used source of finance. The large firms are more likely to issue bonds in the market than small corporate.
- The hybrid securities are the least popular source of finance amongst corporate India. They are more likely to be used by low growth firms. Preference shares are used more by public sector units and low growth corporate.
- Equity capital as a source of fund is not preferred across the board.
- Indian companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence internal funds are used first, and when that is depleted debt is issued, and when it is not sensible to issue any more debt, equity is issued.
- Study revealed that an average of 60.54% of the total funds was raised from internal sources whereas external sources contribute only 39.46% of the total funds of Indian companies. It indicated that Indian companies prefer more to raise funds from internal sources as compared to external sources.
- It has been found that, issue of share capital had never been a major source of long-term finance for the corporate sector. The dependence on debt capital i.e. secured and unsecured loan is more as compared to equity.
- Small sized companies relies more on debt capital as compared to large sized companies. The average debt-equity ratio of small sized companies were found to be more than 3:1 whereas in case of large sized companies it is 1:1. This shows that the large sized companies followed a strict conservative policy while deciding the debt equity mix.
- The average debt-equity ratios of manufacturing companies were more than double of the average debt-equity ratio of service sector companies. It indicates that service sector companies relies more on the equity and less on the debt, and vice-versa in case of manufacturing companies.
- The common observation for the companies of all the four regions was that they have raised more funds through debt capital as compared to equity, may be due to the reason of easy availability of cheap debt capital.
- Although the size of the firm, its age, the region to which it belongs and industry-classification contribute to the existing variation in capital structure across industry classes but nature of the industry seems to dominate.
- The study revealed that in terms of total average inflow of funds, western region stood highest as this region is the most industrially advanced region of our country and covers 135 companies out of the total sample size of 300 companies. In terms of mean average southern region has the highest inflow of funds as compared to other regions because most of the large sized companies are situated in this region, which are capable of generating more funds as compared to the companies of other region.
- More specifically, it is the differences in external fund requirement based on technology differences that play a leading role in determining the inter-industry variation in capital structure. This signals that there exists a linkage between product market and capital market. This proves that the capital structure and the determinants of capital structure vary from industries to industries and the nature of the industry acts as a key determinant of the capital structure.
- To sum up, nature of the industry to which the firm belongs to, its size, age and location plays a major role in the determination of the capital structure of the private sector firms of Indian corporate.

CONCLUSION

Barring to a few exceptions like small and medium sized companies in size group and agro based companies and plantation companies in industrial group; it was found that companies mostly prefer internal funds as compared to external funds. When it comes to external funds, the common observation for the companies of all the four regions was that they have raised more funds through debt capital as compared to equity, may be due to the reason of easy and availability of cheap debt capital. Not a single company of any region has raised any fund through differed credit. Small sized companies relies more on debt capital as compared to large sized companies. The average debt-equity ratio of small sized companies were found to be more than 3:1 whereas in case of large sized companies it is 1:1. This shows that the large sized companies followed a strict conservative policy while deciding the debt equity mix. The average debt-equity ratios of manufacturing companies were more than double of the average debt-equity ratio of service sector companies. It indicates that service sector companies relies more on the equity and less on the debt, and vice-versa in case of manufacturing companies. To sum up, Indian companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence internal funds are used first, and when that is depleted debt is issued, and when it is not sensible to issue any more debt, equity is issued. Equity capital as a source of fund is not preferred across the board. This shows that somewhere or other, the financing pattern of Indian private sector companies' is in line with the pecking-order theory as propounded by Myers and Majluf (1984). This gives a redeeming signal about the Indian corporate behavior which is found out to show more dependence on their internally generated funds than on external sources of finance.

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APPENDICES

Table – 1 (Classification of companies according to their age)

Year of Incorporation	Age Group	No. of Companies	% to Total Sample
Prior to 1947	Very Old	44	14.67
1947 - 1980	Old	95	31.67
After 1980	New	161	53.66
Total		300	100

Table – 2 (Classification of companies according to their region)

Region/Group	Eastern	Western	Southern	Northern	Total
No. of Companies	34	135	85	46	300
% of Total Sample	11.33	45	28.33	15.34	100

Table – 3 (Classification of companies according to their size)

Size of the Company	Total Assets as on 31 st March 2008 (Rs. in Crores)	No. of Companies	% to Total Sample
SMALL	Below Rs. 100 Crores	75	25
MEDIUM	Rs.100 Crores to Rs.500 Crores	98	32.67
LARGE	Above Rs.500 Crores	127	42.33
TOTAL		300	100

Table – 4 (Classification of companies according to their sector/industry)

Industrial Group	NAME OF THE INDUSTRY/SECTOR	NO. OF COMPANIES	PERCENTAGE TO TOTAL SAMPLE
Agro Based Manufacturing Industries	Textiles Manmade, Food Processing, Edible Oil, Cotton Textiles, Paper, Sugar,	90	30
Mineral Based Manufacturing Industries	Chemicals, Cement, Fertilizer, Construction & Housing, Mining, Fabricated Metal, Electric Equipment, Pharmaceuticals, Plastic,	135	45

Service Industries	Computer Software, Hotel, Transport	45	15
Plantation Industries	Rubber, Tea & Coffee,	30	10
Total		300	100

DETAILS OF COMPANIES UNDER STUDY

Top BSE Listed Private Sector Companies based on Total Assets as on 31st March, 2008.

Sl. No.	Company Name	Total Assets as on 31 March 2008 (Rs. In Crores)	Size Group	Year of Incorporation	Age Group	State	Region	Sector
1	Tata Chemicals	5,916.96	Large	1939	Very Old	Maharashtra	West	Chemicals
2	United Phosphorous	3,323.21	Large	1985	New	Gujarat	West	Chemicals
3	Gujarat Heavy Chemicals	1,672.83	Large	1983	New	Gujarat	West	Chemicals
4	Gujarat Fluorochemicals	1,467.63	Large	1987	New	Gujarat	West	Chemicals
5	Pidilite Industries	1,145.08	Large	1969	Old	Maharashtra	West	Chemicals
6	India Glycols	1,035.44	Large	1983	New	Uttar Pradesh	North	Chemicals
7	Aarti Industries	711.77	Large	1984	New	Gujarat	West	Chemicals
8	Vikas WSP	627.95	Large	1988	New	Haryana	North	Chemicals
9	BOC India	589.99	Large	1935	Very Old	West Bengal	East	Chemicals
10	Kanoria Chemicals and Industries	586.71	Large	1960	Old	West Bengal	East	Chemicals
11	Hikal	558.91	Large	1988	New	Maharashtra	West	Chemicals
12	Himadri Chemicals and Industries	554.19	Large	1987	New	West Bengal	East	Chemicals
13	Sree Rayalaseema Alkalies and Allied Chemicals	436.91	Medium	1981	New	Andhra Pradesh	South	Chemicals
14	BASF India	339.68	Medium	1943	Very Old	Maharashtra	West	Chemicals
15	Thirumalai Chemicals	327.55	Medium	1972	Old	Maharashtra	West	Chemicals
16	Ambuja Cements	5,961.54	Large	1981	New	Gujarat	West	Cements
17	ACC	5,404.16	Large	1936	Very Old	Maharashtra	West	Cements
18	India Cements	5,132.61	Large	1946	Very Old	Tamil Nadu	South	Cements
19	Dalmia Cement	2,730.48	Large	1951	Old	Tamil Nadu	South	Cements
20	Madras Cements	2,589.49	Large	1957	Old	Tamil Nadu	South	Cements
21	Shree Cements	1,942.93	Large	1979	Old	Rajasthan	West	Cements
22	Birla Corporation	1,232.48	Large	1919	Very Old	West Bengal	East	Cements
23	OCL India	1,052.34	Large	1949	Old	Orissa	East	Cements
24	Chettinad Cement	828.68	Large	1962	Old	Tamil Nadu	South	Cements

25	Prism Cement	617.77	Large	1992	New	Andhra Pradesh	South	Cements
26	Saurashtra Cement	363.89	Medium	1956	Old	Gujarat	West	Cements
27	KCP	246.26	Medium	1941	Very Old	Tamil Nadu	South	Cements
28	Shree Digvijay Cement Company	129.92	Medium	1944	Very Old	Gujarat	West	Cements
29	Gujarat Sidhee Cement	118.51	Medium	1973	Old	Gujarat	West	Cements
30	Panyam Cements	8.34	Small	1955	Old	Andhra Pradesh	South	Cements
31	Nagarjuna Fertilisers and Chemicals	2,990.04	Large	1976	Old	Andhra Pradesh	South	Fertilizers
32	Chambal Fertilisers and Chemicals	2,666.76	Large	1985	New	Rajasthan	West	Fertilizers
33	Coromandel Fertilisers	1,707.11	Large	1961	Old	Andhra Pradesh	South	Fertilisers
34	Zuari Industries	1,394.64	Large	1967	Old	Goa	West	Fertilisers
35	Deepak Fertilizers and Petrochemicals	1,048.18	Large	1979	Old	Maharashtra	West	Fertilizers
36	Mangalore Chemicals and Fertilisers	752.81	Large	1966	Old	Karnataka	South	Fertilisers
37	Khaitan Chemicals and Fertilizers	157.89	Medium	1982	New	Madhya Pradesh	West	Fertilizers
38	Rama Phosphates	105.42	Medium	1984	New	Maharashtra	West	Fertilisers
39	Dharamsi Morarji Chemical Company	85.8	Small	1919	Very Old	Maharashtra	West	Fertilizers
40	Basant Agro Tech (India)	59.88	Small	1990	New	Maharashtra	West	Fertilizers
41	Liberty Phosphate	48.52	Small	1977	Old	Gujarat	West	Fertilisers
42	Teesta Agro Industries	41.87	Small	1986	New	West Bengal	East	Fertilizers
43	Shiva Fertilizers	23.36	Small	1993	New	Maharashtra	West	Fertilisers
44	M P Agro Fertilisers	9.49	Small	1975	Old	Madhya Pradesh	West	Fertilisers
45	Bharat Fertilizers	7.05	Small	1959	Old	Maharashtra	West	Fertilisers
46	Wipro	15,433.10	Large	1945	Very Old	Karnataka	South	Computers -Software
47	Infosys	13,490.00	Large	1981	New	Karnataka	South	Computers -Software
48	TCS	11,023.06	Large	1995	New	Maharashtra	West	Computers -Software
49	Satyam	7,381.31	Large	1987	New	Andhra Pradesh	South	Computers -Software
50	HCL Tech	3,190.41	Large	1991	New	Delhi	North	Computers -Software
51	Oracle Financ	2,795.02	Large	1989	New	Maharashtra	West	Computers -Software
52	Patni Computer	2,529.66	Large	1978	Old	Maharashtra	West	Computers -Software
53	Rolta	1,982.58	Large	1989	New	Maharashtra	West	Computers -Software
54	3i Infotech	1,907.09	Large	1993	New	Maharashtra	West	Computers -Software
55	Financial Tech	1,868.58	Large	1988	New	Tamil Nadu	South	Computers -Software
56	Subex	1,658.21	Large	1999	New	Karnataka	South	Computers -Software
57	Tech Mahindra	1,323.40	Large	1986	New	Maharashtra	West	Computers -Software
58	Mphasis	1,173.89	Large	1992	New	Karnataka	South	Computers -Software
59	Mascon Global	1,058.18	Large	1991	New	Tamil Nadu	South	Computers -Software
60	Geodesic	876.76	Large	1999	New	Maharashtra	West	Computers -Software
61	Ansal Properties & Infrastructure	1,910.84	Large	1967	Old	Delhi	North	Construction&Housing
62	Peninsula Land	1,400.60	Large	1871	Very Old	Maharashtra	West	Construction&Housing
63	D.S. Kulkarni Developers	744.02	Large	1991	New	Maharashtra	West	Construction&Housing

64	Prajay Engineers Syndicate	712.27	Large	1994	New	Andhra Pradesh	South	Construction&Housing
65	Ansal Housing and Construction	495.44	Medium	1983	New	Delhi	North	Construction&Housing
66	Ganesh Housing Corporation	499.05	Medium	1991	New	Gujarat	West	Construction&Housing
67	BSEL Infrastructure Realty	369.48	Medium	1995	New	Maharashtra	West	Construction&Housing
68	Arihant Foundations and Housing	260.82	Medium	1995	New	Tamil Nadu	South	Construction&Housing
69	Lok Housing and Constructions	418.16	Medium	1985	New	Maharashtra	West	Construction&Housing
70	Kamanwala Housing Construction	163.22	Medium	1984	New	Maharashtra	West	Construction&Housing
71	HB Estate Developers	96.78	Small	1985	New	Haryana	West	Construction&Housing
72	Vijay Shanthi Builders	94.07	Small	1992	New	Tamil Nadu	South	Construction&Housing
73	Lancor Holdings	90.29	Small	1995	New	Tamil Nadu	South	Construction&Housing
74	SAAG RR Infra	78.56	Small	1995	New	Tamil Nadu	South	Construction&Housing
75	Alpine Housing Dev Corp	63.55	Small	1992	New	Karnataka	South	Construction&Housing
76	Abhishek Industries	1,730.83	Large	1990	New	Punjab	North	Cotton Textiles
77	Spentex Industries	688.94	Large	1991	New	Delhi	North	Cotton Textiles
78	Vardhman Polytex	607.52	Large	1980	New	Punjab	North	Cotton Textiles
79	Phoenix Mills	1,643.57	Large	1905	Very Old	Maharashtra	West	Cotton Textiles
80	Gangotri Textiles	486.62	Medium	1989	New	Tamil Nadu	South	Cotton Textiles
81	Ginni Filaments	454.47	Medium	1982	New	Uttar Pradesh	North	Cotton Textiles
82	Rajapalayam Mills	416.58	Medium	1936	Very Old	Tamil Nadu	South	Cotton Textiles
83	Ambika Cotton Mills	390.41	Medium	1988	New	Tamil Nadu	South	Cotton Textiles
84	Indo Count Industries	378.73	Medium	1988	New	Maharashtra	West	Cotton Textiles
85	Super Spinning Mills	380.87	Medium	1962	Old	Tamil Nadu	South	Cotton Textiles
86	Suryalakshmi Cotton Mills	373.37	Medium	1962	Old	Andhra Pradesh	South	Cotton Textiles
87	Winsome Yarns	369.31	Medium	1990	New	Punjab	North	Cotton Textiles
88	Nitin Spinners	355.91	Medium	1992	New	Rajasthan	West	Cotton Textiles
89	Forbes Gokak	343.1	Medium	1919	Very Old	Maharashtra	West	Cotton Textiles
90	Ashima	331.54	Medium	1982	New	Gujarat	West	Cotton Textiles
91	Ruchi Soya	2,666.20	Large	1986	New	Maharashtra	West	Edible Oils
92	KS Oils	978.91	Large	1985	New	Madhya Pradesh	West	Edible Oils
93	Murli	909.04	Large	1991	New	Maharashtra	West	Edible Oils
94	Guj Amb Exports	872.29	Large	1991	New	Gujarat	West	Edible Oils
95	Anik Industries	373.09	Medium	1976	Old	Maharashtra	West	Edible Oils
96	Sanwaria Agro	318.53	Medium	1991	New	Madhya Pradesh	West	Edible Oils
97	Vijay Solvex	149.81	Medium	1987	New	Rajasthan	West	Edible Oils
98	Kriti Industries India	140.82	Medium	1990	New	Madhya Pradesh	West	Edible Oils
99	Agro Tech Foods	123.72	Medium	1986	New	Andhra Pradesh	South	Edible Oils
100	Vippy Industrie	103.49	Medium	1973	Old	Madhya Pradesh	West	Edible Oils
101	Vimal Oils	94.29	Small	1992	New	Gujarat	West	Edible Oils
102	Rasoya Protein	88.18	Small	1992	New	Maharashtra	West	Edible Oils
103	AVT Natural Products	73.96	Small	1986	New	Tamil Nadu	South	Edible Oils
104	KSE	46.45	Small	1995	New	Maharashtra	West	Edible Oils

105	Indian Extract	32.51	Small	1956	Old	Maharashtra	West	Edible Oils
106	ABB	2,118.96	Large	1949	Old	Karnataka	South	Electric Equipment
107	Crompton Greave	1,018.30	Large	1937	Very Old	Maharashtra	West	Electric Equipment
108	Emco	704.46	Large	1964	Old	Maharashtra	West	Electric Equipment
109	Havells India	702.77	Large	1983	New	Delhi	North	Electric Equipment
110	HBL Power	655.08	Large	1986	New	Andhra Pradesh	South	Electric Equipment
111	Easun Reyrolle	317.87	Medium	1975	Old	Tamil Nadu	South	Electric Equipment
112	Birla Power Solutions	285.26	Medium	1984	New	Maharashtra	West	Electric Equipment
113	Best and Crompton Engineering	215.99	Medium	1911	Very Old	Tamil Nadu	South	Electric Equipment
114	Igarashi Motors	214.55	Medium	1992	New	Tamil Nadu	South	Electric Equipment
115	Bharat Bijlee	186.54	Medium	1946	Very Old	Maharashtra	West	Electric Equipment
116	Honda Siel Power Products	183.51	Medium	1985	New	Uttar Pradesh	North	Electric Equipment
117	WS Industries	174.53	Medium	1961	Old	Tamil Nadu	South	Electric Equipment
118	Techno Electric and Engineering Company	171.52	Medium	1962	Old	West Bengal	East	Electric Equipment
119	Kirloskar Electric Co	169.37	Medium	1946	Very Old	Karnataka	South	Electric Equipment
120	Numeric Power Systems	156.88	Medium	1994	New	Tamil Nadu	South	Electric Equipment
121	Sterlite Industries India	16,422.66	Large	1965	Old	Tamil Nadu	South	Fabricated Metals
122	Hind Zinc	11,848.58	Large	1966	Old	Rajasthan	West	Fabricated Metals
123	Jhagadia Copper	1,298.17	Large	1962	Old	Gujarat	West	Fabricated Metals
124	Hind Copper	1,091.68	Large	1967	Old	West Bengal	East	Fabricated Metals
125	Tinplate	383.77	Medium	1920	Very Old	West Bengal	East	Fabricated Metals
126	Precision Wires	218.33	Medium	1989	New	Maharashtra	West	Fabricated Metals
127	Bilpower	204.77	Medium	1995	New	Maharashtra	West	Fabricated Metals
128	Brasco Extrusions	1.53	Small	1980	New	Maharashtra	West	Fabricated Metals
129	Ram Ratna Wires	81.47	Small	1992	New	Maharashtra	West	Fabricated Metals
130	Alcobex Metals	68.53	Small	1970	Old	Delhi	North	Fabricated Metals
131	Shalimar Wires	53.27	Small	1995	New	West Bengal	East	Fabricated Metals
132	Cubex Tubings	47.8	Small	1979	Old	Andhra Pradesh	South	Fabricated Metals
133	Rose Zinc	24.19	Small	1990	New	Rajasthan	West	Fabricated Metals
134	ND Metal	18.26	Small	1992	New	Maharashtra	West	Fabricated Metals
135	Mardia Samyoung	12.49	Small	1992	New	Maharashtra	West	Fabricated Metals
136	Britannia	861.92	Large	1918	Very Old	West Bengal	East	Food Processing
137	GlaxoSmithKline Healthcare	760.88	Large	1958	Old	Punjab	North	Food Processing
138	Agro Dutch Industries	482.41	Medium	1992	New	Punjab	North	Food Processing
139	Nestle	474.17	Medium	1959	Old	Delhi	North	Food Processing
140	Heritage Foods	272.44	Medium	1992	New	Andhra Pradesh	South	Food Processing
141	Modern Dairies	164.8	Medium	1992	New	Haryana	North	Food Processing
142	Foods and Inns	151.95	Medium	1967	Old	Maharashtra	West	Food Processing
143	Hatsun Agro	186.19	Medium	1986	New	Tamil Nadu	South	Food Processing

144	Hind Industries	115.54	Medium	1973	Old	Delhi	North	Food Processing
145	Milkfood	103	Medium	1973	Old	Punjab	North	Food Processing
146	Mount Everest	99.04	Small	1994	New	Himanchal Pradesh	North	Food Processing
147	KLRF	92.65	Small	1961	Old	Tamil Nadu	South	Food Processing
148	Usher Agro	90.74	Small	1996	New	Maharashtra	West	Food Processing
149	Vadilal Industries	90.46	Small	1982	New	Gujarat	West	Food Processing
150	ADF Foods	84.63	Small	1990	New	Gujarat	West	Food Processing
151	Indian Hotels Company	3,170.73	Large	1902	Very Old	Maharashtra	West	Hotels
152	Hotel Leela	2,965.84	Large	1981	New	Maharashtra	West	Hotels
153	EIH	2,118.10	Large	1949	Old	West Bengal	East	Hotels
154	Asian Hotels	1,641.63	Large	1980	New	Delhi	North	Hotels
155	Country Club India Ltd	757.88	Large	1991	New	Andhra Pradesh	South	Hotels
156	Viceroy Hotels	717.58	Large	1965	Old	Andhra Pradesh	South	Hotels
157	Kamat Hotels	403.16	Medium	1986	New	Maharashtra	West	Hotels
158	EIH Assoc Hotel	349.67	Medium	1983	New	Tamil Nadu	South	Hotels
159	Taj GVK Hotels	307.4	Medium	1995	New	Andhra Pradesh	South	Hotels
160	GL Hotels	299.73	Medium	1961	Old	Maharashtra	West	Hotels
161	Sterling Holiday Resorts India Ltd.	275.02	Medium	1986	New	Tamil Nadu	South	Hotels
162	Oriental Hotels	261.38	Medium	1970	Old	Tamil Nadu	South	Hotels
163	Blue Coast	210.14	Medium	1992	New	Goa	West	Hotels
164	Royal Orchid	193.11	Medium	1986	New	Karnataka	South	Hotels
165	Mac Charles	168.81	Medium	1979	Old	Karnataka	South	Hotels
166	AdityaBirlaNuvo	6,767.16	Large	1956	Old	Gujarat	West	Textiles - Manmade
167	SRF	1,470.20	Large	1970	Old	Delhi	North	Textiles - Manmade
168	JBF Industries	1,151.97	Large	1982	New	Dadra & Nagar Haveli	West	Textiles - Manmade
169	Century Enka	897.22	Large	1965	Old	West Bengal	East	Textiles - Manmade
170	Eskay Knit	662.15	Large	1987	New	Dadra & Nagar Haveli	South	Textiles - Manmade
171	Futura	433.68	Medium	1960	Old	Maharashtra	West	Textiles - Manmade
172	Nirlon	297.26	Medium	1958	Old	Maharashtra	West	Textiles - Manmade
173	NRC	275.32	Medium	1946	Very Old	Maharashtra	West	Textiles - Manmade
174	Indian Acrylics	197.34	Medium	1986	New	Punjab	North	Textiles - Manmade
175	GSL Nova Petrochemicals	172.89	Medium	1993	New	Gujarat	West	Textiles - Manmade
176	Pasupati Acrylon	137.42	Medium	1982	New	Uttar Pradesh	North	Textiles - Manmade
177	Filatex India	113.24	Medium	1990	New	Dadra & Nagar Haveli	West	Textiles - Manmade
178	Sumeet Industries	84.04	Small	1988	New	Gujarat	West	Textiles - Manmade
179	Paras Petro	62.88	Small	1991	New	Gujarat	West	Textiles - Manmade
180	Modipon	36.68	Small	1965	Old	Uttar Pradesh	North	Textiles - Manmade
181	Sesa Goa	2,791.13	Large	1954	Old	Goa	West	Mining
182	Indian Metals & Ferro Alloys Ltd	754.29	Large	1962	Old	Orissa	East	Mining
183	Ashapura Mine	730.41	Large	1982	New	Maharashtra	West	Mining
184	GMR Industries	451.41	Medium	1986	New	Karnataka	South	Mining

185	Agee Gold Refiners	268.37	Medium	1994	New	Maharashtra	West	Mining
186	VBC Ferro	167.49	Medium	1981	New	Andhra Pradesh	South	Mining
187	Assoc Stone	151.22	Medium	1945	Very Old	Rajasthan	West	Mining
188	Ferro Alloys	145.27	Medium	1955	Old	Orissa	East	Mining
189	Impex FerroTech	130.62	Medium	1995	New	West Bengal	East	Mining
190	Insecticides India	91.25	Small	1996	New	Delhi	North	Mining
191	Indsil Hydro Power and Manganese	59.29	Small	1990	New	Tamil Nadu	South	Mining
192	Sandur Manganes	44.07	Small	1954	Old	Karnataka	South	Mining
193	Nagpur Power	38.58	Small	1995	New	Maharashtra	West	Mining
194	Auroma Coke Ltd	29.9	Small	1992	New	West Bengal	East	Mining
195	Kutch Minerals	1.28	Small	1981	New	Maharashtra	West	Mining
196	Ballarpur Industries	2,208.70	Large	1945	Very Old	Maharashtra	West	Paper
197	Tamil Newsprint	1,192.43	Large	1979	Old	Tamil Nadu	South	Paper
198	JK Paper	1,113.90	Large	1961	Old	Gujarat	West	Paper
199	AP Paper Mills	935.26	Large	1964	Old	Andhra Pradesh	South	Paper
200	West Coast Paper Mills	807.01	Large	1955	Old	Karnataka	South	Paper
201	Rama Newsprint	542	Large	1991	New	Gujarat	West	Paper
202	Sirpur Paper	534.39	Large	1938	Very Old	Andhra Pradesh	South	Paper
203	Seshasayee Paper and Boards	522.88	Large	1960	Old	Tamil Nadu	South	Paper
204	Mysore Paper	288.85	Medium	1936	Very Old	Karnataka	South	Paper
205	Rainbow Papers	214.91	Medium	1986	New	Gujarat	West	Paper
206	Pudumjee Pulp	193.78	Medium	1964	Old	Maharashtra	West	Paper
207	Shreyans Ind	104.62	Medium	1979	Old	Punjab	North	Paper
208	Star Paper	165.46	Medium	1936	Very Old	West Bengal	East	Paper
209	Shri Bhawani	104.2	Medium	1979	Old	Uttar Pradesh	North	Paper
210	NR Agarwal	134.45	Medium	1993	New	Maharashtra	West	Paper
211	Ranbaxy Labs	7,442.15	Large	1961	Old	Punjab	North	Pharmaceuticals
212	Dr Reddys Labs	5,274.09	Large	1984	New	Andhra Pradesh	South	Pharmaceuticals
213	Cipla	4,336.35	Large	1935	Very Old	Maharashtra	West	Pharmaceuticals
214	Panacea Biotech	1,095.43	Large	1993	New	Punjab	North	Pharmaceuticals
215	Sterling Bio	2,649.68	Large	1985	New	Maharashtra	West	Pharmaceuticals
216	Aurobindo Pharma	2,976.25	Large	1986	New	Andhra Pradesh	South	Pharmaceuticals
217	Orchid Chemicals and Pharmaceuticals	2,641.55	Large	1992	New	Tamil Nadu	South	Pharmaceuticals
218	Lupin	2,282.60	Large	1983	New	Maharashtra	West	Pharmaceuticals
219	Wockhardt	2,497.91	Large	1993	New	Maharashtra	West	Pharmaceuticals
220	Cadila Health	1,792.70	Large	1995	New	Gujarat	West	Pharmaceuticals
221	Glenmark	1,552.79	Large	1977	Old	Maharashtra	West	Pharmaceuticals
222	GlaxoSmithKline	1,546.72	Large	1924	Very Old	Maharashtra	West	Pharmaceuticals
223	Piramal Health	1,520.76	Large	1947	Very Old	Maharashtra	West	Pharmaceuticals
224	Biocon	1,538.82	Large	1978	Old	Karnataka	South	Pharmaceuticals
225	Matrix Lab	1,131.30	Large	1984	New	Andhra Pradesh	South	Pharmaceuticals

226	Supreme Ind	550.94	Large	1942	Very Old	Maharashtra	West	Plastics
227	Kemrock Indus	468.35	Medium	1991	New	Gujarat	West	Plastics
228	Cosmo Films	334.61	Medium	1976	Old	Delhi	North	Plastics
229	VIP Industries	258.32	Medium	1968	Old	Maharashtra	West	Plastics
230	Kalpena Ind	159.83	Medium	1985	New	West Bengal	East	Plastics
231	Hydro SandS Ind	54.78	Small	1983	New	Tamil Nadu	South	Plastics
232	Pearl Polymers	99.08	Small	1971	Old	Delhi	North	Plastics
233	Fenoplast	63.88	Small	1975	Old	Andhra Pradesh	South	Plastics
234	Caprihans	90.3	Small	1946	Very Old	Maharashtra	West	Plastics
235	Jhaveri Flexo	90.14	Small	1986	New	Maharashtra	West	Plastics
236	Plastiblends	88.97	Small	1991	New	Maharashtra	West	Plastics
237	Kisan Mouldings	87.07	Small	1989	New	Maharashtra	West	Plastics
238	OK Play	84.11	Small	1988	New	Haryana	North	Plastics
239	Bright Brothers	63.45	Small	1946	Very Old	Maharashtra	West	Plastics
240	Hitech Plast	64.59	Small	1991	New	Maharashtra	West	Plastics
241	Apar Ind	364.94	Medium	1989	New	Gujarat	West	Rubber
242	Pix Transmissions	171.84	Medium	1992	New	Maharashtra	West	Rubber
243	Elgi Tread	80.12	Small	1981	New	Tamil Nadu	South	Rubber
244	Unimers India	78.72	Small	1987	New	Maharashtra	West	Rubber
245	Apcotex Ind	55.8	Small	1986	New	Maharashtra	West	Rubber
246	Guj Reclaim	54.97	Small	1974	Old	Gujarat	West	Rubber
247	Cosco India	44.13	Small	1980	New	Delhi	North	Rubber
248	Indag Rubber	28.04	Small	1973	Old	Delhi	North	Rubber
249	Rubfila Int	24.03	Small	1993	New	Kerala	South	Rubber
250	Vamshi Rubber	23.44	Small	1993	New	Andhra Pradesh	South	Rubber
251	Rishiroop Rubbe	16.06	Small	1990	New	Gujarat	West	Rubber
252	Rubber Products	12.97	Small	1965	Old	Maharashtra	West	Rubber
253	Mahalaxmi Rubtech	18.99	Small	1991	New	Gujarat	West	Rubber
254	Puneet Resins	7.85	Small	1984	New	Maharashtra	West	Rubber
255	MM Rubber	1.91	Small	1964	Old	Karnataka	South	Rubber
256	Bajaj Hindusthan	4,754.19	Large	1931	Very Old	Maharashtra	West	Sugar
257	Balrampur Chini	2,374.97	Large	1975	Old	West Bengal	East	Sugar
258	Sakthi Sugars	1,982.73	Large	1961	Old	Tamil Nadu	South	Sugar
259	Triveni Engineering	1,952.43	Large	1932	Very Old	Uttar Pradesh	North	Sugar
260	Shree Renuka	1,627.30	Large	1995	New	Karnataka	South	Sugar
261	Dhampur Sugar	1,348.30	Large	1933	Very Old	Uttar Pradesh	North	Sugar
262	Pratappur Sugar	1,338.00	Large	1971	Old	Maharashtra	West	Sugar
263	EID Parry	1,093.52	Large	1975	Old	Tamil Nadu	South	Sugar
264	Oudh Sugar Mill	855.76	Large	1932	Very Old	Uttar Pradesh	North	Sugar
265	Bannariamman	830.18	Large	1983	New	Tamil Nadu	South	Sugar
266	Dwarikesh Sugar	729.76	Large	1993	New	Uttar Pradesh	North	Sugar

267	Simbhaoli Sugar	717.44	Large	1936	Very Old	Uttar Pradesh	North	Sugar
268	Rana Sugars	691.65	Large	1991	New	Punjab	North	Sugar
269	Upper Ganges Sugar	650.43	Large	1994	New	Uttar Pradesh	North	Sugar
270	Uttam Sugar	609.33	Large	1993	New	Uttaranchal	North	Sugar
271	Tata Tea	2,561.56	Large	1962	Old	West Bengal	East	Plantations - Tea & Coffee
272	Asian Tea and Exports	34.64	Small	1987	New	West Bengal	East	Plantations - Tea & Coffee
273	Assam Company	840.5	Large	1977	Old	Assam	East	Plantations - Tea & Coffee
274	Tata Coffee	540.96	Large	1943	Very Old	Karnataka	South	Plantations - Tea & Coffee
275	Harrisons Malay	390.99	Medium	1978	Old	Kerala	South	Plantations - Tea & Coffee
276	Bombay Burmah	358.28	Medium	1863	Old	Maharashtra	West	Plantations - Tea & Coffee
277	CCL Products	351.98	Medium	1961	Old	Andhra Pradesh	South	Plantations - Tea & Coffee
278	Jayshree Tea	310.66	Medium	1945	Very Old	West Bengal	East	Plantations - Tea & Coffee
279	Neelamalai Agro	18.25	Small	1943	Very Old	Tamil Nadu	South	Plantations - Tea & Coffee
280	Warren Tea	132.89	Medium	1977	Old	Assam	East	Plantations - Tea & Coffee
281	Dhunseri Tea	178.73	Medium	1916	Very Old	West Bengal	East	Plantations - Tea & Coffee
282	Goodricke Group	108.88	Medium	1977	Old	West Bengal	East	Plantations - Tea & Coffee
283	Diana Tea Co	86.92	Small	1911	Very Old	West Bengal	East	Plantations - Tea & Coffee
284	B and A	66.25	Small	1915	Very Old	Assam	East	Plantations - Tea & Coffee
285	Terai Tea Co Lt	64.24	Small	1973	Old	West Bengal	East	Plantations - Tea & Coffee
286	Jet Airways	16,566.69	Large	1992	New	Maharashtra	West	Transport
287	Container Corporation of India	3,183.92	Large	1988	New	Delhi	North	Transport
288	Kingfisher Air	1,133.26	Large	1995	New	Karnataka	South	Transport
289	SpiceJet	568.1	Large	1984	New	Delhi	North	Transport
290	Transport Corporation of India	492.03	Medium	1965	Old	Andhra Pradesh	South	Transport
291	Allcargo Global Logistics	703.14	Large	1993	New	Maharashtra	West	Transport
292	Patel Integrated Logistics	109	Medium	1962	Old	Maharashtra	West	Transport
293	ABC India	59.78	Small	1972	Old	Assam	East	Transport
294	Chartered Logistics	36.13	Small	1995	New	Gujarat	West	Transport
295	Jagson Airlines	36.04	Small	1994	New	Himachal Pradesh	North	Transport
296	Coastal Roadway	25.1	Small	1968	Old	West Bengal	East	Transport
297	Aegis Logistics	196.9	Medium	1956	Old	Gujarat	West	Transport
298	Inter State Oil Carrier	12.82	Small	1993	New	West Bengal	East	Transport
299	Balughat Technologies	6.23	Small	1993	New	West Bengal	East	Transport
300	SER Industries	2.3	Small	1963	Old	Karnataka	South	Transport

INFLUENCE OF STRESS ON IT PROFESSIONALS – THE GOLD COLLARS – AN INDIAN PERSPECTIVE

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ABSTRACT

In an era of innovation economy where knowledge workers play a predominant role in contributing to the Indian economy, the level of stress experienced by them is also found to be in an upswing. Gold Collars are knowledge workers who are known for their problem solving abilities, creativity, talent and intelligence. IT Professionals come under the umbrella of gold collars and IT sector in India witnessed a tremendous growth in the past few decades due to factors like liberalization and globalization of the Indian economy. IT jobs are mostly contractual with less job security but high pay, and entail strong competitiveness, along with a globalized life style. There are a few evidences that IT jobs are offering an elevated standard of life, but it takes a toll on the mental health and relationship aspects of the professionals. This paper examines the impact of stress on gold collars from Indian IT professionals working in various companies and the respective coping strategies resorted by them.

KEY WORDS

Gold Collars, IT Professionals, Stress, Coping Strategies

Stress is the trash of modern life - we all generate it but if you don't dispose it properly, it will pile up and overtake your life

Terri Guillemets

INTRODUCTION

In an era of innovation economy where knowledge workers play a predominant role in contributing to the Indian economy, the level of stress experienced by them is also found to be in an upswing. This fact is quite well known and there is nothing new about it. Stress has been experienced from time immemorial and now the temper is still more. Innovative trends in the nature of work have led to the emergence of a particular kind of knowledge worker--the gold-collar worker, who is known for problem-solving abilities, creativity, talent, and intelligence. They perform non repetitive and complex work that is difficult to evaluate. Though the term gold collars embrace a wide variety of knowledge workers like IT Professionals, lawyers, community planners, engineers, doctors, stock analysts etc., gold collars who are greatly influenced and subjected to stress are the employees in the IT Profession.

IT sector in India witnessed a tremendous growth in the past few decades due to external liberalization (i.e.) globalization of the Indian economy. These policies in turn brought a new work environment and see changes in the employment trends. Service providers characterized this sector by adhering to strict deadlines set by their customers, working in different time zones, interdependency in teams, multitasking and prolonged work hours. In short majority of the IT professionals are forced to face serious stress problems. At times IT/ITES professionals are forced to change the entire paradigms amidst constant uncertainty and high risk.

More and more gold collar employees are experiencing stress at work. They may be coping with too much pressure, long hours or rapid change. The nature of employment has now changed and the idea of a job for life has been replaced by an emphasis on performance. Stress is now recognized as a valid health and safety issue at work. Today's world moves at a much faster-pace than one has ever imagined and most people accept and expect stress in their lives as they strive to balance the demands of their work and home lives. Deadlines to be met, changing priorities, longer working hours, e-mails commuting are some of the reasons that contribute towards stress. Most of the gold collars are put under pressure to handle situations that are not life-threatening but nevertheless provoke stress signals. These can lead to a range of unpleasant and debilitating feelings and symptoms, such as headache, backache, stomach upsets, anxiety attacks and lethargy. This in turn leads to lack of productivity, burn-out and long-term illness if not prevented.

BACKGROUND OF THE STUDY

STRESS AMIDST GOLD COLLARS – *an Issue of growing Concern*

"Nothing gives one person so much advantage over another as to remain always cool and unruffled under all circumstances."

—Thomas Jefferson

THE CONCEPT OF STRESS

"Stress" according to Oxford Dictionary is "a state of affair involving demand on physical or mental energy". It is a condition or circumstance which can disturb the normal physiological and psychological functioning of an individual. Extreme stress conditions, psychologists say, are detrimental to human health but in moderation stress is normal and, in many cases, proves useful. Stress, nonetheless, is synonymous with negative conditions.

Stress-related disorders encompass a broad array of conditions, including psychological disorders (e.g., depression, anxiety, post-traumatic stress disorder) and other types of emotional strain (e.g., dissatisfaction, fatigue, tension, etc.), maladaptive behaviors (e.g., aggression, substance abuse), and cognitive impairment (e.g., concentration and memory problems). In turn, these conditions may lead to poor work performance or even injury.

WHY IT PROFESSIONALS ARE TERMED GOLD COLLARS?

The term Gold Collars are used to refer high skilled knowledge workers who are known for their intelligence, innovative capability, independence, problem solving skills, creativity, talent, who perform non-repetitive and complex task and above all who rely heavily on their brain power. Since IT Professionals satisfy all the above mentioned criteria they are termed as gold collars.

JOB STRESS AMONG GOLD COLLARS- THE IT PROFESSIONALS

Job stress amidst gold collars is considered to be the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health (mental and physical) and even injury. Stress among gold collars is relatively high as it involves high challenges. Challenge energizes psychologically and physically, and it motivates individuals to accumulate new skills and master jobs. When a challenge is met, one feels relaxed and satisfied. But gold collar stress is quite different - the challenge has turned into job demands that cannot be met, relaxation has turned to exhaustion, and a sense of satisfaction has turned into feelings of stress. In short, the stage is set for illness, injury, and job failure.

REVIEW OF LITERATURE

It is quite true from the review of research works previously undertaken that many researchers have studied the influence of stress among diversified group of people in various dimensions. But currently more focus is given on IT professionals as the influence of stress experienced by them is relatively high when compared to its impact on people belonging to various other sectors.

As per the study conducted on "Work-related stress among women professionals in Chennai City" it is found that impact of outcome variables, depression and life satisfaction were significant on stress among women professionals. Role overload is found to have more influence on women IT professionals.

In a study conducted on "Distress, Wellness and Organisational Role Stress among IT Professionals" it is found that IT professionals in Kolkata, subjectively experienced distress and wellness which are closely associated with Organizational role stress. In other words, personal and professional stressors exert cumulative effect on the individuals. Women professionals have a greater feeling of wellness and less Organizational stress than men professionals. The older age group is more distressed than the younger age group. Wellness and Organizational role stress can be predicted from the number of stressful life events and coping resources taken together.

According to the research study conducted on "Stress Among Gold Collars in Chennai City" by Prof. Ramaniah Mu. Subrahmanian, it is found that the impact of stress is relatively high on both individual performance and Organisational performance. It is also quite evident from the study that roles are critical in integrating employees with their organization. It is also concluded that organizational role stress contributes high stress among IT professionals. It is also suggested that IT employees need to be treated differently and HR strategies must be relaxed and designed having proper understanding of their expectations.

As per the research study conducted by P.S.Swaminathan and Dr. S. Rajkumar, it is found that the phenomenon of stress is highly individualized in nature. Some people have a high level of stress tolerance and they feel quite comfortable to thrive in a dynamic environment. Most of the employees are found to be paralyzed in the face of the stressors present in the Organisation. The stressors which are commonly identified are pressure to meet the deadlines, meeting the high standards of performance expectations, working within the constraints of moderate resources and coping with sudden emergencies.

In the exploratory study on job stress and its effect of the information systems professional in Taiwan, the impact of job stressor and its outcome among IT professionals is focused. The result shows that some of the stressors really affect the information system personnel, and they suffer from anxiety, depression, fatigue, low self-esteem, low job satisfaction, and some health-related problems... etc. Those factors contributing to on-the-job stress among IT professional are (1) fast IT technological innovation (technological uncertainty), (2) long working hours and heavy duty demands (task demands), (3) lack of social support from colleagues and poor interpersonal relationship with users (interpersonal demands), (4) the managerial style of information systems department's manager (organizational leadership), (5) personal marital difficulties (family problem), and (6) personal financial troubles (economic problem).

"The Study on General Role Stress among IT/ ITes Professionals" reveal that stressor 'Role Boundedness' contributes significantly higher than 'Self Role Distance'. The stressor 'Personal Inadequacy' contributes minimum of the general role stress. In Indian context respondents belonging to the age group of 22 to 28 years did not occupy many roles; therefore, the conflict that the individual faces when he or she is occupying more than one role is less i.e. IRD contributes relatively less to GRS. (General Role Stress). Also, the 'Personal Inadequacy' factor is low as professional in general are competent for the work assigned. The stressor 'Role Boundedness' figures high among the respondents, this may be due to the long working hours, working on weekends and working with strict deadlines; leaving them with not sufficient time for themselves. It leads to the feeling of forgoing pleasures in personal life, which respondents feel is due to the work obligations demanded by the organization.

In a research study titled "A study on stress and depression experienced by women IT professionals in Chennai, India" the influence of age and experience on stress and depression and the relationship between stress and depression among women information technology (IT) professionals in Chennai, India. The study aimed (1) to find out the level of stress and depression experienced by women IT professionals, (2) to understand the impact of age and experience on stress and depression, and (3) to study the relationship between stress and depression were studied. Overall stress and stress dimension is found to have significant correlation with depression among employees. Depression is high when stress levels are high. Role stagnation, role erosion, and inter-role distance are related to higher level of stress. Managers, with the participation of employees, can take steps such as managing work allocation, adequate staffing, etc. to reduce the level of stress of these dimensions. The

overall stress, inter-role distance, role isolation, personal inadequacy, self-reported distance, role ambiguity, and resource inadequacy vary significantly among employees based on age and are found to be high among the employees.

To tackle the prevalence of high levels of stress among employees, many IT companies have "help hotlines" that provide counselling intervention to their employees who face stress or psychological fatigue. Companies are also trying to help employees combat stress better. Companies such as Infosys, Tata Consultancy Services, Cognizant and Wipro have regular "stress breaks" intended to help the employees strike a healthy balance between work and fun. Cognizant, as part of an initiative called 'The Everest,' has a set of people planning 'adventure travel' for employees. The company also has yoga sessions for interested employees. While companies such as Wipro and TCS have regular 'family day functions' and 'workout programmes' for their employees, Infosys has regular 'green food stalls' on its food courts to encourage healthy eating habits among its work force.

The study by the Indian Council for Research on International Economic Relations, a New Delhi-based research group, said India's rapid economic expansion has boosted corporate profits and employee incomes, but has also sparked a surge in workplace stress and lifestyle diseases that few Indian companies have addressed. Long working hours, night shifts and a sedentary lifestyle make people employed at information technology companies prone to heart disease and diabetes, the report said. There have also been growing reports of mental depression and family discord in the industry.

Infosys Technologies Ltd., India's second-largest software exporter, has a 24-hour hotline for employees suffering from depression to access psychiatrists. But not many companies in the outsourcing industry conduct regular health checks or provide similar support to their employees. The ICRIER study, which surveyed 81 companies, said they lose approximately 14% of their annual working days due to employee sickness. Less than a third of them provide their staff with preventive health care measures.

Although it is true that IT professionals enjoy hefty salaries, nothing in this world comes complementary. Most IT companies know very well how to take the juice out of the person for whom they are paying well. In the early 2000, there was a real shortage of IT professional in India and IT companies resorted to all possible measures to keep their employees happy besides paying a lump sum salary. But today the scenario has totally changed. Every good student with high percentage prefers to take up IT profession. The over supply of software engineers in the Indian market has resulted in considerable amount of stress both among the existing IT professional as well as on those seeking for jobs.

Jobs in Information technology is the most coveted one in modern India, and the most brilliant section of the youth are going for it. While each job has its own stress, IT jobs are somewhat different from our traditional and typical concept of secured employment: IT jobs are mostly contractual with less job security but high pay, and entail strong competitiveness, along with a globalized life style. There are a few evidences that IT jobs are offering an elevated standard of life, but taking tolls on the mental health and relationship aspects of the professionals.

Mental health professionals are now convinced that an increasing number of persons working in the IT and IT-enabled services sector fall prey to depression, because of the high stress they undergo. Studies confirm that at least 10 per cent of the population in India have gone through some degree of depression. Of these, IT and ITES employees form a large chunk, say doctors. The signs that a person is going through depression becomes apparent through loss of interest in regular activities, poor sleep and appetite, feeling of worthlessness, negative thoughts about the past and present and hopelessness about the future and even thoughts of self harm.

Since IT professionals are more achievement oriented, they do not have much of a social life and the time spent with family is also less. There is also lack of recreation and opportunities to relax, and all these may lead to frustration and eventually depression, he explains. But taking time off from their busy schedule, taking up recreational activities and better sleep and eating patterns are bound to help matters.

RATIONALE OF THE RESEARCH

It is quite true from the literature reviewed that stress is highly predominant amidst IT professionals compared to the employees from the various other sectors. The researchers have attempted in this study to project a holistic picture of the influence of the various stressors on the IT professionals in India and the respective coping strategies that need to be resorted to cope up with the same. Highly motivated and high performing IT professionals are the need of the hour in the Indian IT industry. Strategies need to be resorted by them to ease out or bring down the stress level which in turn will enable the gold collars to come out with superior performance.

OBJECTIVES OF THE STUDY

The study is mainly carried out to find the various factors influencing stress among the Indian IT Professionals and to know about the various individual and organizational coping strategies that are adopted by gold collars to combat stress

METHODOLOGY OF RESEARCH

The research design adopted for this study is descriptive as descriptive research focuses on the description of the state of affairs, as it exists at present. The data for this study are both primary and secondary in nature. A sample of 500 professionals was selected by using proportional allocation and the same questionnaire was sent to the selected software companies. Data were collected from diversified respondents like programmers, developers, team leaders, project managers etc. But response was only from 245 out of which 40 were found to be incomplete. Hence the sample size was restricted to 205. The questionnaire is based on the seven-point Likert-scale, comprising of ten factors to measure stress. Along with this, demographic data is also collected through the same questionnaire using multiple-choice, dichotomous questions etc.

CRUCIAL FACTORS

The factors mentioned below are found to have a powerful influence on gold collars

1. Technological Obsolescence
2. Interaction with the team members
3. Client interactions: Interaction during business analysis and system analysis.
4. Carrying out work at home or working for late hours.
5. Role overload: Assuming different roles in a different or same project.
6. Work culture: Travelling abroad and facing different cultures.
7. Technical constraints: Lack of technical expertise.

8. Attitude and relation of the family towards work.
9. Workload: Excessive and diverse work.
10. Technical risk propensity: Risk due to using innovative technology or process.

DATA ANALYSIS & INTERPRETATION

RESPONDENT'S PROFILE

- YEARS OF WORK EXPERIENCE:

It is inferred from the study that 31% of the gold collar employees have got a work experience of less than 3 years, 36% of the have got a work experience of 10 years and 33 % of them have got an overall experience of above 10 years in the IT Industry.

- GOLD COLLARS –GENDER:

Among the gold collars from which data were collected 60% of them were male and 40 % of them were female

- NATURE OF JOBS:

It is found that 65% are involved in technical jobs and others are involved both in technical and managerial jobs

- QUALIFICATION:

56% of the respondents are under graduates and 44% of them are Post Graduates

- INEVITABLE ROLE OF STRESS:

Most of the gold collars (i.e.) 86% preferred the option that stress at work is highly inevitable and 14% are of the opinion that it is not inevitable.

Applying interval estimation method it is found that the gold collars opinion regarding the inevitable role of stress at work lies between 0.811 and 0.909 at 95% confidence level and population proportion lies between 81.1% and 90.9%. This is a clear indication of the fact that majority of the gold collars – IT professionals are greatly influenced by stress.

RELIABILITY

The reliability of the scales is determined through Cronbach’s Alpha and all the variables are found reliable, that is, the value of alpha is greater than .7 except workload.

VALIDITY

The validity of the scale is determined through the people working in different software companies.

DESCRIPTIVE ANALYSIS

Each factor of stress is measured on a seven-point scale, where ‘1’ indicates the lowest level of intensity and ‘7’ indicates the highest level of intensity. Table 3.3 shows the average level of intensity of each subscale along with their standard deviation. On the basis of coefficient of variance (cv %), it is found that the factor ‘fear of obsolescence’ (mean 3.97) contributes more towards jobs stress followed by ‘client interaction’ (mean 3.86) and ‘technical constraints’ (mean 3.40). The next two factors that contributes towards job stress are, ‘team factors’ (mean 3.11) and ‘role overload’ (mean 3.38). Hence, major factors contributing towards the job stress are not the work or workload but changing technology, availability of technology and availability of technical staff to build the suitable team for a project.

Table 3.3 : Descriptive Analysis of Factors

Factors	Min	Max	Mean	SD	CV%
Fear of obsolescence	1.94	5.94	3.9702	.7512	18.92%
Team factors	.00	6.77	3.1126	1.1735	37.70%
Client interaction	.00	6.71	3.8648	1.4203	36.75%
Work family interaction	.00	6.71	3.2251	1.3287	41.20%
Role overload	.00	6.13	3.3848	1.2821	37.88%
Work culture	.00	6.75	2.2780	1.7766	77.99%
Technical constraint	.00	6.80	3.4039	1.2487	36.68%
Family support	.00	7.00	2.8951	1.4531	50.19%
Workload	.00	7.00	3.7463	1.5392	41.09%
Technical risk	.00	7.00	3.3837	1.4568	43.05%

Work culture and family support has the least priority in contributing to jobs stress, because work culture is measured through data where professionals are visiting foreign countries and having stress due to new environment and culture, where most of the workers have not reported any foreign experience. Similarly, family support is not found as stressor because 75% respondents are unmarried and 76% are under the age of 28 years.

CORRELATION ANALYSIS

The correlation matrix reveals that the highest correlation is found in ‘workload’ and ‘work family interaction’ i.e. .624, and ‘client interaction’ and ‘work overload’ are also highly correlated. Hence, this suggests that staff interacting with clients have multiple roles in the organizations and this mounts stress among the professionals at senior positions. On the other hand, there is weak correlation between fear of obsolescence with work culture and workload. Similarly, there is an obvious weak correlation of client interaction with family support. One factor ‘role overload’ has very high correlation with almost all other factors. Hence, this seems to be a greater source of stress or at least the cause of creating stress through other sources as well.

Table 3.4: Correlation Matrix of Factors

	1	2	3	4	5	6	7	8	9	10
1	1.000	.474	.401	.354	.315	.268	.349	.213	.185	.349
2	.474	1.000	.501	.472	.569	.409	.346	.358	.309	.348
3	.401	.501	1.000	.547	.616	.307	.489	.197	.450	.434
4	.354	.472	.547	1.000	.586	.433	.358	.420	.624	.344
5	.315	.569	.616	.586	1.000	.438	.559	.308	.535	.572
6	.268	.409	.307	.433	.438	1.000	.425	.356	.291	.365
7	.349	.346	.489	.358	.559	.425	1.000	.319	.359	.488
8	.213	.358	.197	.420	.308	.356	.319	1.000	.335	.315
9	.185	.309	.450	.624	.535	.291	.359	.335	1.000	.442
10	.349	.348	.434	.344	.572	.365	.488	.315	.442	1.000

ANALYSIS OF VARIANCE

Analysis of variance is applied on subscales to check whether all subscales have the same impact of stress or not. The analysis suggests that each factor does not contribute equally in the overall stress. Individual analysis of the factors also reveals that ‘fear of obsolescence’ and ‘team interaction’ are the most important contributors towards job stress in software companies

Table 3.5: Analysis of Variance (ANOVA)

Source of Variation	SS	df	MS	F	F crit
Between groups	458.0577	9	50.8953	27.2369	1.8845
Within groups	3811.979	2040	1.8686		
Total	4270.036	2049			

EXTENT OF STRESS CREATED BY THE VARIOUS FACTORS

The various factors that contribute towards stress commonly like working overtime, setting of high standards, deadlines set, future uncertainty, Organizational roles , Challenging Jobs are identified and the respondents are asked to rate the various factors . It is inferred from the analysis through weighted average method that the gold collars are greatly stressed mainly because of the deadlines that are set to complete the task as this attribute occupies the first position. It is followed by other factors like working overtime, setting of high standards, future uncertainty, and organizational roles, challenging jobs which occupy the 2nd, 3rd, 4th, 5th and 6th positions respectively.

COPING STRATEGIES TO COMBAT STRESS

When the respondents were asked whether they resort to any coping strategies continuously to combat stress , it is found that around 79% of the gold collars resort to coping strategies frequently and 21% of them resort to such strategies occasionally. By interval estimation method , it is found that the coping strategies frequently adopted by gold collars to reduce stress lie between 0.73 and 0.85 at 95% confidence level and population proportion lies between 73% and 85% .

CONSEQUENCES OF STRESS AMIDST IT PROFESSIONALS – THE GOLD COLLARS

From the researches carried out previously, it is strongly believed that majority of the gold collars suffer from psychological problems in the initial stage which ultimately have lead to physiological problems at a later stage.

PROBLEMS	NO.OF RESPONDENTS	PERCENTAGE
Physical Problems	38	18.53
Psychological Problems	140	68.30
Behavioral Problems	27	13.17

It is evident from the above analysis that majority of the gold collars suffer from psychological problems followed by physical problems and behavioral problems.

Studies prove that psychological stress has got a great influence towards chronic anxiety, frustration, emotional outburst, depression, boredom and ultimately burnout. Physiological stress is highly associated with high blood pressure, high level of cholesterol and can result in heart disease, ulcer and arthritis. Behavioral Problems may be in the form of alcoholism, drug addiction, increased smoking, sleeplessness etc

MOSTLY PREFERRED COPING STRATEGIES:

COPING STRATEGIES	NO. OF RESPONDENTS	PERCENTAGE
Good Ergonomics	22	10.73
Get Together Parties	21	10.24
Entrusting on Spiritual Power	47	22.93
Entertainment/Recreation	35	17.07
Visiting Holiday Resorts	40	19.51
Yoga	25	12.20
Share Feelings with Trust worthy People	15	7.32

It is implied from the above table that Gold Collars try to combat stress mainly by entrusting more in the Spiritual Power and some try to combat stress by visiting various holiday resorts which in turn is followed by entertainment and recreation activities. Good Ergonomics, Get Together Parties, Sharing Feelings with trust worthy people are the other measures used by gold collars to combat stress.

INDIVIDUAL AND ORGANIZATIONAL STRATEGIES

It is also found out from the research that around 60% of the respondents are of the opinion that the organizational strategies are more powerful in combating stress whereas 40% of the gold collars believe that individual strategies are self sufficient in combating stress.

KEY FINDINGS

It is implied from the study that stress plays a predominant role in the life of gold collars from both the Organizational perspective and individual perspective. Stress if left unnoticed is likely to cause serious effects on the IT Professionals both in terms of their physical health and mental health.

- ✓ Analysis of variance suggests that all factors taken into account are not equally contributing towards job stress among software professionals working in different software
- ✓ On the average, 'fear of obsolescence' is the most contributing factor in job stress
- ✓ Client interaction' and 'workload' are next major factors, after fear of obsolescence
- ✓ According to correlation analysis of the factors, highest correlation is found of 'workload' with 'client interaction' and 'work family support'; and moderate correlation is found with almost every other factor.
- ✓ Those professionals who are playing dual role of handling technology and managerial position are facing more stress
- ✓ Many IT professional suffer from the deadlines that are set in completing the specific task.
- ✓ 79% of the gold collars resort to various coping strategies frequently to combat stress
- ✓ Majority of the gold collars – the IT professionals are found to be suffering from psychological problems
- ✓ Gold collars try to combat stress by visiting holiday resorts and relying more on the spiritual power

CONCLUSION

In businesses across the world, stress levels of IT professionals who are considered to be the gold collar employees are rising along with talk of recession and with the highly fluctuating stock market performance. Problems can also come from a reality that's painfully close by. The gold collars have got no other go but to combat the stress devising suitable strategies. Emotional, rather than cognitive intelligence could well be the key to a successful career. But new research suggests that stress can seriously damage emotional intelligence and with it, workplace effectiveness. IT professionals can resort to healthy ways and means to relax and recharge themselves. To escape from stress they should not resort to negative practices that may affect their health and mar their future. To have an emotional and physical well being they need to have a shift in attitude. They should remember that although feelings of stress and symptoms are very frightening, they are not dangerous or harmful. It is argued that stress can be good as well as bad however bad stress is what causes adverse effects in employee's productivity. A successful approach requires Organizations worldwide to willingly look at organisational stressors as well as employee-directed strategies and programmes to combat stress and enhance competencies since it is believed that Organizational effectiveness begins with personal effectiveness.

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A STUDY OF THE ISSUES OF BORROWERS AND COMMERCIAL BANKS IN SANCTIONING AND RECOVERY OF HOUSING LOANS

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ABSTRACT

Food, clothing and shelter have always been considered a basic human need. Home has been the centre and instrument for mankind's moral and material progress ever since the advent of civilization. Since home life affects the very foundation of an individual's life. The house becomes an integral part of it. The present paper deals with various problems faced by both the sample borrowers in availing loans from the banks and the sample banks in sanctioning and recovering the loans from the borrowers. Besides, the satisfaction levels of sample borrowers and their opinions to overcome the problems faced by them are also highlighted.

KEYWORDS

Borrowing, Commercial Bank, Housing loan, Recovery

INTRODUCTION

India is home to over 1.1 billion people. With about one in every sixth person in the world living in India, housing perforce assumes significant importance. Successive Indian governments have regarded housing as a primary need of the people. The need to provide affordable housing has been the reason behind State interventions in the sector. Housing policies, however, tended to be framed by the government from a social rather than economic perspective. Despite explicit recognition of the need for housing, dedicated programmes have only benefited from low public spending. Home has been the centre and instrument for mankind's moral and material progress ever since the advent of civilization. Since home life affects the very foundation of an individual's life. The house becomes an integral part of it. The first step in house construction is collecting money to own a house. These days one need not have ready cash to start house construction. There are many financing institutions which give a helping hand in fulfilling one's dream of owning a house. The present paper deals with various problems faced by both the sample borrowers in availing loans from the banks and the sample banks in sanctioning and recovering the loans from the borrowers. Besides, the satisfaction levels of sample borrowers and their opinions to overcome the problems faced by them are also highlighted.

OBJECTIVES

The following specific objectives have been set for the study:

- to analyze the problems and experiences of customers availing housing loans ;
- to identify the problems of select commercial banks in the area of housing finance ; and
- to make relevant suggestions and recommendations towards effective and viable housing finance by commercial banks.

HYPOTHESES

The present study intends to formulate the following hypotheses to bring out certain conclusions concerning the performance of commercial banks in housing finance.

- There are no significant differences in the select commercial banks in facing the problems regarding recovery of house loans.
- There are no significant differences in the awareness and satisfaction of the borrowers of housing loans from public sector commercial banks.

SAMPLE DESIGN

The study confines to Housing Finance by Commercial Banks in Kadapa Corporation. Presently, the banking structure in Kadapa Corporation comprises 19 Commercial Banks, i.e., 15 Public Sector Banks and 4 Private Sector Banks. The study has adopted Multi-stage sampling technique taking into consideration the banks, branches and loanees.

Stage I

Out of total 19 public sector commercial banks functioning in the Kadapa Corporation, 11 under public sector and all the 4 under private sector are not actively involved in housing finance activity. So they are excluded from the scope of the study. As such, the remaining four public sector commercial banks: State Bank of India (SBI) ; Syndicate Bank (SB); Andhra Bank (AB) and Indian Bank (IB) which are actively involved in housing finance activity have been selected for the study.

Stage II

The branch network of the sample banks in Kadapa Corporation is SBI-3; AB – 3 ; SB – 3 and IB -1. From each of the select banks, one bank branch which is actively engaged in housing finance activity has been selected for an intensive study.

Stage III

The universe of the housing loan borrowers constitutes those individuals residing in the Kadapa Corporation who have availed loans from the four sample bank branches. The total housing loan borrowers are 1097 consisting 500 from SBI, 352 from AB, 179 from SB, and 66 from IB. Out of 1097 borrowers, 30 per cent borrowers are selected by applying the Random Sampling Technique. Thus, sample borrowers constitute 330 representing 150 from SBI, 106 from AB, 54 from SB, and 20 from IB.

The sample, therefore, finally constitutes 4 Public Sector commercial Banks, 4 bank branches and 330 sample housing finance borrowers.

DATA BASE

To achieve the set objectives, the study is based on primary data. Primary Data is collected from the sample respondents who have taken housing loans from the sample bank branches. Pre- tested schedules were developed and administered for the purpose. The managers and staff members of select commercial banks are interviewed and discussions held in detail regarding various aspects of housing finance.

TOOLS OF ANALYSIS

The data collected from the primary source have been analysed with the help of different analytical tools. Statistical tests are employed at appropriate contexts for arriving at meaningful inferences.

PROBLEMS OF SAMPLE BORROWERS

Sample borrowers of residential house builders are facing number of problems. The problems of the sample borrowers include preparation of documents, delay of sanction, surety and security, rules and regulations, incidental expenses, insufficient loan amount, insurance cost and prepayment burden.

BANK-WISE PROBLEMS OF SAMPLE BORROWERS

Problems of the sample borrowers while borrowing the loans from the banks are embodied in the Table 1.

Table 1
PROBLEMS OF SAMPLE BORROWERS IN SELECT COMMERCIAL BANKS

Sl.No	Sample Bank	Total of borrowers	no.No. of total borrowers	ofNo.of total borrowers facing problems	Number of borrowers facing the problems of								Average No.of Problems per Borrowers*
					Preparation of Document	Delay of processing of application	inSecurity loan	/Rules Regulations	&Incidental Expenses	In sufficient loan	Insurance	Pre payment	
1	SBI	150 (100.0)	78 (52.0)	72 (48.0)	22 (14.67)	31 (20.67)	72 (48.0)	64 (42.67)	68 (45.33)	39 (26.0)	34 (22.67)	10 (6.67)	4.72
2	AB	106 (100.0)	38 (35.85)	68 (64.15)	27 (25.47)	28 (26.42)	54 (50.94)	63 (59.43)	43 (40.57)	26 (24.53)	32 (30.19)	06 (5.66)	4.10
3	SB	54 (100.0)	25 (46.30)	29 (53.70)	12 (22.22)	09 (16.67)	22 (40.74)	28 (51.85)	25 (46.30)	16 (29.63)	28 (51.85)	04 (7.41)	4.97
4	IB	20 (100.0)	14 (70.0)	06 (30.0)	02 (10.0)	03 (15.0)	06 (30.0)	06 (30.0)	04 (20.0)	03 (15.0)	04 (20.0)	01 (5.0)	4.83
Total		330 (100.0)	155 (46.97)	175 (53.03)	63 (19.09)	71 (21.52)	154 (46.67)	161 (48.79)	140 (42.42)	84 (25.45)	98 (29.70)	21 (6.36)	4.53

Chi – Square Value X2 - calculated value 11.6

Level of Significance (%) - 5

degrees of Freedom - 3

Critical Value of Chi-Square - 7.815

Note : Figures in the parentheses indicate percentage to total

*Multiple responses

Source: field survey

Out of 330 sample borrowers, 175 have been facing different kinds of problems. It may be said that the magnitude of the problem is slightly pronounced in AB when compared to other select banks. About 64.15 per cent of the sample borrowers opined that they have problems in dealing with the bank. Very least per cent i.e., 30.0 per cent borrowers said that they faced problems in IB. It indicates that the IB is providing more facilities as customer friendly with other banks. The intensity of the problems varied from bank to bank.

Of all the sample borrowers, the sample borrowers of SB face more problems as of 29 sample borrowers face on an average of 4.97 number of problems and the least is recorded with AB with its 68 sample borrowers, on an average face 4.10 number of problems. Thus, it is observed that the problem of rules and regulations is more in all the select banks.

Hypothesis formulated and tested

It is presumed that 'there are no significant differences between select public sector banks and problems of sample borrowers'. The calculated value of Chi – Square Value (X²) is 11.6. The critical value at 5 per cent level of significance for 3 degrees of freedom is 7.815. The calculated value is more than the Table value. Thus, a null hypothesis is rejected.

INCOME-WISE DISTRIBUTION OF SAMPLE BORROWERS FACING PROBLEMS

The intensity of problems varies from borrower to borrower in relation to their income level as shown in Table 2.

Table 2
INCOME - WISE DISTRIBUTION OF SAMPLE BORROWERS FACING PROBLEMS

Sl.No	Monthly Income (Rs)	Total of borrowers	No. of total borrowers	No. of borrowers facing the problems	Preparation of Documents	Delay in processing of loan applications	Surety & Security	Rules & Regulations	Incidental Expenses	Insurance	Prepayment	Average No. of problems per borrowers *
1	Upto 10000	17 (5.15)	13 (76.47)	04 (23.53)	-	01 (6.67)	03 (20.0)	03 (20.0)	02 (13.33)	02 (13.33)	-	4.12
2	10000-15000	140 (42.42)	83 (59.29)	57 (40.71)	19 (13.38)	23 (16.20)	52 (37.14)	48 (33.80)	42 (29.58)	21 (14.79)	22 (15.49)	4.04
3	15000-20000	99 (30.00)	10 (10.10)	89 (89.90)	33 (33.33)	38 (38.38)	78 (78.79)	87 (87.88)	77 (77.78)	54 (54.55)	64 (64.65)	4.95
4	Above 20000	74 (22.42)	49 (66.22)	25 (33.78)	11 (15.07)	9 (12.33)	21 (28.76)	23 (31.50)	19 (26.03)	9 (12.33)	10 (13.70)	4.50
Total		330 (100.0)	155 (46.97)	175 (53.03)	63 (19.09)	71 (21.52)	154 (46.67)	161 (48.79)	140 (42.42)	84 (25.45)	98 (29.70)	4.53

Chi – Square Value X² - calculated value 75.93

Level of Significance (%) - 5

Degrees of Freedom - 3

Critical Value of Chi-Square - 7.815

Note : Figures in the parentheses indicate percentage to total

* Multiple responses

Source : Field survey

Total sample borrowers are divided into four categories based on their monthly income viz., upto Rs.10000; Rs.10000-Rs.15000; Rs.15000-Rs.20000; and more than Rs.20000. Borrowers in the lowest income group having upto Rs.10000 income are 15, but only 4 of them accounting for 26.67 per cent in the group faced the problems with sample banks. About 40.71 per cent and 89.90 per cent of the borrowers are experiencing the problems with select banks in income group of second and third categories respectively. But, sample borrowers with more than Rs.20000 monthly income are 25 forming 33.78 per cent of the total sample group. They are also experienced the problems in taking the loan from sample banks. Almost all income groups of sample borrowers are experiencing the problems equally.

Hypothesis formulated and tested

It is presumed that 'there are no significant differences between income level and problems of sample borrowers'. The calculated value of Chi – Square Value (X²) 75.93 is greater than the critical value at 5 per cent level of significance for 3 degrees of freedom is 7.815. Hence, a null hypothesis is rejected.

Problem of Documentation

Documentation is an important factor at the time of applying for house loan in sample banks. The applicants have to submit the loan application along with required documents to select banks. The details of documents to be submitted for housing finance are listed as under:

- Duly filled in application , Proof of employment and salary certificate for self , spouse (if employed) / Balance sheet for last 3 years in the case of professionals, businessmen and self employed persons;
- Income Tax/Wealth Tax returns for the past 3 years, Proof of other sources of income like rent, interest on investment, if any;

- Copy of Agreement of Sale/Sale Deed of the property ,Demand Draft/Chalan towards payment of (1) processing fees (2) legal charges and (3) administration;
- Duly filled in guarantor forms and Estimated of the proposed construction certified by the qualified engineer/authorities;
- No objection certificate from the revenue authorities and LIC policy certificate on hand, NIL Encumbrances Certificate for 13 years and approved building plan;
- Parent documents for 30 years , Title deed and Inspection report from qualified civil engineer/architect;

All sample banks insist on similar type of documents. Out of 330 sample borrowers from all sample banks, 63 sample borrowers feel difficulty in the preparation of document for sanction of the housing loans. Out of 63 sample borrowers experienced the problem in preparation of loan documentation, while the highest of 27 sample borrowers (25.47 per cent) in recorded in AB, the lowest of 2 borrowers (10.0 per cent) in IB. Next to AB, 22 borrowers of SBI and 12 loanees of SB could feel the problem concerning the preparation of loan documentation (see Table 6.1).

DELAY IN SANCTION OF LOANS

Owing to delay in the sanction of loans, the select borrowers experienced the problems. In general, select banks after taking borrowers loan applications they will sanction the loans in different time lags. Data with regard to these lags involved in select banks are portrayed in Table 3.

Table 3
DISTRIBUTION OF SAMPLE BORROWERS ACCORDING TO TIME INVOLVEMENT IN THE SANCTION OF HOUSE LOAN

Sl. No.	Time taken sanctioning loans (in days)	No. of Borrowers in SBI	AB	SB	IB	Total
1	Upto 15	38 (25.33)	29 (27.36)	19 (35.18)	06 (30.0)	92 (27.88)
2	15-30	45 (30.0)	37 (34.91)	26 (48.15)	09 (45.0)	117 (35.45)
3	30-45	33 (22.0)	09 (8.49)	06 (11.11)	-	48 (14.55)
4	45-60	26 (17.33)	25 (23.58)	03 (5.56)	03 (15.0)	57 (17.27)
5	Above 60	08 (5.33)	06 (5.66)	-	02 (10.0)	16 (4.85)
Total		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Note: Figures in the parentheses indicate percentages to the total

Source: Field Survey

It is evident that about 35.45 per cent of total sample borrowers are sanctioned loans in 15–30 days; 27.88 per cent of in 15 days; 17.27 per cent in 45-60 days; 14.55 per cent in 30-45 days; and 4.85 per cent after 60 days of application date. There is wide variation of delay in sanctioning loans among the banks under study. About 10.0 per cent of the sample borrowers in IB are receiving loans in more than 60 days. The maximum number of sample borrowers have taken loans for housing construction in 15-30 days in all the select banks. Further, it is significant to note that with in the sample banks, SB sanctions loans more quickly. As large as 35.18 per cent of its borrowers are sanctioned loans within 15 days while none of its customers got loans after 60 days.

PROBLEM OF SURITY AND SECURITY

Another great hurdle that the sample borrowers faced at the times of receiving the loans from select banks is adhering to surity and security conditions. For analysis, surity and security is classified into three aspects namely, (i) Title of the property (ii) Guarantee and (iii) Collateral security.

Table 4
DISTRIBUTION OF SAMPLE BORROWERS FACING SURITY AND SECURITY PROBLEM

Sl. No.	Problem of borrower	No. of borrowers				Total
		SBI	AB	SB	IB	
1	Title of the property	28 (18.67)	19 (17.92)	08 (14.81)	02 (10.0)	57 (17.27)
2	Guarantee	36 (24.0)	29 (27.36)	11 (20.37)	03 (15.0)	79 (23.94)
3	Collateral security	08 (5.33)	06 (5.66)	03 (5.56)	01 (5.0)	18 (5.46)
4	Total 1+ 2+ 3	72 (48.0)	54 (50.94)	22 (40.74)	06 (30.0)	154 (46.67)
5	Borrowers not facing the problem	78 (52.0)	52 (49.06)	32 (59.26)	14 (70.0)	176 (53.33)
Total sample 4+ 5		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Chi – Square Value X² - 3.88

Level of Significance (%) - 5
 Degrees of Freedom - 3
 Critical Value of Chi-Square - 7.815

Note :1. Figures in the parentheses indicate percentages to the total.
 2.X2calculated for the problems regarding surety and security and problems faced by the sample borrowers in select commercial banks.

Source : Field Survey

Table 4 focuses on the problems regarding surity and security in the select commercial banks. It is clear that out of 330 sample borrowers from all select banks, 154 (46.67 per cent) experienced the problem and 176 not faced the problem of surety and security. Among all the select banks, the problem of surety and security is high in SBI, followed by AB, SB and IB. In all the select banks, problem of guarantee is more pronounced with 23.94 per cent when compared to other surity problems such as title of the property and collateral security. Problem of guarantee is also more in AB when compared to other banks. The reason is that banks demand their customers to arrange guarantee for 5 to 20 years. It is becoming hurdle on the part of the customers to arrange that much of guarantee to get the house loan.

Hypothesis formulated and tested

It is presumed that ‘there are no significant differences between the problems of borrowers regarding surity and security in select commercial banks’. It is evident that the calculated value of Chi-square is 3.88 and the critical value is 7.815 at 5 per cent level of significance for 3 degrees of freedom. The calculated value is less than the Table value. Hence, the null hypothesis is accepted.

RULES AND REGULATIONS

Usually banks follow some rules and regulations to grant housing finance. These rules and regulations do not help to finance the total cost of the plot, repayment schedules, plinth area criteria, not considering the future/other income and built area criteria. Table 5 contains the data relating to the problems faced by the sample borrowers regarding the rules and regulations of sample banks. It is evident that among 330 sample borrowers, 51.21 per cent of borrowers in all the select banks do not suffer with the problem of rules and regulations.

Table 5
 DISTRIBUTION OF SAMPLE BORROWERS FACING THE PROBLEMS OF RULES AND REGULATIONS

Sl. No.	Problem of borrower	No. of Borrowers				
		SBI	AB	SB	IB	Total
1	Total cost of plot not financed	24 (16.0)	23 (21.70)	11 (20.37)	04 (20.0)	62 (18.79)
2	Repayment Schedule	12 (8.0)	10 (9.43)	08 (14.81)	01 (5.0)	31 (9.39)
3	Non-consideration future income	10 (6.67)	08 (7.55)	04 (7.41)	01 (5.0)	23 (6.97)
4	Plinth area criteria	12 (8.0)	12 (11.32)	03 (5.56)	-	27 (8.18)
5	Built area criteria	06 (4.0)	10 (9.43)	02 (3.70)	-	18 (5.45)
6	Total 1+2+3+4+5	64 (42.67)	63 (59.43)	28 (51.85)	06 (30.0)	161 (48.79)
7	Borrowing not facing the problem	86 (57.33)	43 (40.57)	26 (48.15)	14 (70.0)	169 (51.21)
Total sample 4+5		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Chi – Square Value X2 - 10.08
 Level of Significance (%) - 5
 Degrees of Freedom - 3
 Critical Value of Chi-Square - 7.815

Note :1. Figures in the parentheses indicate percentages to the total.
 2. X2 calculated for the problems regarding rules and regulations and problems faced by the sample borrowers in select commercial banks

Source: Field Survey

Out of 161 borrowers, who encountered with this problem in all the sample banks, 64 borrowers are from SBI and 63 borrowers from AB. It means that the intensity of this problem is more or less equal among the borrowers of SBI and AB. Very less number of borrowers of IB experienced with this problem. Banks believe that recovery of loan would be perfect from the borrowers those who could acquire plot on their own. Banks fix the repayment schedule by considering the monthly income, period of service and family size.

Hypothesis formulated and tested

It is proposed that ‘there are no significant differences between problems regarding rules and regulations faced by the sample borrowers in select commercial banks’. The calculated value of Chi –Square Value (X2) is 10.08 and the Table value is 7.815 at 5 per cent level of significance for 3 degrees of freedom. The calculated value is much greater than Table value. Thus, the null hypothesis is rejected.

INCIDENTAL EXPENSES

At the time of sanctioning the loan, sample borrowers have to pay a fixed per cent of amount to sample banks for official expenses. They are processing expenses, legal expenses, and registration charges, stamp duty, administration expenses and the like. But along with above expenses, selected sample borrowers will agree to pay some incidental expenses also.

Table 6 depicts the number of sample borrowers have been faced by problems of incidental expenses from select banks in constructing houses. It is clear that out of 330 sample borrowers of select banks, 42.42 per cent of borrowers have faced the problem of incidental expenses. Among all the select banks, 79 borrowers paid incidental expenses upto 1 per cent of their loan sanctioned, 42 borrowers paid 1-2 per cent of the loan and 19 borrowers paid above 2 per cent of the loan sanctioned. The third category borrowers paid it for loan approval. Among all the select banks, the problem of incidental expenses is more in SBI, followed by AB, SB and IB.

Hypothesis formulated and tested

It is hypothesized that 'there are no significant differences between problems faced by the sample borrowers with regarding to incidental expenses and select public sector commercial banks'. The calculated value of Chi-Square (X²) is 5.74 and Table value at 5 per cent level of significance for 3 degrees of freedom is 7.815. The calculated value is less than the Table value. Thus, a null hypothesis is accepted.

Table 6

DISTRIBUTION OF SAMPLE BORROWERS FACING THE PROBLEM OF INCIDENTAL EXPENSES

Sl. No.	Incidental expenses (In percentage over sanctioned of loan)	No. of Borrowers				Total
		SBI	AB	SB	IB	
1	Upto 1	32 (21.33)	28 (26.42)	16 (29.63)	03 (15.0)	79 (23.94)
2	1-2	26 (17.33)	08 (7.55)	07 (12.96)	01 (5.0)	42 (12.73)
3	Above 2	10 (6.67)	07 (6.60)	02 (3.70)	-	19 (5.76)
4	Total (1+2+3)	68 (45.33)	43 (40.57)	25 (46.30)	04 (20.0)	140 (42.42)
5	Borrowers not facing the problem	82 (54.67)	63 (59.43)	29 (53.70)	16 (80.0)	190 (57.58)
Total sample 4+5		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Chi – Square Value X² - 5.74

Level of Significance (%) - 5

Degrees of Freedom - 3

Critical Value of Chi-Square - 7.815

- Note :1. Figures in the parentheses indicate percentages to the total
 2. X² calculated for the problems regarding incidental expenses and problems faced by the sample borrowers in select commercial banks
 Source: Field survey

INSUFFICIENT LOAN AMOUNT

Insufficient loan amount is another problem being faced by the sample borrowers from the banks. This problem is different from borrower to borrower and from bank to bank.

Table 7

DISTRIBUTION OF SAMPLE BORROWERS FACING THE PROBLEM OF INSUFFICIENT LOAN AMOUNT

Sl. No.	Reasons	No. of Borrowers				Total
		SBI	AB	SB	IB	
1	Below Estimated cost	11 (7.33)	09 (8.49)	04 (7.41)	01 (5.0)	25 (7.58)
2	Future and other income not considering	18 (12.00)	12 (11.32)	08 (14.81)	02 (10.0)	40 (12.12)
3	Plinth area criteria	10 (6.67)	05 (4.72)	04 (7.41)	-	19 (5.76)
4	Total 1+2+3	39 (26.00)	26 (24.53)	16 (29.63)	03 (15.0)	84 (25.45)
5	Borrowing not facing the problem	111 (74.00)	80 (75.47)	38 (70.37)	17 (85.0)	246 (74.55)
Total sample 4+5		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Chi – Square Value X² - 6.09

Level of Significance (%) - 5

Degrees of Freedom - 3

Critical Value of Chi-Square - 7.815

- Note :1. Figures in the parentheses indicate percentages to the total
 2. X² calculated for the problems regarding insufficient loan amount and problems faced by the sample borrowers in select commercial banks
 Source: Field survey

Table 7 shows the details of the distribution of sample borrowers facing the problem of insufficient loan amount. It is evident that out of the total sample borrowers of all select commercial banks only 25.45 per cent of borrowers faced this problem. About 50 per cent of borrowers who suffered with insufficient loan amount are mainly due to the reason of 'future and other income not considering', followed by low estimated cost and plinth and built areas. Among all the select commercial banks, more number of borrowers from SBI has suffered with insufficient loan amount due to all the three reasons when compared to other banks.

Hypothesis formulated and tested

It is presumed that 'there are no significant differences between problems of insufficient loan amount in select commercial banks'. The calculated value of Chi-Square (X²) is (6.09) less than the Table value (7.815) at 5 per cent level of significance for 3 degrees of freedom. Thus, the null hypothesis is accepted.

INSURANCE COST

Insurance cost is another problem faced by the sample borrowers. The select public sector commercial banks generally cutoff a fixed amount from the sanctioned loan towards insurance cover/cost. Table 8 indicates the distribution of sample borrowers facing the problem of insurance cost.

Table 8

DISTRIBUTION OF SAMPLE BORROWERS FACING THE PROBLEM OF INSURANCE COST

Sl. No.	Reasons	No. of Borrowers				
		SBI	AB	SB	IB	Total
1	Loan cover	28	26	16	03	73
		(18.67)	(24.53)	(29.63)	(15.0)	(22.12)
2	Term assurance	06	06	12	01	25
		(4.0)	(5.66)	(22.22)	(5.0)	(7.58)
3	Total 1+2	34	32	28	04	98
		(22.67)	(30.19)	(51.85)	(20.0)	(29.70)
4	Borrowing not facing the problem	116	74	26	16	232
		(77.33)	(69.81)	(48.15)	(80.0)	(70.30)
Total sample 3+4		150	106	54	20	330
		(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note : 1. Figures in the parentheses indicate percentages to the total
 2. X² calculated for the problems regarding insurance cover and problems faced by the sample borrowers in select commercial banks

Source: Field survey

It is clear that out of 98 borrowers from all select commercial banks, highest of 34 borrowers encountered the problem of 'insurance cost'. This problem is very less with IB. Only 4 borrowers out of 20 have suffered with this problem. Most of the borrowers from all the select commercial banks under study experienced that loan cover is the major problem than the term assurance. Borrowers of SBI, AB and SB have experienced with the problem of insurance cost more or less equal.

Hypothesis formulated and tested

It is hypothesised that 'there are no significant differences between problems of insurance cover/cost in select commercial banks'. The calculated value of Chi-Square (X²) is 17.21 and the Table value 7.815 at 5 per cent level of significance for 3 degrees of freedom. The calculated value is more than the Table value. Thus, the null hypothesis is rejected.

Pre-Payment

Another problem of the sample borrowers is pre-payment. It is obvious that some borrowers are willing to pay the installment amount before the repayment period. In this connection, instead of reducing the interest for early repayment, select commercial banks are taking 2.0 per cent of penal interest from the outstanding balance. The problem of pre-payment of loan is presented in Table 9.

Table 9

DISTRIBUTION OF SAMPLE BORROWERS FACING THE PROBLEM OF PRE - PAYMENT

Sl. No.	Name of the Bank	Total Borrowers	Total No. of Borrowers Faced the Problem	Total No. of Borrowers Not Faced the Problem
1.	SBI	150	10	140
		(100.0)	(6.67)	(93.33)
2.	AB	106	06	100
		(100.0)	(5.66)	(94.34)
3.	SB	54	04	50
		(100.0)	(7.41)	(92.59)
4.	IB	20	01	19
		(100.0)	(5.0)	(95.0)
Total		330	21	309
		(100.0)	(6.36)	(93.64)

Note : Figures in the parentheses indicate percentages to the total

Source: Field survey

It is evident that out of 330 sample borrowers, only 6.36 per cent of borrowers faced the problem of pre-payment of loan. The problem is more with SBI followed by AB, SB and IB. In IB, very least number i.e., only one borrower experienced this problem. More number of borrowers cleared the loan in advance in SB when compared to other commercial banks.

OPINIONS OF THE SAMPLE BORROWER

The sample borrowers have experienced with certain problems at the time of taking loan from select commercial banks. Regarding the problems of the sample borrowers, their opinions were elicited to overcome these problems. The opinions of the sample borrowers are given in the Table 11.

Table 11

OPINION OF THE SAMPLE BORROWERS TO OVERCOME THE PROBLEMS

Sl. No.	Opinion of the borrowers	Borrowers				Total
		SBI	AB	SB	IB	
1	The purchase cost of the plot should be financed by sample banks	52 (34.67)	48 (45.28)	23 (42.59)	04 (20.0)	127 (38.48)
2	Salary deduction	41 (27.33)	12 (11.32)	11 (20.37)	08 (40.0)	72 (21.82)
3	Removing the Insurance facility	32 (21.33)	17 (16.04)	06 (11.11)	01 (5.0)	56 (16.97)
4	Waiving off penalty to prepayment	19 (12.67)	20 (18.87)	07 (12.96)	05 (25.0)	51 (15.45)
5	Encourage the non-salaried class	6.00 (4.0)	09 (8.49)	07 (12.96)	02 (10.0)	24 (7.27)
Total sample		150 (100.0)	106 (100.0)	54 (100.0)	20 (100.0)	330 (100.0)

Chi – Square Value X^2 - 26.9

Level of Significance (%) - 5

Degrees of Freedom - 12

Critical Value of Chi-Square - 21.026

- Note :1. Figures in the parentheses indicate percentages to total
2. The most significant opinion of the borrower is considered and included in the table.

Source: Field survey

Out of the total 330 sample borrowers, 127 sample borrowers representing 38.48 per cent opined in favour of banks providing sufficient loan to purchase house plots, 72 sample borrowers representing 21.82 per cent have expressed that the installment should be stable as far as possible. 56 sample borrowers representing 16.97 per cent viewed that the banks should not change insurance premium at a time. About 51 sample borrowers representing 15.45 per cent opined that banks while 24 sample borrowers representing 7.27 per cent suggested that the encouragement should be made to the non-salaried categories by the select commercial banks should not collect pre-payment charges. Within the four select banks, the highest percentage (45.28 per cent) of sample borrowers are from AB who have suggested that the purchase cost of the plot should be financed by sample banks. It may be said that the problems of borrowers of housing loans differ from one commercial bank to other.

Results of Hypothesis Tested

It is observed that the calculated value of Chi-Square value (X^2) is 26.9 greater than the Table value is 21.026 at 5 per cent level of significance for 12 degrees of freedom. It is concluded that 'there are no significant differences between the opinions/awareness of the sample borrowers of housing loans from public sector commercial banks'. Thus the null hypothesis is rejected.

SATISFACTION LEVEL OF BORROWERS IN RESPECT OF THEIR LENDING BANKS

In a competitive environment, the prospects of any commercial bank depend on customer satisfaction to a large extent. Therefore, it is quite relevant and useful to assess customer's satisfaction. Sample borrower's satisfaction levels are shown in the Table 12.

Table 12

SATISFACTION LEVEL OF THE SAMPLE BORROWERS

Sample Bank	Satisfaction Level			Total
	Highly Satisfied	Satisfied	Non- Satisfied	
SBI	30 (20.0)	111 (74.0)	09 (6.0)	150 (100.0)
AB	22 (20.75)	77 (72.64)	07 (6.60)	106 (100.0)
SB	32	19	03	54

	(59.26)	(35.19)	(5.55)	(100.0)
IB	12	07	01	20
	(60.0)	(35.0)	(5.0)	(100.0)
Total	96	214	20	330
	(29.09)	(64.85)	(6.06)	(100.0)

Chi – Square Value X² - 43.32

Level of Significance (%) - 5

Degrees of Freedom - 6

Critical Value of Chi-Square - 12.592

Note : Figures in the parentheses indicate percentages to total

Source: Field survey

Out of 330 sample borrowers 214 constituting 64.85 per cent are satisfied with their lending banks, while 96 sample borrowers constituting 29.09 per cent are highly satisfied. And, 20 sample borrowers constituting 6.06 per cent are not satisfied with their banks. Thus, it is clearly understood that the majority of sample borrowers are satisfied with their lending banks. It is clear that out of the total 150 sample borrowers of SBI, as many as 111 representing 74.0 per cent expressed that they are satisfied with the services rendered by the bank. About 30 borrowers are highly satisfied while 9 borrowers are satisfied. In AB 77 borrowers constituting 72.64 per cent are satisfied with the customer services rendered by it. Among 54 sample borrowers of SB, 32 borrowers forming 59.26 per cent expressed that they are highly satisfied with the services rendered by the bank. The satisfaction level in IB sample group is almost similar to that of SB. In respect of all the four select public sector banks, more than 95 per cent of their borrowers feel satisfied with their services.

Results of Hypothesis Tested

It is evident that 'there are no significant differences between the satisfaction level of the sample borrowers of housing loans from public sector commercial banks' as the calculated value of Chi-Square value (X²) is 43.32. Table value at 5 per cent level of significance for 6 degrees of freedom is 12.592. The calculated value is greater than the Table value. Hence, a null hypothesis is rejected.

PROBLEMS OF THE SELECT COMMERCIAL BANKS

Like borrowers, the banks are also facing some problems. Problems of sample Banks, State Bank of India (SBI), Andhra Bank (AB), Syndicate Bank and Indian Bank are analysed separately. Problems like gap between sanctions and disbursements and recovery of installments are analyzed in this connection. The analysis is based on the information provided by the managers and officials of these four sample commercial banks.

RATE OF RECOVERY OF LOAN INSTALLMENTS

The main problem of any select public sector banks is the recovery of installments from its borrowers. The success of any commercial bank is purely depending on its capability of recovering sanctioned loans from the borrowers. Table 6.19 depicts the details of recovery of loan installments by select banks.

On analysis, it is observed that there are fluctuations in the recovery of loan installments in the select public sector banks. SBI has recorded the highest rate of recovery with 100.0 per cent in the year 2002-03 and for the rest of the years its recovery rate varied between 93.0 per cent and 99.0 per cent. In case of AB, the highest recovery rate was 98.16 per cent in 2005-06 and for the rest, recovery rate varied between 84.0 per cent and 97.54 per cent. SB has recovered 98.35 per cent during 2005-06 and in other years its recovery rate range between 86.25 per cent and 95.64 per cent. And, IB has recovered 85.0 per cent in 2002-03 year and between 81.62 per cent and 84.30 per cent in the rest years.

On comparing the rates of recovery of sample commercial banks, it is highest in State Bank of India followed by Syndicate Bank and Andhra Bank. Comparatively, the recovery performance of Indian Bank lags behind the other sample commercial banks.

Table 13

YEAR	RATE OF RECOVERY OF LOAN INSTALLMENTS IN SELECT BANKS			
	RECOVERY PER CENT			
	SBI	AB	SB	IB
1999-2K	93.26	84.28	86.25	83.41
2000-01	98.02	96.24	92.36	82.71
2001-02	99.0	93.55	86.25	81.62
2002-03	100.0	86.54	95.26	85.0
2003-04	97.36	96.65	94.48	81.98
2004-05	96.25	97.54	95.64	82.37
2005-06	95.11	98.16	98.35	84.30
Calculated 'ANOVA' Value - 18.63				
Level of Significance (%) - 5.000				
Degrees of Freedom (n1-1, n2-1) - 3, 24				
Critical Value of 'ANOVA' - 7.08				

Source : Field survey

Results of hypothesis tested

The calculated value of 'ANOVA' (18.63) is greater than the critical value of 'ANOVA' (3.01). Hence the hypothesis, 'there are no significant differences in the select commercial banks in facing the problems regarding recovery of house loans' is rejected.

CONCLUSION

Out of 330 sample borrowers, 175 borrowers constituting 53.03 per cent have experienced one problem or the other. And the remaining borrowers constituting 47.27 per cent have not experienced any problems from any select public sector commercial banks. Of all the problems faced by the borrowers, the major problem is rules and regulations followed by surety and security and paying the incidental expenses. Other problems such as insufficient loan amount, delay in processing, insurance cost, prepayment and preparation of documents are experienced by lesser number of borrowers. In the case of period of loan sanctioned, only a few applications took more than 60 days while more applicants were sanctioned within 30 days. Most of the borrowers opined that instead of deducting in one go (lump sum). Insurance cost can be collected in installments. Simultaneously, it would be reasonable to cut certain percentage month wise. Majority of the sample borrowers opined that the cost of the plot needs to be considered by commercial banks for financing. Other views expressed by them in order of weightage include introducing salary deduction facility for repayment of house loan installments, removing insurance cost, waiving of prepayment charges and encouraging the non-salaried class groups. In respect of all the four select public sector banks, more than 95 per cent of their borrowers feel satisfied with their services. It may be concluded that the select commercial banks have been successful in maintaining goodwill among their borrowers to a large extent. With regard to disbursement of housing loans, all the four commercial banks have no problems. Most of the sanctioned amount is utilized by their borrowers for house construction. The recovery performance is better in SBI as against other sample banks.

RESULTS OF HYPOTHESES TESTED

The null hypothesis that '*there are no significant differences in the select commercial banks in facing the problems regarding recovery of house loans*' is rejected.

The null hypothesis that '*there are no significant differences between the opinions/awareness and satisfaction of the sample borrowers of housing loans from public sector commercial banks*' is rejected.

SUGGESTION

The commercial banks shall guide the borrowers in the preparation of the estimated cost plans to get quick sanction of housing loans from the banks.

Public sector banks should reduce time to process the documentation and should try to sanction the loan within 15 to 20 days from the date of application for loan.

The public sector commercial banks should minimize the processing and administrating charges to improve the clientele.

Inordinate delays in sanctioning of loans shall be avoided. Even in the case of non-salaried income loanees, the cumbersome procedure prevalent shall be simplified while sanctioning the loans.

The loan amount shall be estimated based on the latest prices of the inputs to make it more adequate for the purpose of sanctioning loan.

Processing of verification and documentation should be made simple. Specifically, the number of documents to be submitted for house loan shall be minimized.

While recovering the loan amount from the beneficiaries, banks should avail the facility of deducting the dues from the salary at source to save time and expenditure of the borrowers and banks.

Insurance cost should not be deducted in one lumpsum. It should be better if it is added to the monthly installments.

Pre-settlement of housing loans should be allowed with nominal charges. Further, the borrower should be encouraged to repay the housing loans ahead of their repayment schedule.

Competition shall be created among the branches to excel in recovery and best performing branches may be rewarded monetarily. At individual employee level also, performance linked incentives system shall be implemented to motivate employees to step-up monitoring and recovery.

System for awarding of trophy/ merit certificates shall be introduced for better recovery performance in public sector commercial banks.

Government should provide guarantee on customer's credit, especially in the case of low income groups.

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INVESTORS PERCEPTION ABOUT INTERNET STOCK TRADING - A CONSTRAINT ANALYSIS

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ABSTRACT

In the Indian context, internet trading can be rightly called as a recent phenomenon, which took root with the change of century i.e., April 2000, and even till day internet trading is not much popular among investors for which a list of factors can be blamed. This fact is clear from the information available that where numbers of stock exchanges in India have grown from 7 exchanges in 1946 to total 23 stock exchanges till 2005 of which only two stock are providing online stock trading. There is no denying the fact that internet trading offered investors convenience of trading along with reduced cost. But simultaneously we have solid evidence of the fact that Indian investors are more conservative, they do not adopt any change easily and they have not yet fully realized the importance of using technology for stock trading. Internet trading has gained momentum, from just 0.5% of total traded volumes 5 years back, which now account for 5% of the total trading volume of approximately Rs.14,000 cr on NSE. Over the past two years, the value of all trades executed through internet on NSE has grown from less than Rs.100 cr in June 2003 to over Rs.700 cr in June 2005. Internet trading is gaining momentum as a result of trading volume growing by 150% per annum. Now NSE has 108 registered brokers, 1.054 million internet trading subscribers with 5 major companies' control 90% of the market share in internet trading. Based on this background, this paper made an empirical attempt to study the investor's perception about constraints involved on internet stock trading in Vellore District, Tamil Nadu, and India.

KEY WORDS:

Internet Stock Trading

INTRODUCTION

The internet has opened up a world of possibilities from shopping to education to financial success delivered through a wire straight to our desktops and laptops. The internet revolution has empowered the small investor to educate themselves and to make financial gains in the arena of day trading and the internet stock exchange. Internet trading refers to trading through internet. Now the time has gone where a person used to bind himself in a limited sphere. Internet trading assists investors in exchange of stock anywhere, offering platform with immense flexibility. Internet trading provides opportunity to investors to buy sitting in front of a Personal Computer (PC), offering bids to trade in stock and even entering stop limit order. National Stock Exchange (NSE) adopted National Exchange for Automated Trading (NEAT) system which is an online, order driven, screen based trading system through which a member can execute his transaction using computer mentioning quantities of securities and prices at which he will like to transact. Order of the investor is automatically executed when the system finds matching order from the counter party. The investor simply has to enter his request (securities, quantity, price and buy/sell) in broker's site, which is checked electronically to appropriate exchange for execution by the broker. At the same time customer's accounts are updated to reflect the transaction.

REVIEW OF EARLIER STUDIES

Nidhi Walia (2007) studied that Indian investors have not yet fully realized the importance of using technology for stock trading. National Stock Exchange (NSE) makes extensive use of state of the art technology for providing online trading services to its investors, for that purpose they are making effective use of satellite networks through total 2829 VSATs across 345 cities across the nation. **Subha** (2006) expressed that only a small percentage of investors invest in equities, viewing it as an investment option. Why do individual investors stay away from investing in equity shares? The main reason could be the lack of confidence in the performance of the equity shares. Investors still perceive equity as a risky investment option. There is still lack of clarity about the functioning of the capital markets and the role played by intermediaries. Some of the investors have had bitter experiences due to scams and faulty behaviour of intermediaries. **Barua** (1992) studied that speculation had dominated the share market in the given period. The existing literature shows mixed and contradictory results in relation to the Internet stock trading. Within this framework, the present study aims to analyze the constraint involved in internet stock trading in Vellore District, Tamil Nadu.

STATEMENT OF PROBLEMS

The traditional hassle of finding a broker and reaching them directly via phone or even e-mail is rapidly becoming obsolete. Online trading has advanced the average stock broker into a whole new realm. For some it's a marvelous pandemonium that has freed them from obsolete tradition. For others, online stock trading is a scary sea of the unknown and an abyss of pitfalls. Fortunately, with a little education and a little research the average stock trader can decide whether online stocks are the right tools for success or if they are more comfortable sticking with traditional venues. Exploring that education is vital even if you are already involved in online stock trading. There is always room for improvement and always more profitable ventures. Based on the above problems this paper made an attempt to study the investor's perception and constraints involved on internet stock trading in Vellore District, Tamil Nadu, and India.

OBJECTIVES OF THE STUDY

1. To study the demographic profile of the respondents
2. To identify the investors perception and constraint in internet stock trading in Vellore District, Tamil Nadu, India.
3. To find out the investors satisfaction towards internet stock trading.

HYPOTHESIS

Ho: There is no significant relationship between occupation and satisfaction of the respondents towards internet stock trading.
H1: There is significant relationship between occupation and satisfaction of the respondents towards internet stock trading.

SAMPLING

One of the major important aspects of a study is the selection of sample. The Multi-stage random sampling technique is used to select the sample. The total sample size is 100 taken from investors doing internet trading in Vellore District, Tamil Nadu and India.

TOOLS USED FOR THE STUDY

Both primary and secondary data were used to collect the questionnaire. There were 16 items in the questionnaire. Out of these 16 items, 1 to 8 are perception statements and items 9 to 16 are constraint statements. For each statement, five alternate answers were given on the right side with Likert’s five point scale. These were highly satisfied, satisfied, both neither satisfied nor dissatisfied, dissatisfied and highly dissatisfied. To test the reliability of the scale, alpha reliability technique was used, where correlation between the scores of statements for the respondents was computed. The value of correlation co-efficient was 0.98, which is significant, implying that the scale used in the study was reliable.

STATISTICAL TECHNIQUES

Statistical techniques like percentage analysis, Pearson’s rank correlation, and one way ANOVA were used to test the formulated hypothesis.

ANALYSIS AND INTERPRETATION - I

DEMOGRAPHIC PROFILE - OCCUPATION

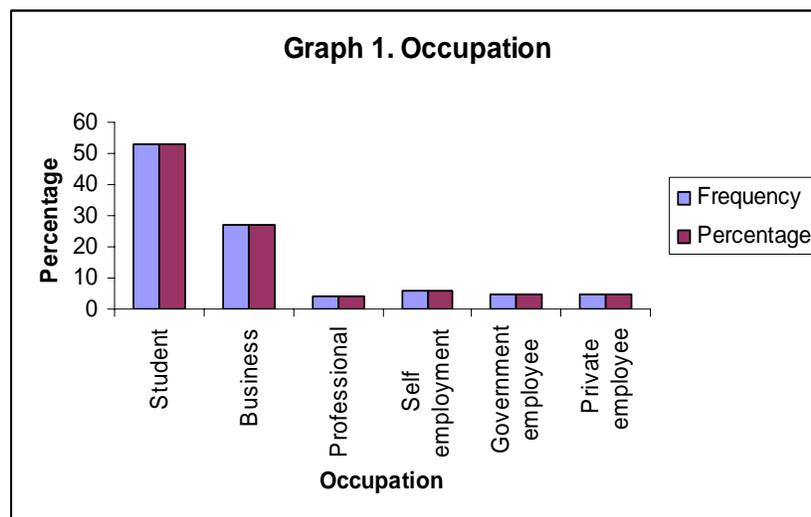
The data pertaining to occupation of the respondents are presented in Table 1.

Table 1. Occupation

Occupation	Frequency	Percentage
Students	53	53
Business	27	27
Professional	4	4
Self employment	6	6
Government employee	5	5
Private employee	5	5
Total	100	100

Source: Primary data

From Table 1 it is found that 53% of the respondents are students While 27% of the respondents are Business. 4% of the respondents are engaged in professional, 6% of the respondents are engaged in self employment, 5% of the respondents are engaged in Government service where as 5% of the respondents work as private employee. The same results are also exhibited in Graph 1.



SATISFACTION

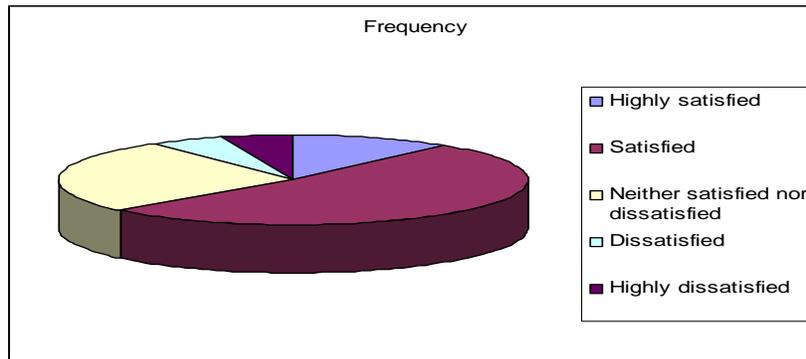
The data pertaining to satisfaction of the respondents towards internet stock trading are presented in Table 2.

Table 2. Satisfaction

Satisfaction	Frequency	Percentage
Highly satisfied	11	11
Satisfied	52	52
Neither satisfied nor dissatisfied	27	27
Dissatisfied	5	5
Highly dissatisfied	5	5
Total	100	100

Source: Primary data

From Table 2 it is found that 11% of the respondents are highly satisfied while 52% of the respondents are satisfied. 27% of the respondents are neither satisfied nor dissatisfied, 5% of the respondents are dissatisfied, and where as 5% of the respondents are highly dissatisfied. The same results are also exhibited in Graph 2.



ANALYSIS AND INTERPRETATION - II

INVESTORS PERCEPTION

Table 3 Investors perception about internet trading in Vellore District

S.No	Variables	SA	A	NANDA	DA	SD	Mean	Rank
1	Internet trading attracts more investors	150	148	36	26	8	3.68	1
2	Internet trading in Indian share market as become efficient	100	100	84	36	9	3.29	4
3	Upward trade in stock market is correlated with internet trading	75	104	99	36	8	3.22	6
4	Internet trading is reducing the work load of broker	50	128	87	38	10	3.13	7
5	More transparent	75	124	78	38	9	3.24	5
6	Internet trading as more future scope	85	124	90	32	6	3.37	2
7	Chances for low fraud	70	96	78	50	11	3.05	8
8	Helps more return on investment	110	120	72	14	17	3.33	3

Source: Primary data

INFERENCE

Table 3 inferences that internet trading attracts more investors ranked 1 with mean score 3.68. Internet trading as more future scope for all investors who invest his money in share market ranked 2 with mean score 3.37. The third investors perception about internet trading is helping more return on investment ranked 3 with mean score 3.33.

CONSTRAINT ANALYSIS

Table 4 Constraint in internet stock trading in Vellore District

S.No	Variables	SA	A	NANDA	DA	SD	Mean	Rank
9	Lack of Technology	120	124	75	22	9	3.50	1
10	Risk of system failure	60	108	111	36	6	3.27	4
11	Lack of Management	45	152	99	28	6	3.30	3

12	High transaction cost	35	104	111	28	7	3.25	5
13	Lack of knowledge	60	120	75	44	11	3.10	8
14	Possibilities of fraud	115	104	63	48	6	3.36	2
15	Poor communication	65	92	123	36	5	3.20	6
16	Lack of transference	55	112	96	40	9	3.12	7

Source: Primary data

INFERENCE

Table 2 inferences that lack of technology ranked 1 with mean score is 3.50. The second constraint in internet trading is a possibility of fraud ranked 2 with mean score is 3.36. Lack of management is the third constraint in internet trading ranked 3 with mean score of 3.30. The fourth constraint in internet trading is risk of system failure ranked 4 with mean score of 3.27.

ANALYSIS AND INTERPRETATION – III

INVESTORS SATISFACTION TOWARDS INTERNET STOCK TRADING

TESTING OF HYPOTHESIS

Table 5. Descriptive

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Students	53		
Business Professional	27	3.37	.492	.095	3.18	3.57	3	4
Self-employed	4	3.00	.000	.000	3.00	3.00	3	3
Govt. employee	6	3.00	.000	.000	3.00	3.00	3	3
Private employee	5	2.00	.000	.000	2.00	2.00	2	2
Total	5	1.00	.000	.000	1.00	1.00	1	1
Total	100	3.59	.933	.093	3.40	3.78	1	5

Source: Output of SPSS

Table 6. ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	71.177	5	14.235	89.129	.000
Within Groups	15.013	94	.160		
Total	86.190	99			

Source: Primary data

INFERENCE

At the 0.05 significance level with 5 degrees of freedom, the hypothetical value $F(0.95) = 0.05$. Then, since $0.000 < 0.05$, we rejected the null hypothesis that there is significant relationship between occupation and satisfaction of the respondents towards internet stock trading.

FINDINGS

1. Majority of the respondents (124 points) agree to this fact that internet stock trading process is more transparent.
2. Majority (150 points) of the respondents strongly agree that internet stock trading attract more investors in India.
3. Majority (124 points) of the respondents admitted that lack of technology affect their investment in equity capital.
4. Majority of the investors agree to this fact that internet trading has reduced the chances of low fraud.
5. Most of the investors who deal in stock trading are students, middle age, educated and have sufficient knowledge on computer.

CONCLUSION

Nevertheless, internet stock trading has offered investors a platform with transparency in system. Although internet trading at NSE is considered to be at its infancy stage but success trend of internet trading predicts bright future where investors will get opportunity to buy new integrated financial products. Internet trading empowers educated investors to make their own decision with a close watch on market sensitivity by browsing through various sites. Besides, internet trading assures achievement of twin objectives of securities regulation, which are creation of efficient market to meet global requirements and investor’s protection. Major impediments to growth of internet stock trading are computer illiteracy, poor infrastructure, risk adverse attitude of investors etc, so with the growth of educational investors and support from SEBI, internet trading is sure to grow at faster pace.

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DUAL CAREER AND ITS EFFECT ON RELATIONSHIPS: A STUDY OF GOVERNMENT AND PRIVATE ACADEMIC INSTITUTES

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ABSTRACT

The present study explored effect of dual career on relationships. This study was conducted with a total sample of 100 teachers through stratified convenience sampling method. The respondents were chosen equally from both government (50) and private institutes (50). The result showed that time for each other, discuss problems with each other and make work life balance were found to have a significant effect on relationships. Results further demonstrated that demographics such as age, income and family structure plays a significant role in effecting relationships.

KEYWORDS

dual career, work and family, flexi time

I INTRODUCTION

The term "dual-career" was first used by a European academic couple (Rapoport & Rapoport 1969; Rapoport & Rapoport 1971). Since then this term has become quite established, other expressions are "coupled careers", "conjoint career couple" (Adler et al. 1989) or "coordinated career" couple. These last two terms, however, refer to couples where both partners pursue careers in the same field or whose work activities overlap, and who are, therefore, professional colleagues in addition to being partners. According to the Rapoport, dual career couples differ from dual-earner families/couples. In dual-career couples, both partners pursue an occupational career occupying or seeking jobs which are characterized by high professional standards, a high degree of commitment and a developmental sequence. On the contrary, in the dual-earner couples only one (or neither) partner has a career while the other holds an employment without career prospects and/or aspirations. Other expressions used for this arrangement are two-paycheck families, dual-worker families or two-person career. The rationale for such a distinction between dual-career and dual-earner couples is that a number of problems are particularly relevant to the situation when both partners have and want to pursue careers, thus of dual-career couples. These problems can be classified into two areas: geographical mobility and family responsibilities.

Work-family or work-life conflict occurs when the cumulative demands of many work and non-work life roles are incompatible in some respect so that participation in one role is made more difficult by participation in the other role. Work life balance is about people having a measure of control over when, where and how they work. It is achieved when an individual's right to a fulfilled life inside and outside paid work is accepted and respected as the norm, to the mutual benefit of the individual, business and society.

Challenges

Family-Related Challenges: The division of household duties is main issue for most dual-career couples. In approx. 80% of couples, women perform 70% -80% household chores. However, attempts to protect a traditional division of duties eventually create an overload situation for woman.

Personal Challenges: The personal and career challenges facing men and women are different. Women don't make decisions about without considering the implication for their families. By, contrast men view work and family roles as independent. What this means is that women feel that choosing in favour of one role means choosing against the other while men don't experience a similar dilemma.

In middle class families, it is difficult for a single person to earn for the whole family, so this concept of dual career couple came into existence over riding the dogmatic custom of the Indian society. There are so many impediments in the way of working couples that can be personal, domestic or from the society which hinder them. While in the 1950s the male was often the sole bread winner in the family, in today's society the family consisting of dual-earners or dual-career couples is on the rise. One reason for this change is the increase of dual career entering the workforce.

This study is structured as follows. In the very beginning conceptual analysis is undertaken. Second section presents review of the literature. The next section describes the research methodology. Thereafter, the results of the present study are analyzed and discussed in relation to each of the research question. Finally, the paper concludes with summarizing the results and its implications.

II REVIEW OF LITERATURE

The various articles on different aspects of dual career which appeared in different magazines, journals and books have been reviewed as follows.

Green and Zenisek (1983) reviewed the literature and discussed the implications of the dual-career family structure from both the individual and the organizational point of view. Specifically, five major topic areas are covered: (1) advantages and disadvantages of the lifestyle, (2) marital satisfaction, (3) egalitarian relationships, (4) the impact of transfers, relocations and living apart, and (5) the employing organization's reaction to an adaptation to the phenomenon.

Yogev Sara (1983) focused on clinical understanding and therapeutic interventions most appropriate for couples' marital and individual difficulties. The paper briefly describes characteristics of the dual-career lifestyle and personalities. The analysis provides case examples

illustrating external and internal sources of stress generated by a lack of time or the need for an effective system for handling housework and childcare.

JoAnn Ray (1990) explored the relationships of interactional patterns to the marital satisfaction of dual-career couples. Greater marital satisfaction was related to creativity, equality and reciprocity in the relationships. Couples experiencing greater marital satisfaction were apt to both give and take supports, to be involved in each other's careers, have equal commitment to the relationship, and to practice equal decision making. Holding non-traditional sex-role attitudes and the husbands' approving of their wives' careers were related to higher marital satisfaction. Women who began their career after their marriages were apt to experience less marital satisfaction, less job satisfaction, fewer spouse supports, and greater inequality in decision making.

Strober and Chan (1998) examined the household task arrangements of a sample of married 1981 graduates of Stanford and Tokyo Universities, about a decade after their graduation. No less than 43 percent of Stanford graduates shared household tasks about equally with their spouse, a much higher sharing rate than for the whole U.S. population. Their examination of task arrangements among dual career couples provides support for bargaining power theories of the division of household tasks, but suggests that societal ideology plays a critical role in defining the scope for bargaining.

Tryon S. Georgiana and Tryon W. Warren (2002) presented a systematic review of the issues involved in dual career marriages. A definition of dual-career couples/families is provided. The literature is then reviewed with respect to employment issues, employment issues specific to dual-career couples, career interruptions, household chores, child care, and marital difficulties.

White et al. (2003) analyzed the effects of selected high-performance practices and working hours on work-life balance with data from national surveys of British employees in 1992 and 2000. Alongside long hours, which are a constant source of negative job-to-home spillover, certain 'high-performance' practices have become more strongly related to negative spillover during this period. Surprisingly, dual earner couples are not especially liable to spillover - if anything, less so than single-earner couples. Additionally, the presence of young children has become less important over time. Overall, the results suggest a conflict between high-performance practices and work-life balance policies.

Hardill and Watson (2004) investigated the impact of child rearing upon male and female participation rates and earnings within 130 dual career households. Female participation rates and earnings in households with children are significantly lower than both comparable males and females without children. No significant gender differences exist in pay in childless households.

Carless and Wintle (2007) examined the impact of salient identity, career path and recruiter functional area [internal human resource (HR) personnel vs. external recruitment company] on perceptions of organizational attraction with a sample of young, inexperienced job seekers. Two hundred and one participants responded to a questionnaire and rated their attraction to two different job advertisements. It was concluded that flexible HR policies increase applicants' perceptions of organizational attraction during the initial stages of the recruitment process.

Carriero et al. (2009) studied how dual earner couples with children organize their working time in Belgium, Italy, and the Netherlands by placing working time coordination explicitly in a comparative framework to allow cross-country differences in time-scheduling mechanisms to be revealed. The main findings were as follows: (1) parents actively coordinate their working times in all three societies; (2) on average, Italian and Flemish dual-earner parents tend to synchronize (increase their work-time overlap), which indicates that parents aim at spending non-market time jointly; and (3) Dutch dual-earner parents tend to de-synchronize (decrease work-time overlap), which indicates that the latter tend to maximize the amount of time that at least one parent is out of the job.

Michael (2010) explored the dimensions and means to implement a global dual-career expatriate couple mentoring program. The study explored the impact of such mentoring programs on "nontraditional" global managers, along with their trailing spouses. Social learning theory was used as the foundation for the development of such a mentoring program. To add to the contextual understanding of global assignments imposed on global dual-career couples, we explored the effectiveness of mentoring by investigating temporal (before, during, after expatriation) and gender-related dimensions.

Rispens, Jehn and Rexwinkel (2010) investigated the differences in the types and consequences of conflicts that couples in dual career and commuting situations experience. The study also investigated how the differences in conflict perceptions between relationship partners (i.e., conflict asymmetry) affects family and work related outcomes in different manners in the two types of couples (dual career and commuting). Data were obtained from a sample of 40 commuting and 36 dual career couples. Results showed a difference in lifestyle such that commuters evaluated their jobs more positively more dual career partners were more satisfied with their family and level of relationship intimacy. Results further demonstrated a higher level of conflict asymmetry in dual career relationships.

Deding and Filges (2010) analyzed the relationship between geographical residence and job mobility for Danish dual earner couples. The results point to the importance of addressing the interrelationship between residence and jobs. Furthermore, the change of residence matter more than change of job and women respond relatively more to changes in their husbands' job region. The findings imply that mobility promoting initiatives must focus on families rather than individuals and recognize that for most families the choice of residence location dominates the choice of job location.

Ukpokolo Chinyere focused on women academics within the dual career couples category in Nigeria. The study draws on primary data gathered through ethnographic methods to analyze how women career advancement can be hindered by the misogynistic 'micro politics' at the family level on the one hand, and the larger university community on the other. The paper concludes that the challenge of academic freedom demands more inward examination of the 'micro politics within' in order to as well as one's desire and intentions to continue being a part of it incorporate the interests of all stakeholders within the intellectual community in the struggle for academic freedom and academic democracy in the continent of Africa.

III RESEARCH METHODOLOGY

This study was conducted with a total sample of 100 teachers through stratified convenience sampling method. The respondents were chosen equally from both private institutes (50) and government (50). Responses were collected from the college and university teachers working in western parts of Haryana. A structured questionnaire was developed for this purpose. Respondents were asked to judge the factors/statements through a five-point scale ranging from "strongly agree" to strongly disagree". For data calculation, "strongly agree" was given 1 point and "strongly disagree" was given 5 points.

Frequencies, percentage, average, standard deviation, t-test and ANOVA were used for data analysis.

IV ANALYSIS AND INTERPRETATION

The study sought to assess the effect of dual career on the teachers working in both private and government institutes. The respondents were provided with seven different statements pertaining to relationships and their views were gathered on the same.

Table 1: Sample Characteristics: Private Institutes
N=50

Demographics		No. of Respondents	%
Age (in Years)	25-35	30	60
	35-45	16	32
	above 45	4	8
Income (p.a.)	Upto Rs.2 lakhs	10	20
	Rs.2-5 lakhs	30	60
	Above Rs.5 lakhs	10	20
Family Structure	Nuclear Family	28	56
	Joint Family	22	44

Source: Field Survey

The characteristics of the sample depicted in Table 1 reveals that the majority of the respondents working in private institutes are between 25 to 35 years of age (60 per cent), followed by the age groups of between 35 to 45 years (32 per cent) and only 8 per cent respondents lie in the age group of above 45 years. About 60 per cent of the respondents belong to Rs. 2-5 lakhs p.a. and 20 percent upto Rs. 2 lakhs p.a. and same percentage of respondents belong to above Rs. 5 lakhs p.a. category. Respondents are almost evenly split by family structure (56 per cent nuclear family and 44 per cent joint family).

Table 2: Sample Characteristics: Government Institutes
N=50

Demographics		No. of Respondents	%
Age (in Years)	25-35	31	62
	35-45	17	34
	above 45	02	4
Income(p.a.)	Upto Rs.2 lakhs	16	32
	Rs. 2-5 lakhs	27	54
	Above Rs.5 lakhs	07	14
Family Structure	Nuclear Family	27	54
	Joint Family	23	46

Source: Field Survey

Table 2 reveals that the majority of the respondents working in government institutes are between 25 to 35 years of age (62 per cent), followed by the age groups of between 35 to 45 years (34 per cent) and only respondents 4 per cent respondents lie in the age group of above 45 years. About 54 per cent of the respondents belong to the income bracket of Rs. 2-5 lakhs p.a. and 32 percent upto Rs. 2 lakhs p.a. and 14 per cent lies in above Rs. 5 lakhs p.a. income category. Respondents are almost evenly split by family structure (54 per cent nuclear family and 46 per cent joint family).

Table 3: Effect of Dual Career on Relationships: Private Institutes
N=50

Variables	Strongly Agree (1)	Agree (2)	Agree to some extent (3)	Disagree (4)	Strongly Disagree (5)	Mean	Standard Deviation
Able to spend time in family functions	2 4%	14 28%	14 28%	0 0%	20 40%	3.44	1.37
Have time for each other	0 0%	2 4%	20 40%	6 12%	22 44%	3.96	1.00
Have time for children	22 44%	08 16%	10 20%	08 16%	02 4%	2.20	1.27
Go in social places together	08 16%	08 16%	16 32%	14 28%	04 8%	2.96	1.19
Discuss problems with each other	02 4%	08 16%	06 12%	08 16%	26 52%	3.96	1.29
Make work life balance	00 00%	04 8%	16 32%	10 20%	20 40%	3.92	1.02
Give time to your friends	08 16%	12 24%	20 40%	06 12%	04 8%	2.72	1.12

Source: Field Survey

Table 3 depicts views of respondents in private institutes regarding effect of dual career on relationships. The result of the study revealed that out of seven factors, *time for each other*, *discuss problems with each other* and *make work life balance* were found to have a significant effect on relationships. Fifty six per cent of respondents disagreed (taking 'agree to some extent' and 'disagree' categories together) that they have time for each other. Quite importantly 68 per cent of respondents said that they do not discuss problems with each other. Sixty per cent of the respondents were of the view that they were *not able to make work life balance*.

The above finding indicates that in private institutes there is greater work pressure and there are fewer holidays as compared with government institutes. So, teachers working in private institutes get relatively less time for their families. Moreover, there is less job security in private institutes so; teachers have to work very hard to save their jobs, even if the teacher is not well he/she is not given any long leave. Further, there are more expectations from the teachers in private institutes and there is greater accountability on their part also.

Table 4: Effect of Dual Career on Relationships: Government Institutes

N=50

Variables	Strongly Agree (1)	Agree (2)	Agree to some extent (3)	Disagree (4)	Strongly Disagree (5)	Mean	Standard Deviation
Able to spend time in family functions	01 2%	13 26%	16 32%	02 4%	18 36%	3.46	1.28
Have time for each other	00 0%	00 0%	10 20%	11 22%	29 58%	4.38	.80
Have time for children	29 58%	13 26%	02 4%	06 12%	00 0%	1.70	1.01
Go in social places together	01 2%	15 30%	16 32%	15 30%	03 6%	3.08	.96
Discuss problems with each other	00 0%	01 2%	07 14%	10 20%	32 64%	4.46	.81
Make work life balance	00 0%	00 0%	12 24%	14 28%	24 48%	4.24	.82
Give time to your friends	06 12%	18 36%	11 22%	09 18%	06 12%	2.82	1.22

Source: Field Survey

Table 4 presents views of respondents working in government academic institutes regarding effect of dual career on relationships. Here, the results revealed that a significant percentage (80 %) of respondents felt that do not have time for each other. This is true in case of government institutes where there is lot of work pressure. Eighty four percent of respondents in the study told that they do not discuss problems with each other. In many cases, they felt that as both are working so one does not want to stress other with one's work problems. Quite importantly, 76 percent of respondents held that they were not able to make work life balance.

Here, the results are akin to private institutes but the reasons are different. Government jobs are transferable, and there are very few couples who are posted in the same district. As a result, one of the spouses has to commute and some of them come home at weekends, therefore, they get comparatively less time for their families.

Impact of demographic factors on effect of dual career on relationships

In order to get a better understanding of the dual career issues, the impact of various demographic factors like age, income and family structure, on relationships were analyzed through ANOVA and t test. (Significant at 5 % level)

Table 5: Analysis of Significant Demographic factors showing effect of dual career on Relationships: Private Institutes

N=50

Age(in years)	Variables	Age (years)	N	Mean	S.D.	F	Sig.
	Able to spend time in family functions	25-35	30	2.00	0.00	3.32	.04
		35-45	16	3.25	1.43		
		above 45	4	3.73	1.31		
	Have time for each other	25-35	30	3.37	1.02	4.73	.01
		35-45	16	4.20	0.92		
		above 45	4	4.50	0.57		
	Discuss problems with each other	25-35	30	3.00	1.46	8.87	.00
		35-45	16	4.46	0.97		
		above 45	4	4.00	0.00		
Make work life balance	25-35	30	3.25	1.12	6.26	.00	
	35-45	16	4.20	0.84			
	above 45	4	4.50	0.57			
Income(p.a.)	Able to spend time in family functions	Upto Rs.2 lakhs	10	2.40	0.51	4.07	.02
		Rs.2-5 lakhs	30	3.60	1.83		
		Above Rs.5 lakhs	10	3.73	1.25		
	Have time for each other	Upto Rs.2 lakhs	10	3.20	0.42	5.06	.01
		Rs.2-5 lakhs	30	3.80	1.03		

Family Structure	Go in social places together	Above Rs.5 lakhs	10	4.26	1.01	11.11	.00	
		Upto Rs.2 lakhs	10	1.80	0.78			
		Rs.2-5 lakhs	30	2.60	1.42			
	Discuss problems with each other	Above 5 lakhs	10	3.46	0.89	7.67	.00	
		Upto Rs.2 lakhs	10	3.00	0.94			
		Rs.2-5 lakhs	30	3.40	1.42			
	Make work life balance	Above Rs.5 lakhs	10	4.46	1.10	5.50	.00	
		Upto Rs.2 lakhs	10	3.20	0.42			
		Rs.2-5 lakhs	30	3.60	1.26			
	Family Structure	Discuss problems with each other	Nuclear Family	28	4.36	1.00	-2.0	.04
			Joint Family	22	3.64	1.41		

Source: Field Survey

AGE

Some significant differences were found among different age groups viz. 25-35 years, 35-45 years and above 45 years in terms of their perception towards effect of dual career. Respondents in the age group of above 45 years (mean score 3.73) and 35-45 years (mean score 3.25) agreed to some extent whereas, respondents belonging to 25 to 35 years (mean score 2.00) agreed on the issue of 'spend time in family functions'.

Similarly, 'time for each other' was perceived differently among various age groups. Respondents in the advanced age of above 45 years (mean score 4.50) and in the age group of 35-45 years (mean score 4.20) believed more strongly than the respondents in the age group of 25-35 years (mean score 3.37) that husband and wife don't get time for each other.

While responding to the statement - 'discuss problems with each other' there was significant difference between the perception of the respondents in age groups of 25-35 years (mean score 3.00), 35-45 years (mean score 4.46) and above 45 years (mean score 4.00). Here also teachers in advanced age don't bother each other with their routine problems.

In terms of 'make work life balance', there was a great difference among various age groups. Respondents in the age group of 35-45 years and above 45 years disagreed (mean score 4.20 and 4.50 respectively) that they are able to make work life balance.

One can argue that as the age and experience of the person increases, work pressures like other administrative duties also increases so it becomes more difficult for him/her to manage family affairs.

INCOME

In the ANOVA results, income groups did not show any significant influence on the perception of dual couples as far as the 'have time for children' and 'give time to your friends' are concerned. However, while assessing 'able to spend time in family functions', income levels seemed to play a significant role. While both group of respondents, having income of Rs.2-5 lakhs p.a. and above Rs.5 lakhs p.a. disagreed more (mean score 3.60 and 3.73 respectively) on the subject of able to spend time in family functions, respondents in the income group of upto 2 lakhs p.a. disagreed less (mean score 2.40) on this issue.

A difference among the respondents in the income group of upto Rs.2 lakhs p.a. (mean score 3.20), Rs.2-5 lakhs p.a. (mean score 3.80) and above Rs.5 lakhs p.a. (mean score 4.26) was also observed in terms of their opinion on 'have time for each other'. Respondents in the highest income bracket disagreed more on the subject as compared to others.

In terms of 'go in social places together', there was great difference among various respondents. Those in the highest income bracket disagreed more on (mean score 3.46) that they (both husband and wife) go in social places together.

While responding to the statement - 'discuss problems with each other' there was a significant difference between the perceptions of respondents lying in the income group of above Rs. 5 lakhs p.a.(mean score 4.46), Rs. 2 to 5 lakhs p.a. (mean score3.40) and above Rs. 5 lakhs p.a.(mean score 3.00).

Regarding 'make work life balance' respondents' views again varied with each other. Those in the highest income group and moderate income disagreed more (mean score 4.26 and 3.60 respectively) on the issue as compared to the respondents lying in the lowest income (mean score 3.20).

Couples who are bracketed in the higher income group remains more busy in their jobs and consequently get less time to spend time together. get comparatively less time The reason for the above results could be that respondents belonging to highest income group (above Rs. 5 lakhs p.a.) will have to invest their money also. So, they are engaged in side businesses like property dealing, share trading, running coaching centers etc. as a result they get very little time to spend with their family.

FAMILY STRUCTURE

In the ANOVA results, family structure did not show any significant influence on the perception of dual couples as far as the 'able to spend time in family functions', 'have time for each other', 'have time for children', 'go in social places together', 'make work life balance' and 'give time to your friends are concerned'.

However, respondents living in joint family agreed to some extent (mean score 3.64) that they (husband and wife) discuss problems with each other. This is indicative of the fact that in joint families, domestic responsibilities are shared with others so couples get enough time to discuss their problems with each other.

Table 6: Analysis of Significant Demographic factors showing effect of dual career on Relationships: Government Institutes
N=50

Age (in years)	Variables	Age (years)	N	Mean	S.D.	F	Sig.
	Make work life balance	25-35	31	2.87	.94	2.04	.01

		35-45	17	3.58	.73		
		above 45	2	2.00	.00		
Income(p.a.)	Discuss problems with each other	Upto Rs. 2 lakhs	16	3.87	1.02	8.86	.00
		Rs.2-5 lakhs	27	4.81	.48		
		Above Rs.5 lakhs	7	4.42	.53		
	Give time to your friends	Upto Rs.2 lakhs	16	2.42	.78	3.31	.04
Rs.2-5 lakhs		27	2.55	1.07			
Above Rs.5 lakhs		7	3.43	1.52			
Family Structure	Have time for children	Nuclear Family	27	1.96	1.19	2.04	.04
		Joint Family	23	1.39	.65		

Source: Field Survey

AGE

Table 6 presents age-wise analysis of respondents working in government institutes regarding effect of dual career on relationships. It reveals that significant difference of opinion exists between the respondents in case of 'make work life balance'. Respondents in the age group of 35-45 years disagreed more (mean score 3.58) as compared to other age groups. It shows that dual couples working in government institutes also are unable to make work life balance.

The survey has also revealed that middle and higher age couples in government service find it difficult to strike balance between job and family in the face of greater responsibilities, both official and domestic.

INCOME

Table 6 depicts the results of the income-wise analysis of employees working in government institutes. It can be seen from the table that significant difference of opinion among respondents on the issue of 'discuss problems with each other'. Those lying in the income group of Rs.2-5 lakhs p.a. and above Rs. 5 lakhs p.a. disagreed more (mean score 4.81 and 4.42 respectively) on the subject as compared to the respondents in the income group of upto Rs. 2 lakhs p.a. (mean score 3.87).

Marked differences among respondents lying in the income group of above Rs.5 lakhs p.a. (mean score 3.43), Rs. 2-5 lakhs p.a. (mean score 2.55) and upto Rs. 2 lakhs p.a. (mean score 2.42) was also observed in terms of their opinion on 'give time to your friends'.

When we look at the condition of higher income groups, we find that though the income of such couples increases they get busier with their official duties, so they get less time for their families as well as their circle of friends.

FAMILY STRUCTURE

Significant differences have been observed between the respondents working in government institutes, on the subject of 'have time for children'. Those living in the joint families agreed more (mean score 1.39) on the issue than the respondents living in nuclear families (mean score 1.96).

The findings suggest that family structure of the employees working in government institutes greatly influence their most important duty towards children that is giving them sufficient and quality time.

V IMPLICATIONS OF THE FINDINGS

The findings of this research are very important as they help us comprehend the effect of dual career on relationships.

The research undertaken here indicates that most of the respondents working in private institutes said that they don't have time for each other, don't discuss problems with each other and are unable to make work life balance. Similarly in government institutes majority of respondents opined that they do not have time for each other, don't discuss problems with each other and also are not able to make work life balance. This is indicative of the fact that in teaching profession, teachers have to keep themselves up-to-date in knowledge to give their best to their students so they have to study at home also. Moreover, there have to fulfill other assignments like admission process; functions, paper checking, paper setting etc. So, they get very little time for their family as a result they are unable to make work life balance. This situation is very alarming because if people will not discuss their emotions with anyone then they may suffer from many psychological problems.

The results from this study throw up a number of issues that are important for dual career couples. One must also need to understand that the burden of managing family and career that teachers face may result in negative mental and physiological health outcomes. In the competitive scenario, the employers can best utilize the potential of its staff only if they are sensitive to these issues concerning dual careers.

It is suggested that employers need to come up with various employee friendly provisions like flexi time, stress management techniques, counseling, etc. to help dual couples balance their professional and family responsibilities. New hiring policies require a clear understanding of workforce demographics as well as the cultural practices and values of faculty in the 21st century.

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INDIA'S INTERNATIONAL TRADE DURING GLOBAL RECESSION

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ABSTRACT

Due to the globalization national and local business cannot be unaffected by the global business environment these days. The global recession spread across developed economies in first nine months in 2008-09 and then it started to affect a number of developing economies. It is often said that when the US sneezes the rest of the world catches a cold. The US economy has been deeply affected by the extreme volatility in the energy, food and commodity prices. India's engagement with the global economy became deeper from the 1990s and interdependence of international trade makes it inevitable to impact the trading partners all over the world. The recent global recession also had a huge impact on Indian industries as well. The present paper attempts to analyze the growth trends of international trade of India especially the import and export trade in the lights of the global recession.

KEYWORDS

Trade, Recession, Business, Economies, Market

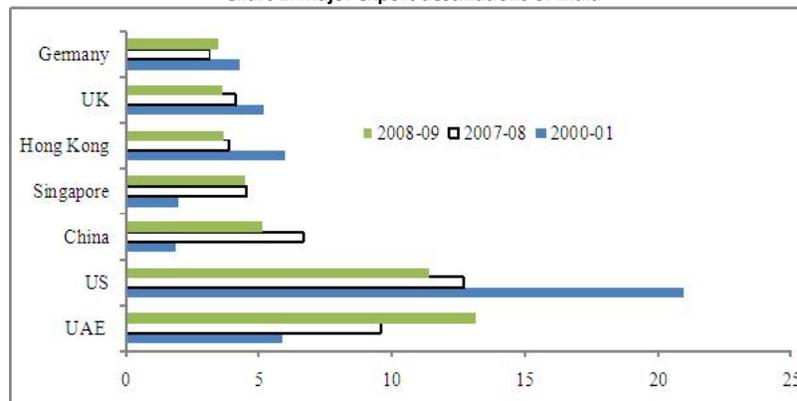
INTRODUCTION

Impact Globalizations is inevitable to all trading partners of the world whether it's positive or negative. For more than a year the world has been confronting one of the worst financial crises in over seventy years. This crisis has two phases: the first, financial, and the second, real, in other words a significant slowdown, and possibly even a global recession. Both the financial and real effects of the global financial crisis on world economy are clearly evident.

LITERATURE REVIEW

Dony Alex & Rajiv Kumar, 'The Great Recession and India's trade collapse', 27 November 2009, argue that the traditional export destinations for India have been Asia, EU and North America. Within Asia, ASEAN is the largest export destination (52%) followed by the EU (21%), and the US (13%). The US's share, however, has recently fallen to 11% (March 2009), even lower than that of the United Arab Emirates (13%). This sudden decrease can be considered an aftermath of the financial crisis. One of the core reasons for the sharp fall in India's exports is the high income demand elasticity for exports which makes exports highly sensitive to GDP movements. India's exports have been found to be more sensitive to income than to price changes. The income elasticity of demand for India's exports has been found to be highest for the US (2.5) while, for India's global exports, it is estimated at about 1.9 (UNCTAD 2009). This is consistent with the fall in the US' share in total Indian exports from 2008-09.

Chart 1: Major export destinations of India



Source: DGFT, Ministry of Commerce and Industry

The study analyzes invisible trade in the lights of occurrence of global recession in 'Impact of US Financial crisis on Indian Outsourcing Industry' by Mani Malarvannan, Sept 24, 2008, discusses how the current US financial crises will affect the Indian outsource industry in the short-term

and in long-term. The IT and BPO outsourcing boom created a huge impact in the Indian economy and it increased the IT salary, cost of living, real-estate price, etc, ultimately the Indian outsource boom increased the outsource cost for the companies in US and UK. Due to high inflation and tightening of monetary policies, Indian economy has slowed to 7.5% which will reduce salary of the IT professionals. As a effect it will reduce the cost for the western companies to outsource to India. In addition, the current Indian currency rate will motivate more US companies to use Indian outsource vendors for IT and BPO work.

However there are studies which have reverse opinion and one of them is Charles Cole, EconomyWatch.com feels that though the situation in the US is compared with the Great Depression of 1929, but this situation is far from a depression – in fact it's not even a recession. In the Great Depression there was no work and there was widespread poverty. In the US, August 2008 unemployment figures were at 6.1%, according to the US Bureau of Labor Statistics. In the Great Depression unemployment was higher than 25%. The Commerce Department reported that GDP growth was at 2.8%, hardly indicative of a recession, although this was revised down from the 3.3% figure it projected a month ago.

While analyzing the impact of global recession on India, Mathew Joseph, argues in 'Global Financial Crisis: How was India Impacted?', ICRIER New Delhi, that Indian economy began to slow down in 2007-08 (April-March) after reaching a GDP growth of 9.8 per cent in the last quarter of 2006-07. In fact, Indian economy grew at an annual average rate of 8.8 per cent during the five years ending 2007-08. In the first half of the financial year 2008-09, the growth rate dropped to 7.8 per cent. The pre-crisis slowdown of the economy can be attributed to the tightening of monetary policy right from September 2004 in response to the fear that the Indian economy had been overheating and inflation rising. The monetary tightening became harder in 2006-07 and later in early 2008-09 as the huge rise in world commodity prices pushed India's inflation also high.

METHODOLOGY

SOURCES OF DATA

A study is based on the secondary sources of data only and data is collected, tabulated and computed from authentic source from RBI's Data Base on Indian Economy: RBI Data Warehouse.

TOOLS

A data is analyzed with the help of simple statistical tools such as percentages and growth rates in order to do a trend analysis.

LIMITATION

Time period of the study is from April 2006 to April 2010 total four years only. The data is analyzed segregating them into pre and post recession monthly trends. A study is limited to the available time and sources and merchandised trade in the global recession period only.

PRE AND POST RECESSION INTERNATIONAL TRADE

The global recession spread all over the world from Aug 2008. In order do the comparative analysis of India's Merchandise trade, month to month in pre and post recession period. The four years data from April 2006-March 2010 for India's Export and Import trade compiled into total 48 months and used for monthly analysis. It is categorized as Pre Recession Period from April 2006 to March 08 and Post Recession Period April 2008 to March 2010.

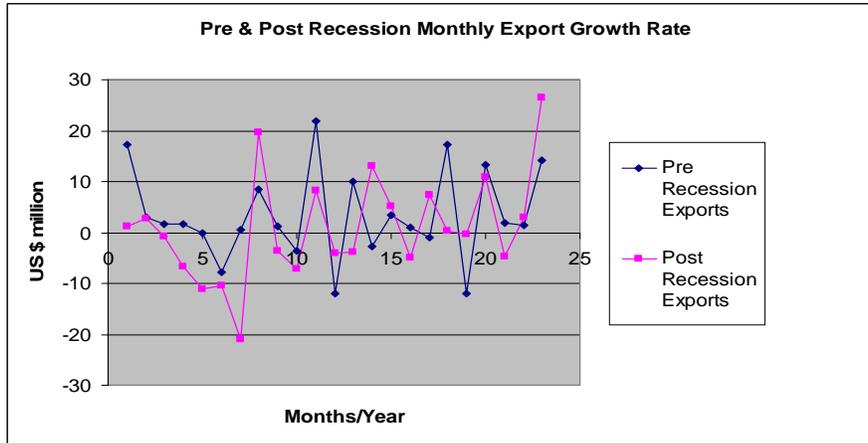
TABLE 1: PRE AND POST RECESSION INDIA'S EXPORTS

Pre Recession			Post Recession		
Month/Year	Exports in US\$ millions	Rate of Growth	Month/Year	Exports in US\$ millions	Rate of Growth
Apr-06	8625		Apr-08	18460.4	
May-06	10109.7	17.21	May-08	18686.6	1.22
Jun-06	10420	3.06	Jun-08	19180.9	2.64
Jul-06	10600.1	1.72	Jul-08	19030.4	-0.78
Aug-06	10769.5	1.59	Aug-08	17759.3	-6.67
Sep-06	10756.9	-0.11	Sep-08	15789.1	-11.09
Oct-06	9928.6	-7.70	Oct-08	14130.8	-10.50
Nov-06	9979.4	0.51	Nov-08	11163.3	-21.00
Dec-06	10834.5	8.56	Dec-08	13368.2	19.75
Jan-07	10967	1.22	Jan-09	12869	-3.73
Feb-07	10561.2	-3.70	Feb-09	11940.9	-7.21
Mar-07	12862.4	21.78	Mar-09	12916	8.16
Apr-07	11326.8	-11.93	Apr-09	12397	-4.01
May-07	12455.7	9.96	May-09	11915.9	-3.88
Jun-07	12101	-2.84	Jun-09	13474.2	13.07
Jul-07	12513.3	3.40	Jul-09	14182.8	5.25
Aug-07	12640.6	1.01	Aug-09	13475	-4.99

Sep-07	12521.4	-0.94	Sep-09	14464.3	7.34
Oct-07	14674.7	17.19	Oct-09	14507.5	0.29
Nov-07	12909.3	-12.03	Nov-09	14469.5	-0.26
Dec-07	14625.5	13.29	Dec-09	16032.8	10.80
Jan-08	14889.1	1.802332	Jan-10	15279.8	-4.69662
Feb-08	15116.2	1.525277	Feb-10	15737.5	2.995458
Mar-08	17254	14.14244	Mar-10	19908	26.5004

Source: Tabulated and Calculated from RBI Data Base on Indian Economy

Graph 2: Pre and Post Recession Monthly Trends in Export



Source: Tabulated and Calculated from RBI Data Base on Indian Economy

A table and graph show India’s exports figures in US \$ million and monthly growth rates of export in pre and post global recession i.e. from April 2006-April 2010. There is a declining trend in the growth of the exports in recession period compared to the same month before recession period. The dip in the exports is much deeper in the post recession period when we see month wise except for the Dec-08, June and Sept 09.

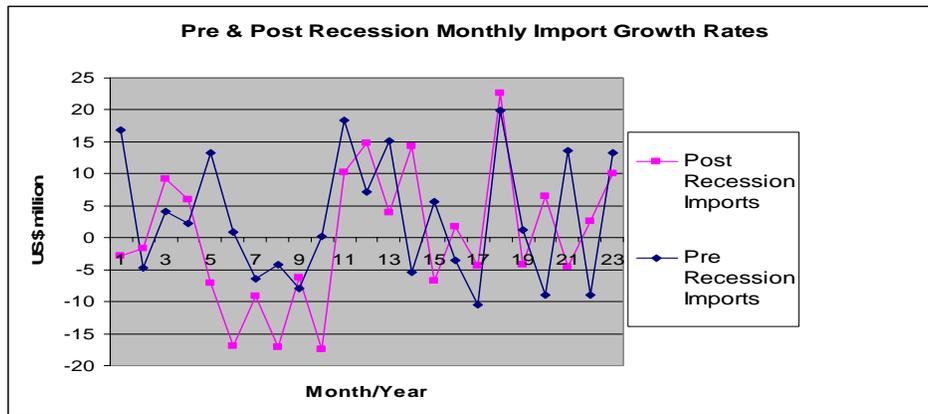
Table 2: PRE AND POST RECESSION INDIA’S IMPORTS

Pre Recession			Post Recession		
Month/Year	Imports in US\$ millions	Rate of Growth	Month/Year	Imports in US\$ millions	Rate of Growth
Apr-06	12924.5		Apr-08	30316.9	
May-06	15106	16.87	May-08	29443.6	-2.88
Jun-06	14400.1	-4.67	Jun-08	28950.6	-1.67
Jul-06	14985.4	4.06	Jul-08	31625.5	9.23
Aug-06	15326.7	2.27	Aug-08	33523.2	6.00
Sep-06	17351.1	13.20	Sep-08	31135.7	-7.12
Oct-06	17512.4	0.92	Oct-08	25869.3	-16.91
Nov-06	16381.2	-6.45	Nov-08	23488.2	-9.20
Dec-06	15679.6	-4.28	Dec-08	19456.3	-17.16
Jan-07	14446.9	-7.86	Jan-09	18228.2	-6.31
Feb-07	14484.7	0.26	Feb-09	15062.2	-17.36
Mar-07	17136.6	18.30	Mar-09	16597	10.18
Apr-07	18370.6	7.20	Apr-09	19052	14.79
May-07	21149.5	15.12	May-09	19806.1	3.95
Jun-07	20016	-5.35	Jun-09	22643.9	14.32
Jul-07	21128.6	5.55	Jul-09	21111.5	-6.76
Aug-07	20365.9	-3.60	Aug-09	21485.2	1.77
Sep-07	18217.5	-10.54	Sep-09	20538.4	-4.40

Oct-07	21832.6	19.84	Oct-09	25179.8	22.59
Nov-07	22104.1	1.24	Nov-09	24133.9	-4.15
Dec-07	20116.9	-8.99	Dec-09	25718.4	6.56
Jan-08	22844.4	13.55	Jan-10	24567.7	-4.47
Feb-08	20804.4	-8.92	Feb-10	25199.1	2.57
Mar-08	23573.7	13.31	Mar-10	27733	10.05

Source: Tabulated and Calculated from RBI Data Base on Indian Economy

Graph 3: Pre and Post Recession Monthly Trends in Imports

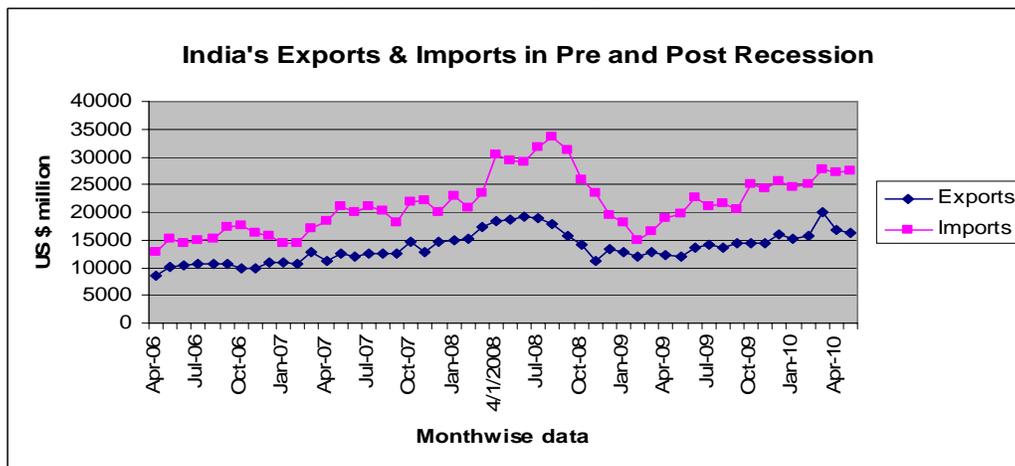


Source: Tabulated and Calculated from RBI Data Base on Indian Economy

A table and above graph show India’s imports figures in US \$ million and monthly growth rates of imports from April 2006-April 2010 i.e. pre and post global recession. From April 2008 recession is felt and spared the rest of world. There is a declining trend in the growth of the imports in recession period compared to the same month before recession period. The dip in the imports is much deeper in the post recession period when we see month wise except for the July-Aug 08 and April, June, Oct 2009.

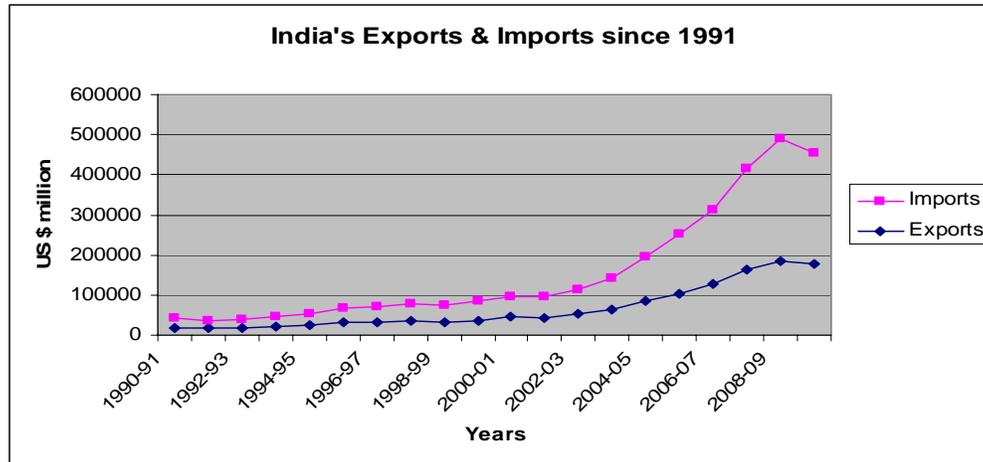
While comparing the monthly trends in exports and imports of India’s merchandise trade its found that the dip in imports is more than the dip in the exports in the recession period. Presently trends are showing recovery in the imports and exports of the India’s merchandise trade.

Graph 4: Pre & Post Recession Exports & Imports



Source: Tabulated and Calculated from RBI Data Base on Indian Economy

Graph 5 : India’s Exports and Imports from 1990-91 to 2009-10



Source: Tabulated and Calculated from RBI Data Base on Indian Economy

It is clearly evident from the above graph which represents the figures tabulated and calculated from RBI Data Base on Indian Economy from RBI Data ware house that India's merchandise trade is showing growing trends till recently. It is also clear that India's Imports had been always more than of its Exports since based on the data from 1990-91. Indian Imports started rising than its Exports rapidly from 2005-06. During the period of global recession Indian Exports are seen with declining trend. Whereas Indian Imports are showing much more declining trend than Indian Exports.

CONCLUSION

Indian Exports and Imports both show rising trends from 1990-91 to 2007-08. Its only during the global recession period both exports and imports are showing falling trends.

Trend analysis shows that as an impact of the global meltdown in the India's Merchandise trade, the dip in Imports trade is more than the dip in the Exports trade in the global recession period.

Presently trends are showing recovery in the Imports and Exports of the India's merchandise trade and it is expected that in coming months rates will pick up gradually as world recovers from the recession.

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DOES INDIAN EQUITY MARKET FOLLOW RANDOM WALKS? EVIDENCE FROM THE NATIONAL STOCK EXCHANGE

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ABSTRACT

The behavior of stock market returns in the financial literature is a central issue to the theory and practice of asset pricing, asset allocation, and risk management. The supporters of the efficient market hypothesis (EMH) claim that stock prices are basically random and as such any speculation based on past information is fruitless. The main objective of the paper is to test whether the Indian equity market follow random walk process or not. Since the determination of stock price is very difficult, the present study commences with the question of random walk model and its validity for the individual eighty-three stocks that belongs to eleven different sectors of the Indian economy. The paper investigates the random walk hypothesis applying two widely used unit root tests namely, Augmented Dickey-Fuller (1979) test and Phillips-Perron (1988) test using daily data for the period 1st June, 2005 to 26th March, 2010. The ADF and PP unit root tests clearly reveals that the null hypothesis of unit root is convincingly rejected in case of all eighty-three individual stocks that belong to eleven different sectors of the economy, suggesting that the Indian equity market do not show characteristics of random walk and as such is not efficient in the weak form implying that stock prices remain predictable. The empirical results does not support the validity of random walk hypothesis for stock return of individual firms that belongs to different sectors, viz., Automobiles, Bank, Cement, Electrical equipments, Fertilizers, Information Technology (IT), Oil & Gas, Pharmaceuticals, Power, Steel and Textiles, which possesses unique features and characteristics of its own firm-specific information releases. Results of the present study suggest that the Indian equity market is not weak form efficient indicating that there is systematic way to exploit trading opportunities and acquire excess profits. This provides an opportunity to the traders for predicting the future prices and earning abnormal profits. The implication of rejection of weak form efficiency for investors is that they can better predict the stock price movements, by holding a well diversified portfolio while investing in the Indian equity market.

KEYWORDS

Indian Equity Market, Random Walk Hypothesis, Unit root test

JEL CLASSIFICATION

C22, C52, G10

INTRODUCTION

The term market efficiency in capital market theory is used to explain the degree to which stock prices reflect all available, relevant information. The concept of Efficiency Market Hypothesis (EMH) is based on the arguments put forward by Samuelson (1965) that anticipated price of an asset fluctuate randomly. In finance, the efficient-market hypothesis (EMH) asserts that financial markets are "informationally efficient". That is, one cannot consistently achieve returns in excess of average market returns on a risk-adjusted basis, given the information publicly available at the time the investment is made. According to Fama (1970), there are three major versions of the hypothesis: "weak", "semi-strong", and "strong". Weak EMH claims that prices on traded assets (e.g., stocks, bonds, or property) already reflect all past publicly available information. Semi-strong EMH claims both that prices reflect all publicly available information and that prices instantly change to reflect new public information. Strong EMH additionally claims that prices instantly reflect even hidden or "insider" information. There is evidence for and against the weak and semi-strong EMHs, while there is powerful evidence against strong EMH.

Random walk hypothesis basically measures weak form of market efficiency. In weak-form efficiency, future prices cannot be predicted by analyzing prices from the past. Excess returns cannot be earned in the long run by using investment strategies based on historical share prices or other historical data. Technical analysis techniques will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide excess returns. Share prices exhibit no serial dependencies, meaning that there are no "patterns" to asset prices. This implies that future price movements are determined entirely by information not contained in the price series. Hence, prices must follow a random walk. However, if the markets were not efficient, the investors will beat the market and attain maximum profits. Participants in an inefficient market can use various devices such as trading rules and statistical techniques to predict the movement of stock prices.

REVIEW OF LITERATURE

Random walk hypothesis have been tested in many stock exchanges of the world. Several researches have been done on this topic on various stock markets of different countries or regions. Empirical studies on weak form efficiency in Asian stock markets have been extensively conducted in recent years. Indeed, in the Chinese stock markets, Mookerjee and Yu (1999) and Groenewold et al. (2003) consistently found that these markets (Shanghai and Shenzhen stock exchanges) are not weak form efficient. Besides, Lima and Tabak (2004) found that the B shares index for both Shanghai and Shenzhen Stock Exchange do not follow the random walk. However, they also report that the hypothesis of weak form efficiency cannot be rejected for A shares indexes of the two exchanges. Moreover, Seddighi and Nian (2004) found that the Shanghai Stock Exchange is weak form efficiency for the period from 4th January 2000 to 31st December 2000. Regarding the Taiwanese stock market, it is

proved that the market is efficient in the weak form (Fawson et al., 1996; Alam et al., 1999; and Chang and Ting, 2000). Similarly, the null hypothesis of random walk cannot be rejected for the Hong Kong stock market (Karemera et al., 1999; Alam et al., 1999; Cheung and Coutts, 2001; and Lima and Tabak, 2004). In addition, it is showed that stock market in the ASEAN region (Indonesia, Malaysia, Thailand and Singapore) follow the weak form of EMH (Barnes, 1986; Karemera et al., 1999; Alam et al., 1999). In the Southern part of Asia, Sharma and Kennedy (1977) and Alam et al. (1999) report that the random walk hypothesis cannot be rejected for stock price changes on the Bombay (India) and Dhaka Stock Exchange (Bangladesh) respectively. However, Abeysekera (2001) and Abraham et al., (2002) show evidence to reject the hypothesis of weak form efficiency for stock markets in Sri Lanka, Kuwait, Saudi Arabia and Bahrain. The studies such as Sharma and Kennedy (1977), Barua (1980, 1987), Sharma (1983), Ramachandran (1985), Gupta (1985), Srinivasan (1988), Vaidyanathan and Gali (1994) and Prusty (2007) supports the weak form efficiency of Indian capital market. However, some studies like Kulkarni (1978), Chaudhury (1991), Poshakwale (1996), Pant and Bishnoi (2002), Pandey (2003), Gupta and Basu (2007), Mishra, (2009) and Mishra and Pradhan, (2009) do not support the existence of weak form efficiency in Indian capital market.

In short, the above literature shows that still it cannot said with certainty that whether stock market follow random walk or stock prices are predicable. The quarrel between random walk believers and believers of non random behavior of asset prices has not end yet. Random walk hypothesis are testing in various stock market specially recently behavior of Stocks of emerging markets are of great concern of many researcher. In the Indian context, there has been wide range of studies concerning the efficient market hypothesis in the literature, but seems to provide mixed evidences. At a national level, most of the studies have adopted stock indices for the purpose of testing the weak-form efficiency. To the best of my knowledge, only a few studies have been conducted at individual stock level. Therefore, there exists a scope for further investigate the issue by using the stock prices on individual securities that belongs to different sectors of the Indian economy. The ability of Indian stock market to play the role that is ascribed to them – attracting foreign investment, boosting domestic saving and improving the pricing and availability of capital – depends upon the presence of random walks. A market following a random walk is consistent with equity being appropriately priced at an equilibrium level, whereas the absence of a random walk infers distortions in the pricing of capital and risk. This has important implications for the allocation of capital within an economy and hence overall economic development. If the Indian equity market is efficient, the need for government intervention is minimal. On the other hand, an inefficient equity market provides opportunities for profitable transactions. Participants in an inefficient equity market can use various devises such as trading rules and statistical techniques to predict the movement of share prices. Further, the stock market regulators and authorities can determine the best way to influence stock prices, reduce stock market volatility and evaluate the consequences of different economic policies.

In this context, the present study investigates weak-form efficiency of the individual eighty-three stocks that belongs to eleven different sectors of the Indian economy. The remainder of our article is organised as follows: Section-3 describes the methodology and data used for empirical analysis. Section-4 offers empirical results and discussion of the study. Concluding remarks are presented in section-5.

METHODOLOGY

Usually time series analysis considers stationary time series in empirical studies. If the series is non-stationary, the relationship between the independent and dependent variables may exhibit misleading inferences leading for spurious regression. A series said to be stationary if the mean and auto covariance of the series does not depends on time. In order to examine whether each variable’s time series is integrated and has a unit root, the study has considered two widely used popular unit root tests- Augmented Dickey-Fuller test (1979) test and Phillips-Perron (1988) test. Both the tests use the null hypothesis that the series does contain a unit root (non-stationary variable) against a stationary variable in the alternative hypothesis. If the calculated test statistics is higher than the critical value then one does not reject the null hypothesis and the concerned variable is non-stationary, if not that is stationary. To test the EMH (Efficient Market Hypothesis) of Indian equity market, the tools of stationarity of share prices are tested by using daily market returns.

The equation of unit root test is expressed as:

$$\Delta R_t = \alpha_0 + \alpha_2 t + \sum_{i=1}^k \beta_i \Delta R_{t-i} + \epsilon_t \dots\dots\dots (1)$$

where, R_t denotes the daily return of the individual stock at time t and β_i is the coefficient to be estimated, k is the number of lagged terms, t is the trend term, α_2 is the estimated coefficient for the trend, α_0 is the constant, and ϵ is white noise. MacKinnon’s critical values are used in order to determine the significance of the test statistic associated with β_0 . The unit root tests the null hypothesis $H_0: \beta_i = 1$ against the one-sided alternative $H_1: \beta_i < 1$. The null hypothesis of a unit root is rejected in favour of the stationary alternative in each case if the test statistic is more negative than the critical value. Phillips-Perron (1988) suggests an alternative approach for checking the presence of unit roots in the data. They formulate a nonparametric test to the conventional t-test which is robust to a wide variety of serial correlation and time dependent heteroscedasticity. The Phillips-Perron test incorporates an alternative (nonparametric) method of controlling for serial correlation when testing for a unit root by estimating the non-augmented Dickey-Fuller test equation and modifying the test statistic so that its asymptotic distribution is unaffected by serial correlation.

The data for the study consists of daily closing prices of eighty-three individual stocks that traded in National Stock Exchange (NSE). The selected stocks are belongs to 11 sectors of the economy. The sectors in the study comprises of Automobiles, Bank, Cement, Electrical equipments, Fertilizers, Information Technology (IT), Oil & Gas, Pharmaceuticals, Power, Steel and Textiles. The list of the selected stocks considered for the study had presented in Appendix-I. The data span for the study has been considered from 1st June, 2005 to 26th March, 2010. All the required data information for the study has been retrieved from the website of National Stock Exchange (NSE), Mumbai. Throughout this paper, stock market returns are defined as continuously compounded or log returns (hereafter returns) at time t , r_t , calculated as follows:

$$R_t = \log (P_t / P_{t-1}) = \log P_t - \log P_{t-1} \dots\dots\dots (2)$$

where P_t and P_{t-1} are the daily closing prices of individual stocks at days t and $t-1$, respectively.

EMPIRICAL RESULTS AND DISCUSSIONS

To examine the random walk hypothesis of the Indian equity market, the present study performs Augmented Dickey-Fuller (ADF) test with intercept, with intercept and trend and without an intercept and trend. We further test the series using the Phillips-Perron (PP) test for a confirmatory data analysis. The result of unit root tests (ADF & PP tests) of random walk model for the eighty-three individual stocks was presented in Table-1. The table result of both unit root tests clearly reveals that the null hypothesis of unit root is convincingly rejected in case of all eighty-three individual stocks that belong to eleven different sectors of the economy, suggesting that the Indian equity market do not show characteristics of random walk and as such is not efficient in the weak form implying that stock prices remain predictable. The empirical results does not support the validity of random walk hypothesis for stock return of individual firms that belongs to different sectors, viz., Automobiles, Bank, Cement, Electrical equipments, Fertilizers, Information Technology (IT), Oil & Gas, Pharmaceuticals, Power, Steel and Textiles, which possesses unique features and characteristics of its own firm-specific information releases. Results of the present study suggest that the Indian equity market is not weak form efficient indicating that there is systematic way to exploit trading opportunities and acquire excess profits. This provides an opportunity to the traders for predicting the future prices and earning abnormal profits. The implication of rejection of weak form efficiency for investors is that they can better predict the stock price movements, by holding a well diversified portfolio while investing in the Indian equity market.

CONCLUSION

The behavior of stock market returns in the financial literature is a central issue to the theory and practice of asset pricing, asset allocation, and risk management. The supporters of the efficient market hypothesis (EMH) claim that stock prices are basically random and as such any speculation based on past information is fruitless. The main objective of the paper is to test whether the Indian equity market follow random walk process or not. Since the determination of stock price is very difficult, the present study commences with the question of random walk model and it's validity for the individual eighty-three stocks that belongs to eleven different sectors of the Indian economy. The paper investigates the random walk hypothesis applying two widely used unit root tests namely, Augmented Dickey-Fuller (1979) test and Phillips-Perron (1988) test using daily data for the period 1st June, 2005 to 26th March, 2010. The ADF and PP unit root tests clearly reveals that the null hypothesis of unit root is convincingly rejected in case of all eighty-three individual stocks that belong to eleven different sectors of the economy, suggesting that the Indian equity market do not show characteristics of random walk and as such is not efficient in the weak form implying that stock prices remain predictable. The empirical results does not support the validity of random walk hypothesis for stock return of individual firms that belongs to different sectors, viz., Automobiles, Bank, Cement, Electrical equipments, Fertilizers, Information Technology (IT), Oil & Gas, Pharmaceuticals, Power, Steel and Textiles, which possesses unique features and characteristics of its own firm-specific information releases. Results of the present study suggest that the Indian equity market is not weak form efficient indicating that there is systematic way to exploit trading opportunities and acquire excess profits. This provides an opportunity to the traders for predicting the future prices and earning abnormal profits. The implication of rejection of weak form efficiency for investors is that they can better predict the stock price movements, by holding a well diversified portfolio while investing in the Indian equity market.

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ANNEXURES

Table-1: Results of Augmented Dickey-Fuller and Phillips-Perron Tests

Name of the Stocks	Market	Augmented Dickey-Fuller Test Statistics			Phillips-Perron Test Statistics		
		Intercept	With Intercept & Trend	Without Intercept & Trend	Intercept	With Intercept & Trend	Without Intercept & Trend
Industry Group: Automobiles							
ASHOKLEY	Equity	-13.97*	-14.22*	-13.96*	-26.59*	-26.70*	-26.60*
ESCORTS	Equity	-13.95*	-14.02*	-13.93*	-27.56*	-27.60*	-27.58*
HEROHONDA	Equity	-19.32*	-19.30*	-19.31*	-29.53*	-29.50*	-29.52*
M&M	Equity	-16.98*	-17.02*	-16.95*	-27.08*	-27.11*	-27.09*
MARUTI	Equity	-14.45*	-14.60*	-14.46*	-28.91*	-28.99*	-28.93*
TATAMOTORS	Equity	-13.86*	-14.29*	-13.81*	-25.44*	-25.59*	-25.41*
TVSMOTOR	Equity	-13.75*	-13.94*	-13.67*	-29.08*	-29.21*	-29.03*
Industry Group: Bank							
ALBK	Equity	-13.07*	-13.09*	-25.39*	-25.37*	-25.41*	-13.07*
ANDHRABANK	Equity	-16.27*	-16.29*	-25.41*	-25.39*	-25.42*	-16.27*
AXISBANK	Equity	-16.15*	-16.07*	-26.33*	-26.31*	-26.26*	-16.15*
BANKBARODA	Equity	-24.95*	-24.97*	-24.86*	-24.85*	-24.87*	-24.95*
BANKINDIA	Equity	-15.87*	-15.84*	-25.72*	-25.71*	-25.70*	-15.87*
CANBK	Equity	-13.37*	-13.39*	-25.11*	-25.12*	-25.13*	-13.37*
CORPBANK	Equity	-11.31*	-11.33*	-24.29*	-24.28*	-24.31*	-11.31*
FEDERALBNK	Equity	-12.47*	-12.45*	-25.70*	-25.69*	-25.71*	-12.47*
HDFCBANK	Equity	-14.38*	-14.23*	-25.43*	-25.44*	-25.37*	-14.38*
ICICIBANK	Equity	-13.32*	-13.19*	-23.48*	-23.52*	-23.47*	-13.32*
IDBI	Equity	-15.93*	-15.95*	-23.95*	-23.94*	-23.97*	-15.93*
INDUSINDBK	Equity	-13.62*	-13.61*	-25.40*	-25.39*	-25.42*	-13.62*
IOB	Equity	-13.50*	-13.48*	-24.06*	-24.05*	-24.07*	-13.50*
J&KBANK	Equity	-15.18*	-15.13*	-26.70*	-26.71*	-26.69*	-15.18*
KTKBANK	Equity	-12.32*	-12.25*	-26.74*	-26.73*	-26.71*	-12.32*
ORIENTBANK	Equity	-24.00*	-24.02*	-23.95*	-23.94*	-23.96*	-24.00*
PNB	Equity	-26.25*	-26.28*	-26.24*	-26.23*	-26.26*	-26.25*
SBIN	Equity	-25.78*	-25.74*	-25.75*	-25.76*	-25.71*	-25.78*
SYNDIBANK	Equity	-11.85*	-11.82*	-24.72*	-24.74*	-24.75*	-11.85*
UNIONBANK	Equity	-13.09*	-13.11*	-26.89*	-26.87*	-26.90*	-13.09*
VIJAYABANK	Equity	-25.21*	-25.24*	-25.14*	-25.13*	-25.16*	-25.21*
Industry Group: Cement							
ACC	Equity	-31.06*	-31.07*	-31.05*	-31.06*	-31.06*	-31.05*
GRASIM	Equity	-33.28*	-33.31*	-33.29*	-33.71*	-33.70*	-33.69*
INDIACEM	Equity	-34.02*	-34.05*	-34.03*	-34.13*	-34.19*	-34.14*
Industry Group: Electrical Equipments							

ABB	Equity	-33.67*	-33.66*	-33.68*	-33.72*	-33.71*	-33.73*
BHEL	Equity	-31.60*	-31.61*	-31.59*	-31.55*	-31.56*	-31.54*
SIEMENS	Equity	-33.67*	-33.66*	-33.68*	-33.67*	-33.67*	-33.68*
SUZLON	Equity	-32.18*	-32.16*	-32.17*	-32.15*	-32.11*	-32.10*
Industry Group: Fertilizers							
CHAMBLFERT	Equity	-32.44*	-32.43*	-32.45*	-32.42*	-32.41*	-32.40*
GNFC	Equity	-30.14*	-30.15*	-30.16*	-30.13*	-30.17*	-30.18*
NAGARFERT	Equity	-30.61*	-30.59*	-30.62*	-30.58*	-30.56*	-30.59*
TATACHEM	Equity	-30.25*	-30.24*	-30.26*	-30.28*	-30.27*	-30.29*
Industry Group: Information Technology (IT)							
HCLTECH	Equity	-17.61*	-17.66*	-17.62*	-28.81*	-28.84*	-28.82*
OFSS	Equity	-17.22*	-17.40*	-17.21*	-28.62*	-28.76*	-28.63*
INFOSYSTCH	Equity	-18.61*	-18.60*	-18.62*	-30.89*	-30.90*	-30.91*
PATNI	Equity	-11.97*	-12.06*	-11.96*	-26.70*	-26.73*	-26.71*
POLARIS	Equity	-11.80*	-11.82*	-11.84*	-27.67*	-27.66*	-27.68*
TCS	Equity	-21.45*	-21.47*	-21.46*	-29.85*	-29.89*	-29.86*
WIPRO	Equity	-12.96*	-12.95*	-12.18*	-29.64*	-29.63*	-29.66*
Industry Group: Oil & Gas							
BONGAIREFN	Equity	-24.95*	-24.94*	-24.93*	-24.55*	-24.53*	-24.56*
BPCL	Equity	-17.24*	-17.23*	-17.25*	-28.99*	-28.98*	-29.01*
ESSAROIL	Equity	-12.19*	-12.20*	-12.18*	-26.42*	-26.43*	-26.41*
GAIL	Equity	-14.99*	-15.08*	-15.01*	-31.69*	-31.71*	-31.74*
HINDPETRO	Equity	-15.94*	-15.93*	-15.92*	-28.04*	-28.02*	-28.05*
IOC	Equity	-16.03*	-16.02*	-16.04*	-24.98*	-24.96*	-24.99*
MRPL	Equity	-13.39*	-13.40*	-13.38*	-26.82*	-26.80*	-26.84*
ONGC	Equity	-14.73*	-14.79*	-14.75*	-29.74*	-29.78*	-29.75*
RELIANCE	Equity	-18.78*	-18.93*	-18.75*	-29.04*	-29.14*	-29.03*
Industry Group: Pharmaceuticals							
AUROPHARMA	Equity	-11.96*	-12.15*	-11.95*	-26.37*	-26.54*	-26.36*
CIPLA	Equity	-14.05*	-14.08*	-14.07*	-28.47*	-28.46*	-28.49*
DABUR	Equity	-14.39*	-14.40*	-14.41*	-30.71*	-30.69*	-30.72*
DIVISLAB	Equity	-20.05*	-20.06*	-20.09*	-28.85*	-28.85*	-28.87*
DRREDDY	Equity	-17.39*	-17.41*	-17.38*	-30.13*	-30.14*	-30.12*
GLAXO	Equity	-13.13*	-13.16*	-13.12*	-28.74*	-28.75*	-28.73*
MATRIXLABS	Equity	-14.31*	-14.37*	-14.30*	-30.21*	-30.24*	-30.23*
ORCHIDCHEM	Equity	-15.76*	-15.77*	-15.74*	-25.24*	-25.27*	-25.26*
PIRHEALTH	Equity	-13.80*	-13.79*	-13.81*	-30.68*	-30.67*	-30.70*
RANBAXY	Equity	-15.86*	-15.87*	-15.81*	-29.16*	-29.15*	-29.12*
STAR	Equity	-18.19*	-18.27*	-18.15*	-27.39*	-27.49*	-27.37*
SUNPHARMA	Equity	-21.45*	-21.50*	-21.42*	-31.65*	-31.68*	-31.62*
WOCKPHARMA	Equity	-20.11*	-20.31*	-20.04*	-29.14*	-29.32*	-29.06*
Industry Group: Power							
CESC	Equity	-30.85*	-30.83*	-30.80*	-30.74*	-30.75*	-30.70*
CUMMINSIND	Equity	-34.24*	-34.22*	-34.20*	-34.23*	-34.21*	-34.18*
JPHYDRO	Equity	-32.69*	-32.68*	-32.70*	-32.72*	-32.67*	-32.65*
NEYVELILIG	Equity	-31.72*	-31.73*	-31.74*	-31.69*	-31.68*	-31.70*
NTPC	Equity	-33.52*	-33.51*	-33.48*	-33.70*	-33.69*	-33.64*
RELINFRA	Equity	-32.02*	-32.00*	-32.06*	-31.98*	-31.97*	-31.99*
TATAPOWER	Equity	-32.09*	-32.08*	-32.06*	-32.03*	-32.05*	-32.04*
Industry Group: Steel							
JINDALSTEL	Equity	-32.14*	-32.16*	-32.12*	-32.11*	-32.13*	-32.15*
JSL	Equity	-31.40*	-31.39*	-31.41*	-31.43*	-31.42*	-31.45*
MAHSEAMLES	Equity	-30.29*	-30.28*	-30.31*	-30.27*	-30.26*	-30.25*
TATASTEEL	Equity	-30.64*	-30.63*	-30.65*	-30.60*	-30.59*	-30.61*
Industry Group: Textiles							
ALOKTEXT	Equity	-31.34*	-31.35*	-31.32*	-31.36*	-31.37*	-31.30
ARVIND	Equity	-30.54*	-30.53*	-30.50*	-30.58*	-30.57*	-30.55
CENTURYTEX	Equity	-33.14*	-33.13*	-33.15*	-33.18*	-33.20*	-33.23
SRF	Equity	-28.45*	-28.42*	-28.46*	-28.53*	-28.52*	-28.54
Notes: * – indicates significance at one per cent level. Optimal lag length is determined by the Schwarz Information Criterion (SIC) and Newey-West Criterion for the Augmented Dickey-Fuller Test and Phillips-Perron Test respectively. The Augmented Dickey-Fuller (ADF) and Phillips-Peron (PP) unit root test hypotheses are H ₀ : unit root (non stationary), H ₁ : no unit root (stationary).							

APPENDIX -1

A Brief Description of Selected NSE Stocks that considered for the Study

S. No.	Name of the Stocks/NSE Code	Company Name
1. Industry Group: Automobiles		
1.	ASHOKLEY	Ashok Leyland Ltd.
2.	ESCORTS	Escorts India Ltd.
3.	HEROHONDA	Hero Honda Motors Ltd.
4.	M&M	Mahindra & Mahindra Ltd.
5.	MARUTI	Maruti Suzuki India Ltd.
6.	TATAMOTORS	Tata Motors Ltd.
7.	TVSMOTOR	TVS Motor Company Ltd.
2. Industry Group: Bank		
8.	ALBK	Allahabad Bank
9.	ANDHRABANK	Andhra Bank
10.	AXISBANK	Axis Bank Ltd.
11.	BANKBARODA	Bank of Baroda
12.	BANKINDIA	Bank of India
13.	CANBK	Canara Bank
14.	CORPBANK	Corporation Bank
15.	FEDERALBNK	Federal Bank Ltd.
16.	HDFCBANK	HDFC Bank Ltd.
17.	ICICIBANK	ICICI Bank Ltd.
18.	IDBI	Industrial Development Bank of India Ltd.
19.	INDUSINDBK	IndusInd Bank Ltd.
20.	IOB	Indian Overseas Bank
21.	J&KBANK	Jammu & Kashmir Bank Ltd.
22.	KTKBANK	Karnataka Bank Ltd.
23.	ORIENTBANK	Oriental Bank of Commerce
24.	PNB	Punjab National Bank
25.	SBIN	State Bank of India
26.	SYNDIBANK	Syndicate Bank
27.	UNIONBANK	Union Bank of India
28.	VIJAYABANK	Vijaya Bank
3. Industry Group: Cement		
29.	ACC	Associated Cement Co. Ltd.
30.	GRASIM	Grasim Industries Ltd.
31.	INDIACEM	India Cements Ltd.
4. Industry Group: Electrical Equipments		
32.	ABB	ABB Ltd.
33.	BHEL	Bharat Heavy Electricals Ltd.
34.	SIEMENS	Siemens Ltd.
35.	SUZLON	Suzlon Energy Ltd.
5. Industry Group: Fertilizers		
36.	CHAMBLFERT	Chambal Fertilizers Ltd.
37.	GNFC	Gujarat Narmada Fertilizer Co. Ltd.
38.	NAGARFERT	Nagarjuna Fertiliser & Chemicals Ltd.
39.	TATACHEM	Tata Chemicals Ltd.
6. Industry Group: Information Technology (IT)		
40.	HCLTECH	HCL Technologies Ltd.
41.	OFSS	Oracle Financial Services Software Limited
42.	INFOSYSTCH	Infosys Technologies Ltd.
43.	PATNI	Patni Computer Syst Ltd.
44.	POLARIS	Polaris Software Lab Ltd.
45.	TCS	Tata Consultancy Services Ltd.
46.	WIPRO	Wipro Ltd.
7. Industry Group: Oil & Gas		
47.	BONGAIREFN	Bongaigaon Refinery Ltd.
48.	BPCL	Bharat Petroleum Corporation Ltd.
49.	ESSAROIL	Essar Oil Ltd.
50.	GAIL	GAIL (India) Ltd.
51.	HINDPETRO	Hindustan Petroleum Corporation Ltd.

52.	IOC	Indian Oil Corporation Ltd.
53.	MRPL	Mangalore Refinery and Petrochemicals Ltd.
54.	ONGC	Oil & Natural Gas Corp. Ltd.
55.	RELIANCE	Reliance Industries Ltd.
8. Industry Group: Pharmaceuticals		
56.	AUROPHARMA	Aurobindo Pharma Ltd.
57.	CIPLA	Cipla Ltd.
58.	DABUR	Dabur India Ltd.
59.	DIVISLAB	Divi's Laboratories Ltd.
60.	DRREDDY	Dr. Reddy's Laboratories Ltd.
61.	GLAXO	Glaxosmithkline Pharma Ltd.
62.	MATRIXLABS	Matrix Laboratories Ltd.
63.	ORCHIDCHEM	Orchid Chemicals Ltd.
64.	PIRHEALTH	Piramal Healthcare Limited
65.	RANBAXY	Ranbaxy Laboratories Ltd.
66.	STAR	Strides Arcolab Ltd.
67.	SUNPHARMA	Sun Pharmaceuticals India Ltd.
68.	WOCKPHARMA	Wockhardt Ltd.
9. Industry Group: Power		
69.	CESC	CESC Ltd.
70.	CUMMINSIND	Cummins India Ltd.
71.	JPHYDRO	Jaiprakash Hydro-Power Ltd.
72.	NEYVELLIG	Neyveli Lignite Corporation Ltd.
73.	NTPC	NTPC Ltd.
74.	RELINFRA	Reliance Infrastructure Ltd.
75.	TATAPOWER	Tata Power Co. Ltd.
10. Industry Group: Steel		
76.	JINDALSTEL	Jindal Steel & Power Ltd.
77.	JSL	Jindal Stainless Ltd.
78.	MAHSEAMLES	Maharashtra Seamless Ltd.
79.	TATASTEEL	Tata Steel Ltd.
11. Industry Group: Textiles		
80.	ALOKTEXT	Alok Industries Ltd.
81.	ARVIND	Arvind Mills Ltd.
82.	CENTURYTEX	Century Textiles Ltd.
83.	SRF	SRF Ltd.

**NPA's IN HOME LOAN: A SURVEY
(WITH SPECIAL REFERENCE TO SELECTED DISTRICTS OF ODISHA)**

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ABSTRACT

Efficient financial resource management requires that funds deployed should give them good returns along with timely repayment of principal amount. Defaults limit the recirculation of funds there by upsetting the financial planning of banks. The present paper is an attempt to examine the causes of NPAs in home loans of commercial banks. For this borrowers are surveyed through questionnaires made for the purpose, causes analyzed and suggestions made to overcome the problem.

KEYWORDS

Home loan, NPA, Finance & Commercial Banks.

INTRODUCTION

The word NPA is not something new to the bankers. It is regular but disguised loan asset. As everyone knows, a portion of loan assets may become NPA. An asset becomes non-performing when it ceases to generate income for the bank. Prior to 31st March, 2004 a non-performing asset was defined as a credit facility in respect of which the interest or installment of principal has remained *past due* for a specified period of time which was four quarters. Due to the improvements in payment and settlement system, recovery climate, up gradation of technology in the banking system, etc, it has been decided to dispense with *past due concept*, with effect from March 31st 2004. Accordingly, as from the date, a non-performing asset (NPA) is an advance where:

- Interest and/ or installment of principal remain overdue for a period of more than 90 days in respect of term loans.
- The account remains out of order for a period or more than 90 days, in respect of an overdraft/ cash credit (OD/ CC).
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted.
- Interest and /or installment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purpose and
- Any amount to be received remains overdue for a period of more than 90 days.

OVERVIEW OF NPA CLASSIFICATION IN INDIA

Sub- standard Asset	NPA for a period less than or equal to 12 months.
Doubtful Asset	NPA for a period exceeding 12 months.
Loss Asset	An asset where loss has been identified by the bank or internal or external auditors or by the RBI inspection.
Standard Asset	It does not create any problem while paying interest/ installments of the principal. It usually carries more than normal risk attached to the business.

OBJECTIVE OF THE STUDY

- To study the factors responsible for NPA of home loan
- Studying the problem in relation to home loan

- To give suggestions to overcome the problem of NPA on home loans

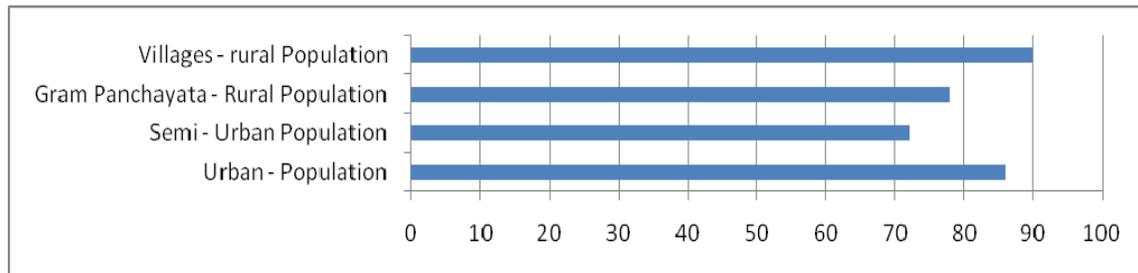
RESEARCH UNIVERSE AND METHODOLOGY

With reference to the selection of the research universe the state of Odisha has been selected with specifications to the compulsions of the geographical territory, linguistic boundary, and administrative settlement commonness. Odisha is an Eastern Indian state, the state boundaries are on the Bay of Bengal Sea. South- Andhra Pradesh, West – Chhattisgarh and Jharkhand, North- West Bengal having a total area of 1,55,707 Square Kilometers with total population of 36,706,920 (as per Indian census survey-2001) , population density 236 per Square Kilometers, Sex Ratio 972 literacy rate of 63.61%. The state is comprising of 30 districts (Administrative Divisions) and 58 Sub-Divisions.

SAMPLING PLAN

In support to the objective of the research there is a primary research through questionnaire administration method in the field through stratified random sampling method covering the state through regional, geographical, economic, cultural, lingual and settlement wise and to analyze the data and derive results from it percentage method used. This method is easy to use and taken as suitable method to compare.

Area	Questionnaire served	Response	Percentage of response
Cities- (Urban Population):			
✓ Bhubaneswar – East Odisha	50	40	26.38
✓ Bramhapur- South Odisha	50	46	
Semi-Urban Population:			
✓ Nabarangpur	25	18	22.09
✓ Koraput	25	17	
✓ Padampur	25	21	
✓ Athagarh	25	16	
Grampanchayats (Rural Population)	25	19	23.93
✓ Saptasajya - Dhenkanal District	25	23	
✓ Ghatagan - Keonjhar District	25	20	
✓ Chandol - Kendrapara District	25	16	
✓ Banthapalli – Ganjam District			
Villages – (Rural Population)	25	23	27.6
✓ Luchapada – Ganjam District	25	22	
✓ Andharua – Khurda District	25	21	
✓ Pathadurga –Balasore District	25	24	
✓ Atabira- Sambalpur District			
Total	400	326	100%



LIMITATIONS OF THE STUDY

- The survey is restricted to selected districts of Odisha.
- The sample is limited; it may not represent the view of all the borrowers of home loan
- The study conducted for the period of 3 months i.e. April-June 2010, and not conducted for the extended period of time.

FINDINGS OF THE STUDY

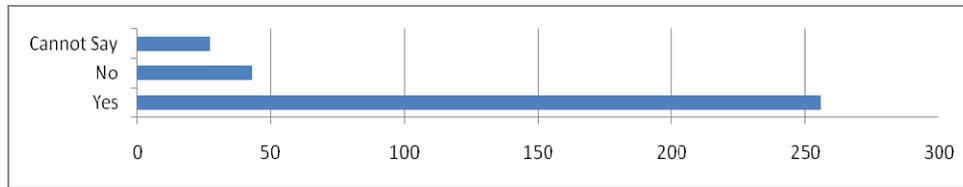
Findings of the study are as under. The tables are formed on the basis of questions contained in the questionnaire.

- *Do you agree that unwillingness to pay leads in NPA in home loan?*

Table-1

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	192	82.05	31	13.25	11	4.7	100
Women	92	28.22	64	69.57	12	13.04	16	17.39	100
Total	326	100	256	78.53	43	13.19	27	8.28	100

Source: Compiled from field survey



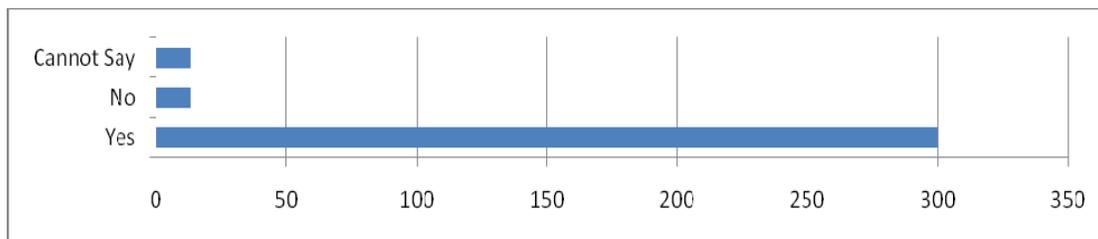
INTERPRETATION: 256 borrowers agreed that unwillingness to pay on the causes of nonpayment of home loan.

- *Do you agree that unforeseen domestic problems like death, divorce, illness and marriage of family members lead to NPA in home loan?*

Table-2

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	213	91.03	8	3.42	13	5.55	100
Women	92	28.22	87	94.57	5	5.43	-	-	100
Total	326	100	300	92.02	13	3.99	13	3.99	100

Source: Compiled from field survey



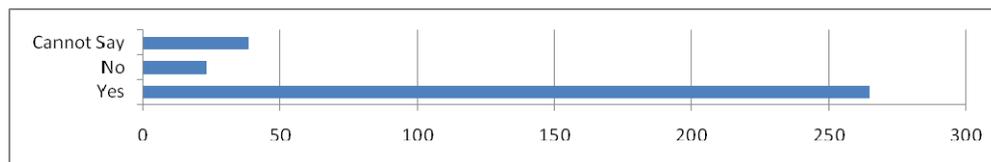
INTERPRETATION: 300 participants agreed that domestic problems one of the causes of default.

- *Do you agree that financial problems of the party lead to NPA of home loan?*

Table-3

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	198	84.62	11	4.70	25	10.68	100
Women	92	28.22	67	72.83	12	13.04	13	14.13	100
Total	326	100	265	81.29	23	7.05	38	11.66	100

Source: Compiled from field survey



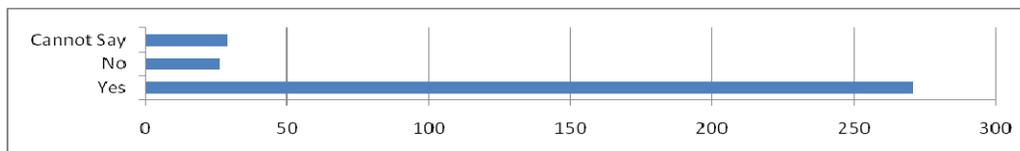
INTERPRETATION: 256 people said Yes to the financial problems of the party leads to NPA in home loan.

- *Do you agree that wrong identification of beneficiary leads to NPA in home loan?*

Table-4

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	187	79.91	26	11.11	21	8.98	100
Women	92	28.22	84	91.30	-	-	8	8.70	100
Total	326	100	271	83.13	26	7.98	29	8.89	100

Source: Compiled from field survey



INTERPRETATION: 271 borrowers agreed that wrong identification of beneficiary one of reason for defaults.

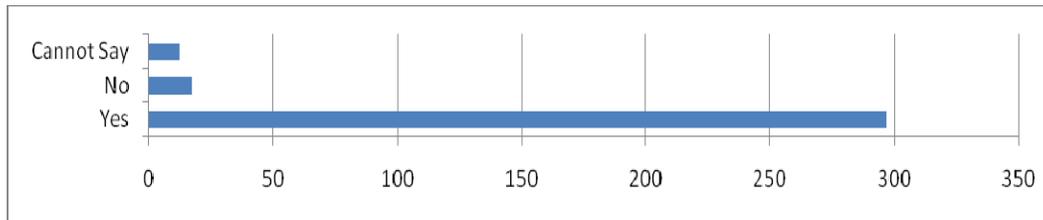
- *Do you agree that inaccurate pre sanction security and appraisal of loan proposal leads to NPA in home loan?*

Table-5

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	187	79.91	26	11.11	21	8.98	100
Women	92	28.22	84	91.30	-	-	8	8.70	100
Total	326	100	271	83.13	26	7.98	29	8.89	100

Men	234	71.78	212	90.60	10	4.27	12	5.13	100
Women	92	28.22	85	92.39	7	7.61	-	-	100
Total	326	100	297	91.10	17	5.21	12	3.69	100

Source: Compiled from field survey



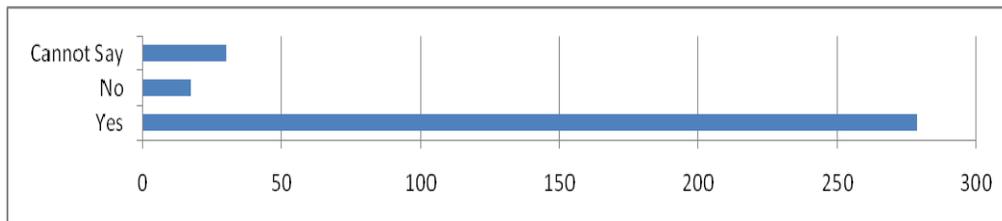
INTERPRETATION: Most of the people agreed to the cause that inaccurate pre sanction and appraisal of loan proposal leads to default in home loan.

➤ *Do you agree that target oriented approach to lending by banks lead to NPA in home loan?*

Table-6

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	196	83.76	11	4.70	27	11.54	100
Women	92	28.22	83	90.22	6	6.52	3	3.26	100
Total	326	100	279	85.58	17	5.21	30	9.21	100

Source: Compiled from field survey



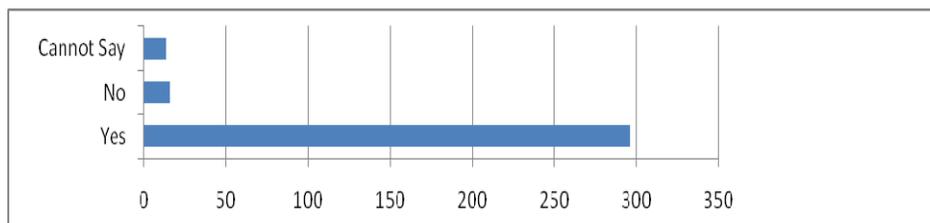
INTERPRETATION: Majority agreed to the target oriented approach to lending by bank one of the reasons for the NPA in home loan.

➤ *Do you agree that absence of credit information sharing among different financial institutions lead to NPA in home loan?*

Table-7

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	207	88.46	13	5.56	14	5.98	100
Women	92	28.22	89	96.74	3	3.26	-	-	100
Total	326	100	296	90.80	16	4.91	14	4.29	100

Source: Compiled from field survey



INTERPRETATION: Most of respondents believe absence of credit information sharing among financial institutions lead to NPA in home loan.

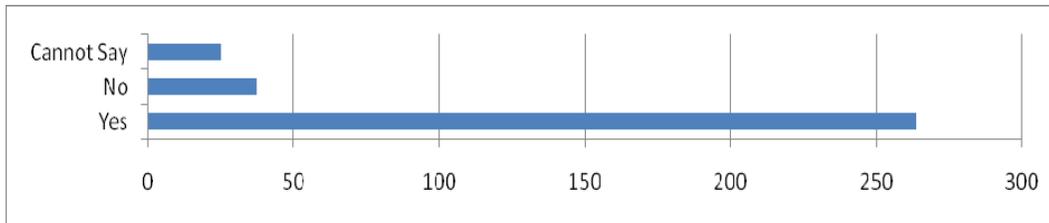
➤ *Do you agree that weak monitoring leads to NPA in repayment of home loan?*

➤

Table-8

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	188	80.34	26	11.11	20	8.55	100
Women	92	28.22	76	82.61	11	11.96	5	5.43	100
Total	326	100	264	80.98	37	11.35	25	7.67	100

Source: Compiled from field survey



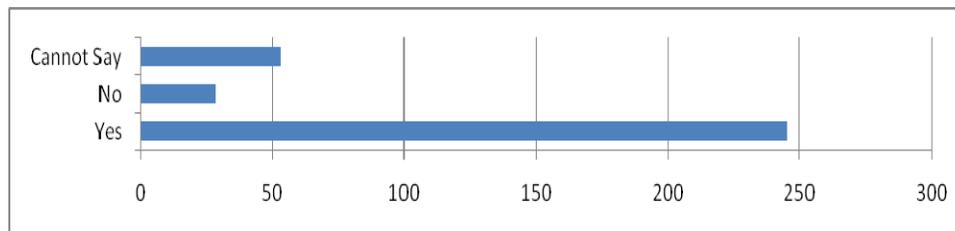
INTERPRETATION: Majority believe that weak monitoring one of the major reasons for NPA in home loans.

➤ *Do you agree that inadequate laws to take appropriate action leads to NPA of home loan?*

Table-9

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	176	75.21	15	6.41	43	18.38	100
Women	92	28.22	69	75	13	14.13	10	10.87	100
Total	326	100	245	75.15	28	8.59	53	16.26	100

Source: Compiled from field survey



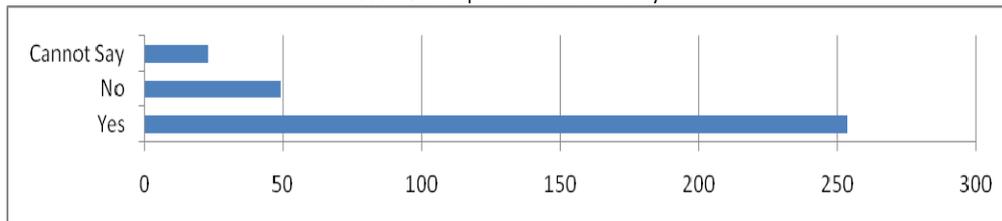
INTERPRETATION: 245 respondents agreed that inadequate laws to take appropriate action leads to NPA in home loans.

➤ *Do you agree that in case of politicians the NPA chances are more for home loans?*

Table-10

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	168	71.79	43	18.38	23	9.83	100
Women	92	28.22	86	93.48	6	6.52	-	-	100
Total	326	100	254	77.91	49	15.03	23	7.06	100

Source: Compiled from field survey



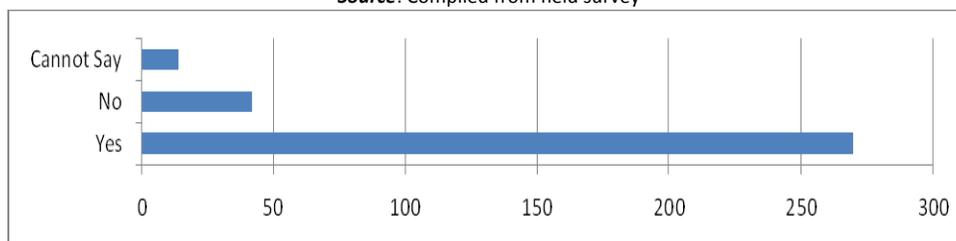
INTERPRETATION: 254 participants supported the view that in case of politicians the chances of default is more.

➤ *Do you agree that lack of initiative on the part of the bank officials lead to NPA in home loans?*

Table-11

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	194	82.91	26	11.11	14	5.98	100
Women	92	28.22	76	82.61	16	17.39	-	-	100
Total	326	100	270	82.82	42	12.88	14	4.3	100

Source: Compiled from field survey



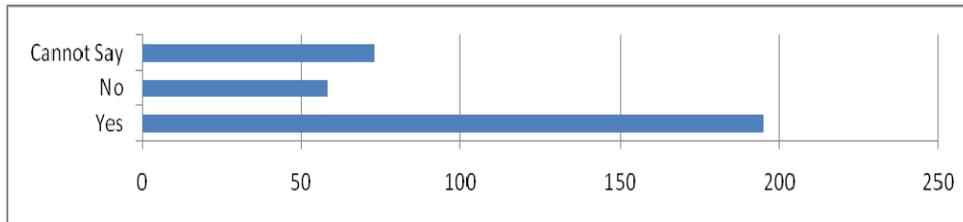
INTERPRETATION: Answering to this question majority agreed that lack of initiative on the part of bank officials lead to default in home loans.

➤ Do you agree that the bigger the size of house (in square meter), lesser the risk of NPA?

Table-12

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	126	53.85	51	21.79	57	24.36	100
Women	92	28.22	69	75	7	7.61	16	17.39	100
Total	326	100	195	59.82	58	17.79	73	22.39	100

Source: Compiled from field survey



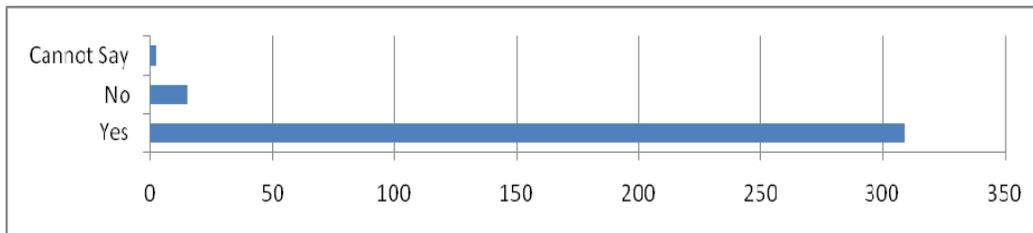
INTERPRETATION: Most of the borrowers agreed that the bigger the size of house, lesser the risk of default.

➤ Do you agree that higher the monthly income, lower the chance of NPA of home loan because of higher ability to pay?

Table-13

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	219	93.59	15	6.41	-	-	100
Women	92	28.22	90	97.83	-	-	2	2.17	100
Total	326	100	309	94.79	15	4.60	2	0.61	100

Source: Compiled from field survey



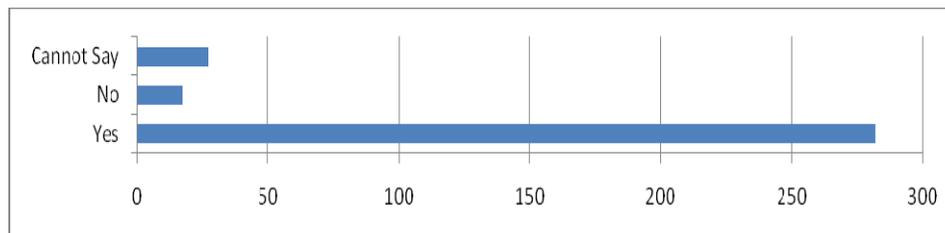
INTERPRETATION: Majority believes that there is correlation between the income and paying ability.

➤ Do you agree that greater the value of asset, lesser the risk of NPA of home loans because of greater affordability?

Table-14

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	196	83.76	12	5.13	26	11.11	100
Women	92	28.22	86	93.48	5	5.43	1	1.09	100
Total	326	100	282	86.50	17	5.21	27	8.29	100

Source: Compiled from field survey



INTERPRETATION: Out of 326, 282 respondents agreed that greater the value of assets, lesser the risk of default of home loans because of greater affordability.

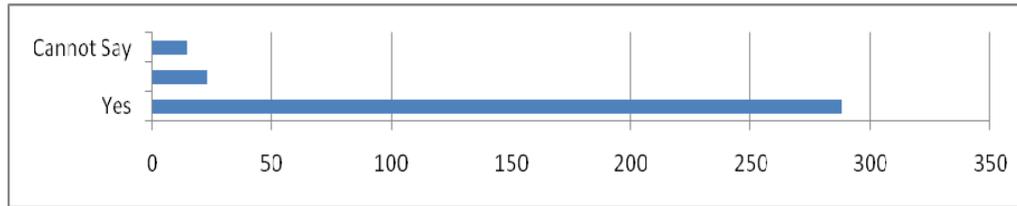
➤ Do you agree that the presence of guarantor, the chances are more to recover the home loan?

Table-15

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	212	90.60	10	4.27	12	5.13	100
Women	92	28.22	76	82.61	13	14.13	3	3.26	100

Total	326	100	288	88.34	23	7.06	15	4.6	100
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Source: Compiled from field survey



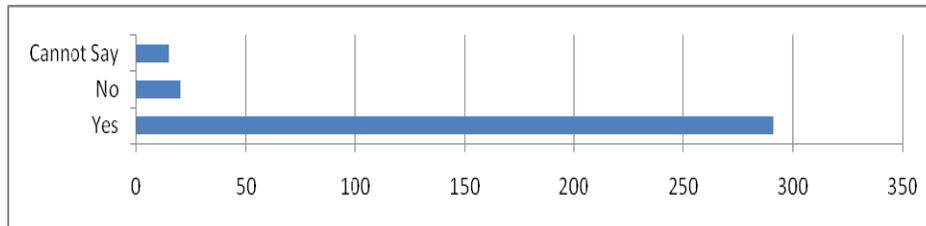
INTERPRETATION: Most of the people believe that the presence of guarantor reduces the chances of NPA.

➤ Do you agree that EMI to income ratio is positively associated with the estimated likelihood of NPA of home loan?

Table-16

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	209	89.32	14	5.98	11	4.7	100
Women	92	28.22	82	89.13	6	6.52	4	4.35	100
Total	326	100	291	89.26	20	6.13	15	4.61	100

Source: Compiled from field survey



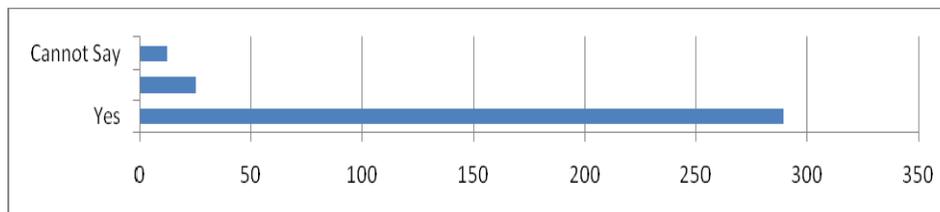
INTERPRETATION: Majority agreed that EMI to income ratio is positively associated with the estimated likelihood of default in home loans.

➤ Do you agree that presence of more number of borrowers reduces the risk of NPA in home loan?

Table-17

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	203	86.75	19	8.12	12	5.13	100
Women	92	28.22	86	93.48	6	6.52	-	-	100
Total	326	100	289	88.65	25	7.67	12	3.68	100

Source: Compiled from field survey



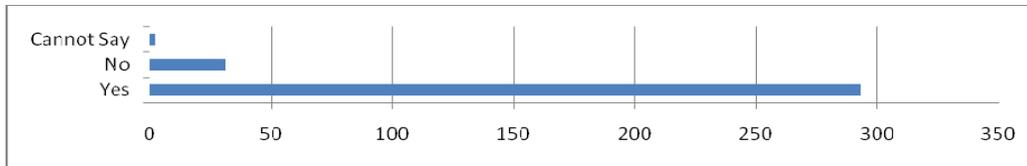
INTERPRETATION: 289 respondents supported out of 326, that the presence of more number of borrowers reduces the risk of NPA in home loan.

➤ Do you agree that as the number of dependents increases, probability of NPA of home loan also significantly rises because of higher financial burden?

Table-18

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	206	88.03	28	11.97	-	-	100
Women	92	28.22	87	94.57	3	3.26	2	2.17	100
Total	326	100	293	89.88	31	9.51	2	0.61	100

Source: Compiled from field survey



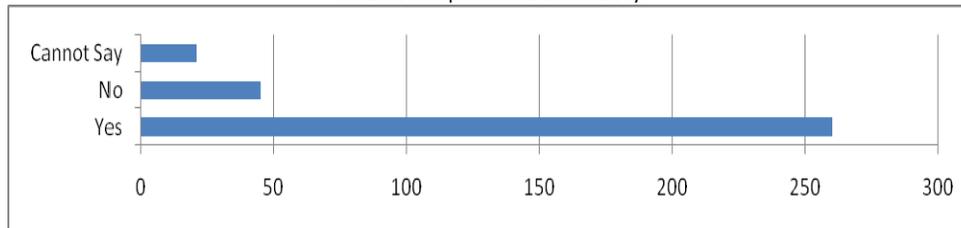
INTERPRETATION: Majority believes that as the number of dependents increases, probability of default in home loan also significantly rises.

- *Do you agree that rural and semi urban borrower are riskier than urban borrowers of home loan?*

Table-19

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	192	82.05	27	11.54	15	6.41	100
Women	92	28.22	68	73.91	18	19.57	6	6.52	100
Total	326	100	260	79.75	45	13.80	21	6.45	100

Source: Compiled from field survey



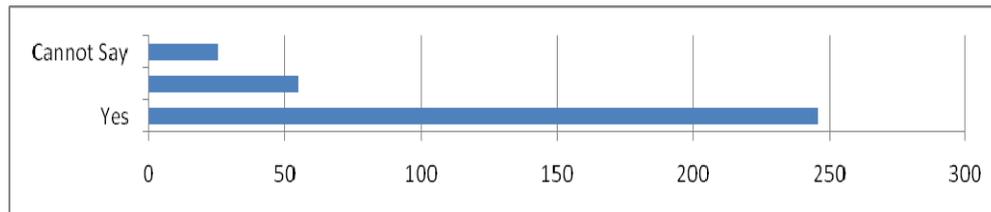
Interpretation: 260 respondents said Yes and agreed that rural and semi urban borrower are riskier than urban borrowers.

- *Do you agree that chances of NPA of home loan are more in case of self employed?*

Table-20

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	168	71.79	44	18.80	22	9.41	100
Women	92	28.22	78	84.78	11	11.96	3	3.26	100
Total	326	100	246	75.46	55	16.87	25	7.67	100

Source: Compiled from field survey



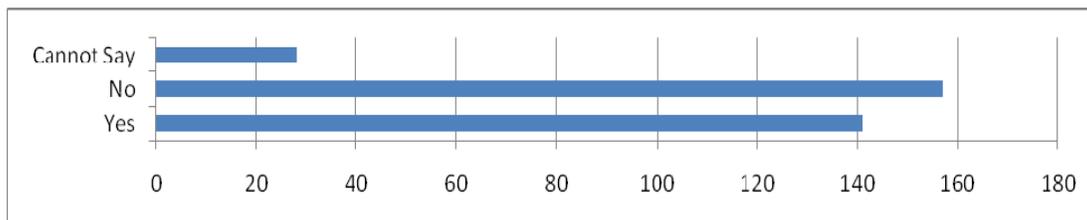
INTERPRETATION: Most of the people agreed that chances of default are more in case of self employed.

- *Do you agree that the chances of NPA of home loan are more in case of service holders?*

Table-21

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	103	44.02	115	49.15	16	6.83	100
Women	92	28.22	38	41.30	42	45.65	12	13.05	100
Total	326	100	141	43.25	157	48.16	28	8.59	100

Source: Compiled from field survey



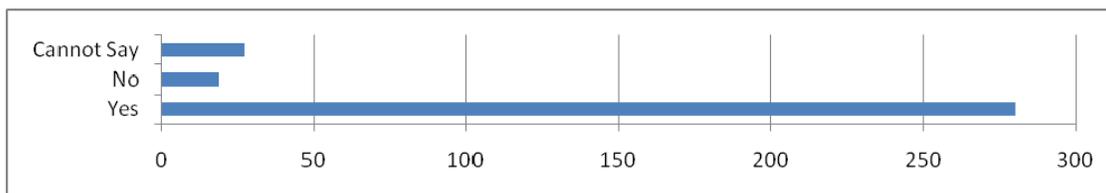
INTERPRETATION: Majority said no. This indicates that chances of NPA of home loan are less in case of service holders.

➤ Do you agree that the chances of NPA of home loan are less in case of women borrowers as compared to men borrowers?

Table-22

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	197	84.19	14	5.98	23	9.83	100
Women	92	28.22	83	90.22	5	5.43	4	4.	100
Total	326	100	280	85.89	19	5.83	27		100

Source: Compiled from field survey



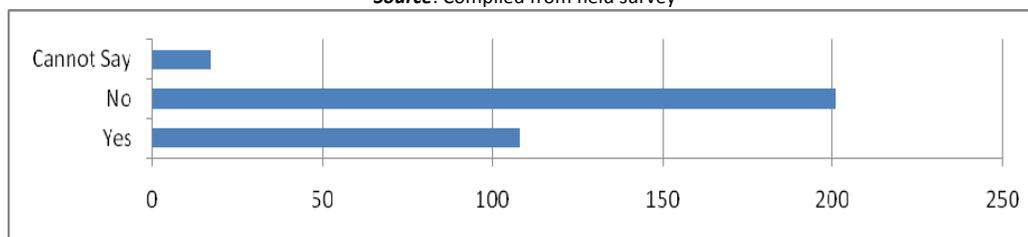
INTERPRETATION: Most believe that in case of women borrowers NPA is less.

➤ Do you agree that in case of government employee the chances of NPA are more for home loans?

Table-23

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	80	34.19	138	58.97	16	6.84	100
Women	92	28.22	28	30.43	63	68.48	1	1.09	100
Total	326	100	108	33.13	201	61.66	17	5.21	100

Source: Compiled from field survey



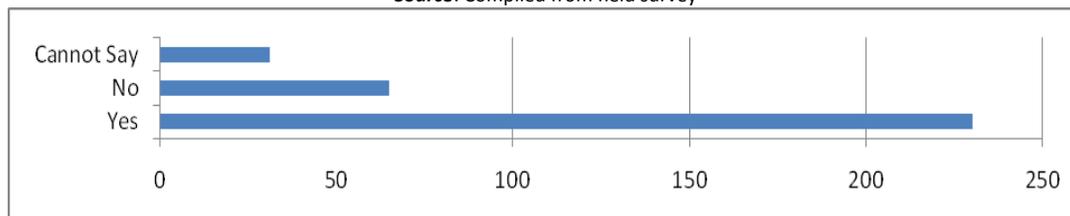
INTERPRETATION: Majority believe that in case of government employees the defaults are less.

➤ Do you agree that employee working in private sector chances of NPA is more?

Table-24

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	167	71.37	44	18.80	23	9.83	100
Women	92	28.22	63	68.48	21	22.83	8	8.69	100
Total	326	100	230	70.55	65	19.94	31	9.51	100

Source: Compiled from field survey



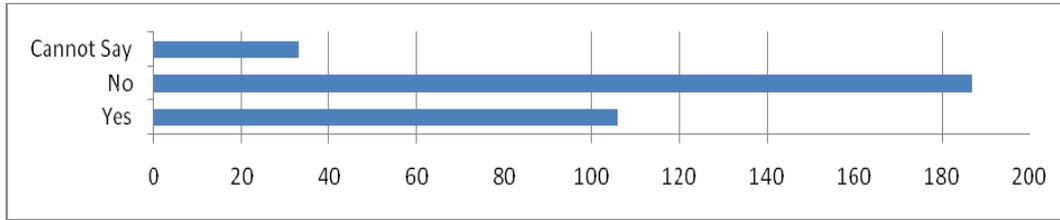
INTERPRETATION: Maximum people agreed that the employees working in private sector chances of default is more.

➤ Do you agree that in case of professionals the chances of NPA in home loans are more?

Table-25

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	84	35.90	118	50.43	32	13.67	100
Women	92	28.22	22	23.91	69	75	1	1.09	100
Total	326	100	106	32.52	187	57.63	33	10.12	100

Source: Compiled from field survey



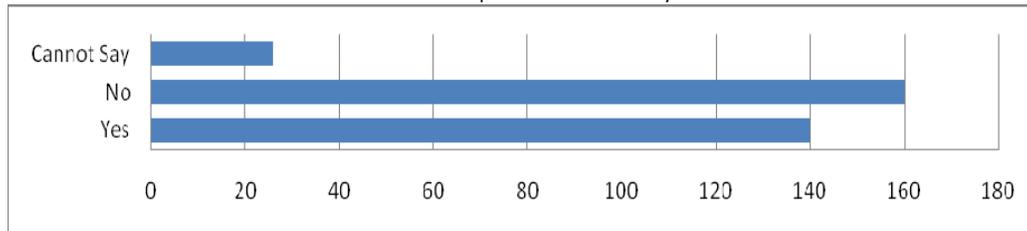
INTERPRETATION: 187 participants agreed that in case of professional the chances of defaults are less.

➤ *Do you agree that in case of semi-government employees the chances of NPA in home loan is more?*

Table-26

Borrowers	sample	%	Yes	%	No	%	Cannot say	%	Total
Men	234	71.78	109	46.58	114	48.72	11	4.7	100
Women	92	28.22	31	33.70	46	50	15	16.3	100
Total	326	100	140	42.94	160	49.08	26	7.98	100

Source: Compiled from field survey



INTERPRETATION: Majority do not agree that in case of semi-government employee the chances of NPA more.

PROPOSED SUGGESTIONS AND STRATEGIES

The following suggestions are made to control the Non Performing Assets of Home loans of Banks.

- General compromise settlement policy for all loan accounts.
- While making pre-lending appraisal, the repaying capability of the borrower must be ascertained by the bank employee carefully.
- In the same way, post-lending supervision and approaching the borrower at the right time for repayment may prove effective in the controlling of NPA.
- In case willful NPAs are, the bank must flash their photos and warn them through the local news paper and if there is no response, stern action will have to be taken with the help of the legal authority.
- The legal system must be effective: the Government of India and /or the RBI have initiated many legal measures to recover over dues. However, as there are some flaws in each legal measure, they need improvement made in order to bring down the level of NPA.
- Dynamic people are to be recruited to collect doubtful debts and for better asset liability management.
- Political pressures are to be resisted in the operation of banks.
- Banks must operate in a democratic environment.
- Banks have to adopt professionalism and accountability in their functioning.
- New technologies should be introduced to reduce administrative costs and increase the profit margin.
- Banks must transparent in their functioning and accountable to share holders and public to maintain international standards of corporate governance.
- Sanctioning authority should not succumb to external pressure.

CONCLUDING NOTE

NPAs are seriously affecting the efficient management of funds. It affects the profitability of the banks and reduces the availability of resources for mobilization besides increasing their costs. It also puts a question mark on the viability and solvency of the organization. Causes of default identified through field surveys need to be sorted out. Concerted efforts are required at the bank level to improve the credit appraisal and monitoring skills of the managers so that potential default can be identified at an early stage. The occurrences of NPA may not avoidable entirely but they can be managed effectively. The fresh incidences of NPAs should be avoided but not at the cost of fresh deployment of credit.

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WORD OF MOUTH MARKETING (WOMM): A CONCEPTUAL FRAME WORK

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ABSTRACT

Word of Mouth Marketing (WOMM) is a form of promotional campaign which operates through an individual's personal recommendations of specific brands, products or services. Despite the interest in WOM, no research to date has summarized the factors that contribute towards WOM's significance. Based on a synthesis of the literature, this paper develops a conceptual framework of the factors that contribute towards the significance of WOM. Eleven factors are identified that contribute towards WOM's significance. The eleven factors can be summarized under two headings: WOM's pervasiveness and persuasiveness, both of which are thought to be interdependent, rather than independent of each other.

KEY WORDS

Word of mouth (WOM), Pervasiveness, Persuasiveness

INTRODUCTION

Word of Mouth Marketing (WOMM) is a form of promotional campaign which operates through an individual's personal recommendations of specific brands, products or services. Like its literal meaning, word-of-mouth marketing spreads from one person to another outside of a formalized setting, without heavy intervention by advertisers. A recommendation from someone familiar and trust-worthy is the easiest path to a product sale, link or new subscriber. Why because recommendations are generally perceived as incentive-free, unlike the obvious motivation of advertisers, who may over-promise in a bid to increase sales. Word of Mouth (WOM) is a concept of strong interest to both marketing academics and practitioners. From an academic perspective, WOM has attracted research attention during the past six decades. Thus, WOM is an area of sustained research enquiry and the intensity appears to be increasing. Practitioners also have a growing interest in WOM; whether it is cooking oil, cars, music, books, Internet telephony, or handheld video games, marketing practitioners are increasingly shying away from traditional mass communication tools in favour of WOM campaigns.

To promote and manage word-of-mouth communications, marketers use publicity techniques as well as viral marketing methods to achieve desired behavioral response. Influencer marketing is increasingly used to seed WOMM by targeting key individuals that have authority and a high number of personal connections.

It appears that both marketing academics as well as practitioners would benefit from a better understanding of WOM and the reasons why it is so significant. A 'deconstruction' of the factors that make WOM so important may allow marketing practitioners to develop more diagnostic ways of measuring the effects of (potential) WOM campaigns. This would echo researchers' calls for greater use of WOM in market research. Thus, the overall goal of this article is to develop a parsimonious conceptual framework of the factors that contribute towards WOM's significance.

Word of mouth (WOM) can be described as informal communication between consumers about goods and services without either party being formally rewarded for this communication. While early definitions focused on oral WOM, more recent research includes non-personal communication via electronic channels, such as email, mobile phone text messages, bulletin boards and other means that would comprise what may be called 'digital WOM'.

THE PHILOSOPHY BEHIND WORD-OF-MOUTH MARKETING

Word of Mouth Marketing is a prismatic discipline. Conversations online or offline are often multiple, non-hierarchical, horizontal and mutational. The message is not controllable by the advertiser, although they can attempt to manipulate buzz flow by devising campaigns to structure dialog and conversation.

Dave Balter, in his Manifesto on Word of Mouth suggested that Word of Mouth is the desired end result, one that is achieved through viral or buzz marketing.

It's a medium made up of the conversations and communications between people. Word of mouth can go viral...But in order for that to happen, you must have actual brand advocacy, and people must be willing to go out of their way to share an opinion, an experience, or their passion about a product. The reason that word of mouth is so powerful is that it is a mutual conversation. You can't find it with a hundred other messages waiting to be deleted from your inbox.

Word of Mouth marketing doesn't exist in a vacuum and it can certainly develop without any efforts on your part if your product or website is seen as extremely helpful, interesting unique or valuable by a specific niche market.

More often than not, you will need to kick start some promotional method to initialize word of mouth buzz. While there are many strategies available, it's important to focus on producing an excellent product or bait as this will greatly facilitate the word of mouth process.

WORD OF MOUTH'S IMPORTANCE

Researchers have recognized that WOM is probably the most powerful force shaping consumer behaviour, which lead researchers to describe WOM as "almost irresistible" and a response that "may be among the most important".

How persuasive WOM is, particularly in comparison with more traditional marketing communication channels such as advertising, has long been a topic of inquiry. Research has found that informal information, such as WOM, was a more important source of information compared to mass media such as print or television Advertising. WOM has even been found to be more important in influencing consumers compared to independent third party reviews such as "Consumer" reports. Lastly, WOM can also be more powerful than the consumer's own attitude toward a product.

While it has become clear that WOM can dominate other information channels, no research has summarized why WOM has such a significant impact on consumers. This is what this paper wishes to investigate. Thus, this paper will now turn to a synthesis of previous research to fill this gap.

At the most fundamental level, one could think of two fundamental factors that fuel WOM's significance. The pervasiveness of WOM, that is its 'reach' or the number of consumers exposed to it, and the persuasiveness, that is its 'impact' on consumers' attitudes and behaviours. The following two sections synthesize findings from the literature regarding the pervasiveness and persuasiveness of WOM and build a conceptual framework consisting of eleven drivers that contribute towards the significance of WOM.

THE Pervasiveness of WOM

Based on extant literature, seven factors can be thought of as contributing towards the pervasiveness of WOM. Firstly, WOM is a **global phenomenon**, although individualist and collectivist cultures may engage in WOM to a different extent. WOM has been found to be of importance in western countries such as the UK, the US, Canada, Germany and Sweden, Asian countries such as Japan, South Korea and Singapore and developing nations such as India and the former Soviet Union. Thus, WOM can be seen to be effective across geographical borders. Secondly, WOM operates **across all industries**. WOM's importance stretches across diverse industries encompassing corporate services, personal services, basic goods and complex goods. Thirdly, **the proportion of consumers engaging** in WOM has been found to be very high. Data from the Swedish and US customer satisfaction barometers indicate that more than half of all consumers engage in WOM. Similarly, 57% of people who had initiated contact with a manufacturer (e.g. email, phone, and web) talked to at least one other person about their experience and more than 70% of consumers had engaged in WOM after product consumption (i.e. watching a movie). Other research findings have suggested that as many as 80% of consumers engage in WOM. Thus, a sizeable proportion of consumers engage in WOM, across a variety of industries. Fourthly, **the proportion of consumers relying** on WOM has been found to be very high. While the precise proportion is disputed, it is clear that the majority of consumers often rely on WOM for decision-making. The proportion of consumers who rely on WOM as the main source of information can vary from nine percent to 65%. A number of other studies support the notion that at least half of all consumers rely on WOM when making purchase decisions. Fifthly, WOM can **spread quickly**. In a study of how many people an innovator had spoken to a few days after trailing a product, 90% of innovators had told at least one person about their experience, while 40% of people had told two or more people. Importantly, the speed with which WOM is re-transmitted is even greater for digital WOM. Sixthly, one of the key factors in allowing WOM to spread quickly is the fact that WOM may be **re-transmitted**. That is, WOM may be received by a consumer who then passes the message on to another consumer and so forth. Early research called for an investigation of this phenomenon with subsequent inquiries showing that re-transmission is a real world phenomenon in traditional settings as well as for digital WOM.

Lastly, one of the most powerful facets of WOM is that it can be shared with more than one person, i.e. **multiple dyads**. Some research has found that WOM is 'only' shared on average with a relatively low number of three people. Using Swedish and US national customer satisfaction barometers, it was found that those who engaged in WOM, talked to an average of 9.5 people (Sweden) and 7.9 people (US). The number of people talked to by each WOM sender can vary considerably from zero to up to 35 in a traditional WOM context. Digital WOM appears to vary even more substantially, ranging between one and 177 digital episodes in a month. After having discussed the pervasiveness, or 'reach', of WOM, the following section discusses the persuasiveness or 'impact' of WOM.

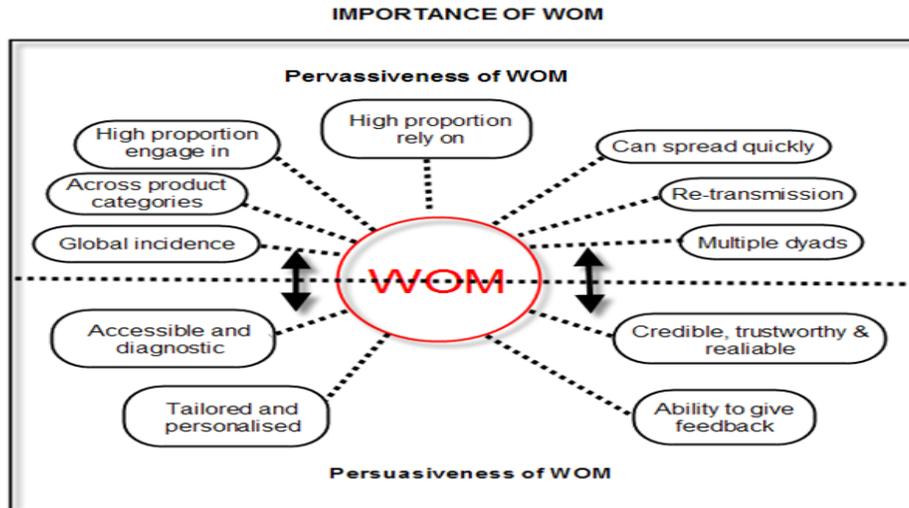
THE Persuasiveness of WOM

Based on the extant literature, four factors have been identified that contribute towards the persuasiveness of WOM. Firstly, it is generally agreed that the persuasiveness of WOM is mainly due to WOM being seen as **credible, trustworthy and reliable**. Secondly, WOM has been found to be highly persuasive due to the **receiver's ability to give feedback**. Thirdly the sender's ability to deliver **tailored or personalized information** in which information may be added or filtered or one's own interpretation is added makes it more relevant to the receiver, thus making WOM highly persuasive. Lastly, research has identified that more **accessible and diagnostic information** has a greater impact on consumers. Diagnosticity in this instance refers to how useful information is for making a purchase decision, for example, how much brands differ and whether certain brands are judged 'better' than others. Importantly, WOM fares well in both accessibility and Diagnosticity compared to non-personal sources of information such as advertising, thus making it a highly persuasive communication channel.

DISCUSSION OF CONCEPTUAL FRAMEWORK

So far this paper has distilled eleven factors that contribute towards the significance of WOM. Figure 1 integrates these factors into one framework. The following section discusses the interrelationship between the pervasiveness and the persuasiveness of WOM.

Figure 1: Conceptual Framework of Factors that Contribute Towards the Significance of WOM



The labels pervasiveness and persuasiveness appear conceptually clear cut. That is, one is concerned about the 'reach' of WOM, while the other is concerned about the 'impact' of WOM upon consumers once they are reached. However, one should consider the pervasiveness and the persuasiveness of WOM not as two independent factors but rather as two interdependent factors. Furthermore, both factors appear interdependent upon each other. Firstly, the pervasiveness of WOM impacts on the persuasiveness of WOM. The greater the number of people who utter consistent WOM to a consumer, the higher the chances of that consumer following the collective advice of WOM senders. Thus, the sheer pervasiveness of WOM can contribute towards the persuasiveness of WOM. Secondly, the persuasiveness of WOM can impact on the pervasiveness of WOM. As discussed earlier, the pervasiveness of WOM is in part driven by the presence of multiple dyads and consumers' ability to re-transmit WOM to other consumers. Research has found that message content, including its persuasiveness, can influence consumers' intentions to share WOM with other consumers (i.e. multiple dyads) and consumers' intention to re-transmit WOM. Thus, the persuasiveness of WOM can also impact on the pervasiveness of WOM.

This discussion suggests that each of the eleven factors may be powerful individually, but that a combination of two or ideally more of these factors would yield stronger synergistic effects. In this sense, the framework may be seen as a checklist for an 'ideal WOM campaign'; the more factors that apply, the more powerful the WOM campaign is likely to be. Thus, the framework may be used by practitioners to assess a WOM campaign's likely impact prior to its implementation.

CONCLUSION

In summary, the first conceptual framework of the factors that contribute towards WOM's significance has been proposed. The framework was developed by synthesizing WOM research from the past six decades. Two higher order factors, the pervasiveness, or reach, of WOM and the persuasiveness, or impact, of WOM were identified. Eleven factors were found to have contributed towards these two higher order factors. Lastly, the pervasiveness of WOM and the persuasiveness of WOM were conceptualized as two interdependent factors.

It is hoped that this framework serves as a useful framework for both academics and practitioners. For practitioners, this framework could serve as a diagnostic tool to assess the appropriateness of WOM to a particular situation. For example, the tool could be used by companies to assess how fully the eleven factors apply to a given situation. The more fully the factors apply, the more appropriate WOM may be as a communications tool in that particular situation. For instance, if the content of a WOM message is highly engaging, then multiple dyads and re-transmission rates are likely to be high, thus resulting in higher pervasiveness and persuasiveness of the message. It is also hoped that the framework presented in this paper is of use to academics. During the past six decades, significant progress has been made but some questions remain unanswered. This paper wishes to fill one of these gaps by making the significance of WOM more explicit. It is also hoped that the proposed theoretical framework will stimulate discussion and highlight WOM's significance even further.

The extensive review of the literature is a good starting point for building the framework. However, this has restricted the research to being purely inductive in nature. A logical next step would be to engage in a test of the framework, or, in other words, a deductive step. Such progression would result in a more developed understanding of a phenomenon that has caught the imagination of both marketing academics and practitioners, in itself a rare occurrence as often academics and practitioners priorities are not closely matched. WOM maybe one of the few exceptions to this. Thus allowing for both Relevance and theory development.

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WORKING CAPITAL MANAGEMENT: POLICIES AND PRACTICES AT SAREGAMA INDIA LIMITED

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ABSTRACT

This study seeks to study current policies and practices of working capital management at Saregama India Limited and tries to identify the strengths and weaknesses of the company; the opportunities it has and the threats it faces. It contains a detailed analysis of the various factors affecting the working capital requirements of the company and the impact they have on its profitability. The statistical tools for the purpose of this study are ratio and trend analysis.

An attempt has been made to identify the concern areas after an in-depth analysis of the company's operations and recommend solutions for the same. The company has certain concern areas like declining physical sales, return of goods sold, long gestation period of films and delayed payments by debtors. The company also faces a problem of unsold stock of goods which are non-moving. The ways in which such stock should be liquidated has also been discussed.

The study concludes by suggesting solutions to address the concern areas that have been identified. The company is recommended to focus on digital sales, incentivize cash sales, follow a forecasting model that captures the tastes and preferences of consumers and strictly implement its credit policy.

KEYWORDS

working capital, management, liquidity, cash

INTRODUCTION

Corporate finance basically deals with three decisions: *capital budgeting decisions, capital structure decisions and working capital management decisions*. Of these three pillars, capital budgeting deals with the subject of deciding what long-term investments to make. Capital structure helps to decide the mix between debt and equity and where to source each from. And the third pillar, working capital management, focuses on how an organization manages its day-to-day financial activities. Among these, working capital management is a very important component of corporate finance since it affects the liquidity and profitability of a company.

The corporate finance literature has traditionally focused on the study of long-term financial decisions, particularly investments, capital structure, dividends or company valuation decisions. However, short-term assets and liabilities are important components of total assets and needs to be carefully analyzed. Management of these short-term assets and liabilities warrants a careful investigation since the working capital management plays an important role for the firm's profitability and risk as well as its value (Smith, 1980). Efficient management of working capital is a fundamental part of the overall corporate strategy to create the shareholders' value. Firms try to keep an optimal level of working capital that maximizes their value (Afza and Nazir, 2007).

Working capital is the lifeblood of any business. It not only indicates a firm's efficiency, but also its short-term financial health. If it is properly managed and nurtured, the business prospers and grows, if not, the business heads towards sickness leading to all types of operational problems. It is essential for the smooth flow of day-to-day activities of the business. *Working capital management* is one of the most complex business processes to deal with due to its *multi-faceted nature*. The functional interdependencies of sales, operations and finance must be seamlessly integrated and flawlessly executed to unlock the hidden working capital. Superior working capital productivity helps organizations build streamlined processes, survive economic downturns and fund business growth.

The management of working capital assumes added importance especially when there is *liquidity crunch* in the economy and bank finance availability for working capital purposes becomes increasingly difficult. Managing cash flows under *exceptional time pressure* is the crux for success. But too much or too little working capital can impair the company's flexibility and performance. Hence, a *delicate balance* needs to be maintained in order to ensure the company is able to earn a decent return on its investments.

This study is significant due to the following reasons:

- It gives an analytical insight into the areas where working capital is tied up and how it can be liquidated.
- It critically evaluates the impact working capital management has on the company's profitability.

OBJECTIVES OF THE STUDY

In this paper an attempt has been made to study the working capital policies and practices at Saregama India Limited with special reference to the current scenario of economic recession, in which availability of working capital finance is a major challenge. The objectives of this study are five-fold. They are as follows:

- a. To gain sound knowledge of how working capital is managed in an entertainment company like Saregama India Limited.
- b. To analyze the current scenario at Saregama India Limited.
- c. To analyze the working capital requirements of Saregama India Limited.
 - d. To investigate the concern areas.
 - e. To recommend solutions for the concern areas.

METHODOLOGY

For the preparation of this study, both primary as well as secondary sources of data have been used.

The primary data has been sourced from the company. The interview method has been adopted to gain first hand information from employees of Saregama India Limited. Visits to the company's factory in Dum Dum have been undertaken to gain an insight into the supply chain and inventory management practices of the company. Visits to the Regional Office in Chowringee have also been undertaken for understanding the sales and debtor management practices of the company. Interactions with the employees in the company's regional offices in other cities have also been undertaken to gain more information about their operations.

The secondary data used for the purpose of analysis has been sourced from several research papers, industry reports, newspaper articles, books and internet portals. Books by M. Y. Khan and P.K. Jain, Brealey and Myers, Prasanna Chandra and R. P. Rustagi have been referred by the author. Data from the *CMIE database* has also been used for the purpose of analysis. A comprehensive list of authors and research scholars that have been referred to is given at the end of the report.

Data has also been sourced from the financial statements of the company for the past five years for the purpose of analysis. The tool of ratio analysis has been used to monitor the overall trends in working capital management of the company and to identify areas that need close monitoring. Statistical tool of trend analysis has also been used to study the financial statements of the company. The data has been edited, classified and tabulated as per requirements of the project.

LIMITATIONS OF THE STUDY

Though an attempt has been made to make this project as comprehensive as possible, there still remain certain limitations which can be explored in future. They are as follows:

- A comprehensive evaluation of the practices of competitors of Saregama India Ltd. is beyond the scope of this report.
- Piracy, a major area of concern for Saregama India Ltd. and its impact on working capital management cannot be dealt with in great detail due to the absence of appropriate information.
- Due to constraint of historical information, publication – the business segment in which the company has ventured into recently – could not be analyzed.
- The short span of time is also a constraint as far as evaluation of the diverse operations of the company is concerned.

The study has been divided into various sections. The first section deals with the literature review. The second section talks about the latest developments in the industry. The third section analyzes the liquidity position. The fourth section talks about the concern areas and their solutions. The fifth section concludes.

LITERATURE REVIEW

Working capital is the lifeblood of any business. It not only indicates a firm's efficiency, but also its short-term financial health. If working capital is properly managed and nurtured, the business prospers and grows, if not, the business heads towards sickness leading to all types of operational problems. It is essential for the smooth flow of day-to-day activities of the business. The management of working capital assumes added importance especially when there is liquidity crunch in the economy and bank finance availability for working capital purposes becomes increasingly difficult. Managing cash flows under exceptional time pressure is the crux for success. But too much or too little working capital can impair the company's flexibility and performance. Hence, a delicate balance needs to be maintained in order to ensure the company is able to earn a decent return on its investments.

In a broader spectrum, from the perspective of Chief Financial Officer (CFO), working capital management is simple and a straightforward concept of ensuring the ability of the organization to fund the difference between the short term assets and short term liabilities (Harris, 2005). However, a "Total" approach should be followed which covers all the company's activities relating to vendor, customer and product (Hall, 2002).

To sustain shareholder value, a business needs to generate a return equivalent to at least its weighted cost of capital for every rupee tied up in *working capital*. This represents a considerable challenge for managers, more so in the current scenario of economic recession (Macdonald, 2002).

In practice, working capital management has become one of the most important issues in the organizations where many financial executives are struggling to identify the basic working capital drivers and the appropriate level of working capital (Lamberson 1995). Consequently, companies can minimize risk and improve the overall performance by understanding the role and drivers of working capital. A firm may adopt an aggressive working capital management policy with a low level of current assets as percentage of total assets or it may also used for the financing decisions of the firm in the form of high level of current liabilities as percentage of total liabilities. Excessive levels of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to lower level of liquidity and stock outs resulting in difficulties in maintaining smooth operations (Van Horne and Wachowicz, 2004).

A firm is required to maintain liquidity in its day-to-day operations to ensure smooth running of the operations and to meet its short-term obligations. But, this is not a simple and straightforward task, as it has to operate its business both efficiently and profitably. In the process, the asset-liability mismatch may occur and it may increase firm's profitability in the short-run but at a risk of its bankruptcy. Higher liquidity in a firm gives the comfort of meeting short-term liabilities but at the cost of the profitability and on the other hand, too little of it may increase the

profitability but at a greater risk of not meeting the short-run obligations. Thus, a Finance manager is in a dilemma of achieving desired tradeoff between liquidity vs. profitability in order to maximize the value of a firm (Anand and Gupta, 2001).

Van Horne (1977) described working capital management as the administration of current assets in the name of cash, marketable securities, receivables and inventories; and according to Osisioma (1997), working capital management is the regulation, adjustment and control of the balance of current assets and current liabilities of a firm such that maturing obligations are met, and the fixed assets are properly serviced.

Shin and Soenen (1998) point out that a corporation's working capital is the result of the time lag between the expenditure for the purchase of raw materials and the collection from the sale of finished goods. As such, it involves many different aspects of corporate operational management: management of receivables, management of inventories, management and use of trade credit, etc.

However, for there to be good working capital management, there must exist two elements: *Necessary Components; and Desirable Quantities*.

The necessary components of an organization's working capital, basically, depend on the type of business and industry. Cash, debtors, receivables, inventories, marketable securities, and redeemable futures can be recognized as the common components of organization's working capital. However, the question is to recognize the factors that determine the adequacy of working capital based on growth, size, operating cash flow, etc. The inability to understand the determining factors and measurement of adequate amounts of working capital will lead an organization to bankruptcy (Osisioma 1997).

Continuing, Osisioma (1997) opined that good working capital management must ensure an acceptable relationship between the different components of a firm's working capital so as to make for an efficient mix, which will guarantee capital adequacy. In the same vein working capital management should seek to make available to the management the desirable quantities of each component of the working capital (Enyi, 2005).

In the majority of businesses, working capital is viewed as a balance sheet item and its management a part of the finance and treasury function – yet all the activities which give rise to working capital takes place outside this function. Despite the 'matrix' character of most organizations nowadays, few managers have identified and defined the inter-relationships between those performance criteria – both financial and non-financial – that are necessary to manage working capital efficiently (Macdonald, 2002).

The main objective of working capital management is to maintain an optimal balance between each of the working capital components. Business success heavily depends on the ability of financial executives to effectively manage receivables, inventory, and payables (Filbeck and Krueger, 2005). Firms can reduce their financing costs and/or increase the funds available for expansion projects by minimizing the amount of investment tied up in current assets. Most of the financial managers' time and effort are allocated in bringing non-optimal levels of current assets and liabilities back toward optimal levels (Lamberson, 1995). An optimal level of working capital would be the one in which a balance is achieved between risk and efficiency. It requires continuous monitoring to maintain proper level in various components of working capital i.e. cash receivables, inventory and payables etc.

Efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet due short term obligations on one hand and avoids excessive investment in these assets on the other hand (Eljelly, 2004).

Historically, business managers expected new best-of-breed enterprise systems to enable more effective management of working capital, usually through standardization and simplification of supply chain processes. But, as it has turned out, their expectations have not been met, partly because these systems are not pre-configured with working capital matrices and partly because focusing on the supply chain itself only addresses part of the problem.

In general, current assets are considered as one of the important component of total assets of a firm. A firm may be able to reduce the investment in fixed assets by renting or leasing plant and machinery, whereas, the same policy cannot be followed for the components of working capital. The high level of current assets may reduce the risk of liquidity associated with the opportunity cost of funds that may have been invested in long-term assets (Afza and Nazir, 2009).

To address the working capital management issue, we need to look across the *entire business value chain* to identify the key activities that impact working capital; to help process owners understand their role in managing working capital; and to identify and measure key performance indicators. It is the role of the finance function to co-ordinate this activity and monitor the outcomes (Macdonald, 2002).

Corporations are looking for new ways to stimulate growth, improve financial performance, and reduce risk in today's challenging economic climate. Funds tied up in working capital can be seen as hidden reserves that can be used to fund growth strategies, such as capital expansion. Cash flows locked in stock and receivables can be freed up by understanding the determinants of working capital. Many organizations that have earned profits over the years have shown the efficient management of working capital (WCM). The successful management of working capital is essential for short-run corporate solvency or the survival of any organization. Especially, efficient WCM will lead a firm to react quickly and appropriately to unanticipated changes in market variables, such as interest rates and raw material prices, and gain competitive advantages over its rivals. Too often, however, this is an area that many organizations have ignored. The way of managing working capital efficiently varies from firm to firm since it depends on industry, the nature of the business, business policy, strategy, etc. Thus, it is very important for an organization to understand the way to manage working capital efficiently (Appuhami, 2008).

As every business school graduate knows, cash recaptured from working capital is cash that can be used more effectively elsewhere – in debt reduction, in research and development, in growth through acquisitions, in buying back stock or in raising corporate dividend. Unfortunately, opportunities to reduce working capital are routinely overlooked by managers attending to seemingly more pressing matters – a merger here, an acquisition there or the launch of a new product. What they too often fail to appreciate is that working capital management – the diligent prosecution of all matters related to expenditure, supply chain and revenue management – is one of the fastest and most cost-effective way for businesses of any size to enhance shareholder value.

Working capital initiatives are an especially attractive source of cash when, like now, a slumping economy makes it more difficult to access funds through traditional channels such as commercial banks, venture capital or equity markets. Companies have virtually no control over such factors. However, even when money is readily available, working capital initiatives are an appealing alternative. Unlike a debt issue, a program to reduce working capital improves key balance sheet ratios. Unlike an equity issue, there is no dilution of control. And the pay-offs generally are spectacular.

The benefits of improved working capital management are not limited to the balance sheet or the income statement. Because drivers of working capital are operational in nature, projects to reduce working capital levels often generate operational improvements that boost customer satisfaction. Eliminate the problems that cause your customers to delay paying their bills, for example, and you don't just shorten

your collection cycle, you make your customers happier too – and more inclined to buy the goods and services your company sells (Payne, 2002).

INDUSTRY OVERVIEW

Consistent commitment to economic reform over the last decade has spurred the steady growth of the Indian economy. The emphasis on creating an enabling environment for investment has been key factor supporting this growth. This growth has had a positive effect on the Indian entertainment industry.

The Indian entertainment industry is on the threshold of emerging as a large market globally. Future growth of the industry is expected to be led by rising spends on entertainment by a growing Indian middle class, increased corporate investments, regulatory initiatives and the industry's dynamic initiatives to make strategic structural corrections to grow. In addition to the Indian middle class' enhanced spends projected towards entertainment, the rising global interest in Indian content is expected to fuel growth in this industry.

Given the average India's cultural affinity for entertainment, the Indian entertainment industry's growing contribution to the economy cannot be understated. The entertainment industry in India has the potential to be the next 'sunrise' industry and is undergoing significant changes. Increasingly, the Indian entertainment industry is being influenced by international trends and developments. The industry is steadily moving towards corporatization and globalised markets.

The spend on entertainment in India is significantly lower than most advanced countries, yet the growing middle class exhibits a greater propensity to spend on entertainment, when we consider the entertainment spend as a percentage of per capita spend. As the Indian economy grows, the rest of the population is moving towards a higher standard of living. It is this growing consuming class with the propensity to spend that will drive the growth of the Indian entertainment industry.

The drivers of growth in the future will be:

- Consumerism
- Content
- Regulation
- Technology
- Pricing

FACTORS INFLUENCING WORKING CAPITAL REQUIREMENTS

The working capital needs of a firm are influenced by numerous factors. The important are:

1. **Nature of business:** The working capital requirement of a firm is closely related to the nature of its business. Some enterprises need to maintain sufficient level of inventories, debtors and cash in order to function smoothly and thus have to invest large amounts in working capital. On the other hand, some which operate entirely on cash basis have relatively less working capital investment. It is very important to properly analyze and understand the nature of business when we want to determine its working capital requirements. (Chandra, 2007)
2. **Business cycle:** The cyclical nature of business operations also has an effect on the working capital position and requirements. When the economy is in upswing and boom conditions prevail, an enterprise is likely to have increased requirements of working capital to support the enhanced level of sales and increased demand. However, during a downswing when recessionary tendencies prevail and economic activities decline, a firm would like to reduce its investment in working capital as demand for goods and services declines. (Khan and Jain, 2007)
3. **Seasonality of operations:** Firms which have marked seasonality in their operations have highly fluctuating working capital requirements. On the other hand, firms which have fairly even sales all throughout the year, have stable working capital requirements. For example, an air-conditioner manufacturer would have high working capital requirements in summer months when compared to winter months. (Chandra, 2007)
4. **Production Policy:** The quantum of working capital required is also influenced by the production policy of the enterprise. An enterprise which sells a seasonal product may have two choices – to produce only when there is demand or follow a steady production policy throughout. The enterprise would have to evaluate which policy suits its overall organizational objectives best as in the first case there is a risk of lost sales and in the second there is an increased investment in working capital.
5. **Production cycle:** The term production cycle refers to the time involved in the manufacture of goods. It covers the time-span between the procurement of raw materials and the completion of the manufacturing process leading to the production of finished goods. Funds are generally tied up in the process of manufacture, necessitating enhanced requirement of working capital. The longer the production cycle, greater is the requirement of working capital.
6. **Credit policy:** The credit policy relating to purchases and sales also affects the working capital. The credit terms extended by the creditors help a firm to finance its investment in current assets to an extent. If the terms are liberal, the company can benefit from it as the need for working capital is less. The credit terms granted to the customers also has a bearing on the magnitude of working capital by determining the level of book debts. A liberal policy would mean higher book debts and hence greater investment in working capital. Hence, a suitable credit policy must be pursued in order to reduce the funds required as working capital by the company. (Khan and Jain, 2007)
7. **Market Conditions:** In today's market, "*Customer is King*". The degree of competition prevailing in the market place has an important bearing on working capital needs. When competition is keen, a larger inventory of finished goods is required to promptly serve the customers who may not be inclined to wait as other manufacturers are ready to meet their needs. Further, liberal credit terms may have to be offered in order to attract customers in a competitive market. Thus the need for working capital increases.
8. **Conditions of Supply:** The inventory of raw materials, spares and stores depends on the conditions of supply. If the supply is prompt and adequate, the firm can manage with small inventory. However, if the supply is scant and unpredictable, then the firm would have to acquire stocks when they are available in order to ensure continuity of production. This would mean carrying larger inventory on an average. (Chandra, 2007)

9. Growth and Expansion: As a company grows, it is logical to expect that a larger amount of working capital would be required. It is, of course, difficult to determine precisely the relationship between the growth and the volume of business of the company and the increased working capital required. The critical fact, however, is that the need for increased working capital funds does not follow the growth in business activities but precedes it.
10. Dividend Policy: Dividend is an appropriation of profit that has an impact on working capital of the enterprise. The payment of dividend consumes cash resources and thereby affects working capital to that extent. In planning working capital requirements, therefore, a basic question to be decided is whether profits would be retained or be paid out to the shareholders.
11. Depreciation policy: Depreciation is a charge against an asset that relates to the loss in the value of the asset due to use, wear and tear and efflux of time. Depreciation charges do not involve any cash outflows. The effect of depreciation policy on working capital is, therefore, indirect. Depreciation affects tax liability and retention of profits. Selection of method of depreciation also has important financial implications. Since, there are no cash outflows; depreciation makes available cash resources to the firm and hence is relevant for working capital planning. (Khan and Jain, 2007)

RECEIVABLES MANAGEMENT

The receivables represent an important part of the current assets of the company. It is of utmost importance for the company to ensure that the collection from the debtors is swift and timely. If that is not the case then precious working capital will be tied up in debtors and the company will face difficulties in managing its working capital.

The close monitoring of debtors is quite significant as we know *Cash is King*. In the event of them failing to pay on time, the company has to take a double hit. In the first place, if the debtors do not pay on time, the forecast the company makes about cash flows goes awry and its liquidity suffers. Hence it has to face difficulty in meeting its other obligations. There is also an interest cost involved which has a negative impact on the company's earnings. Secondly, as the debtors go on delaying the payments, the burden of provisioning also increases. This ultimately hampers the profitability of the company.

When we talk about receivables management, we need to look into the 5 C's which help us formulate our credit policy. They are as follows:

- Character- The willingness of the customer to pay.
- Capacity- The ability of the customer to pay.
- Conditions- The economic conditions prevailing at the time.
- Capital- The financial reserves of a customer.
- Collateral- The security offered by the customer.

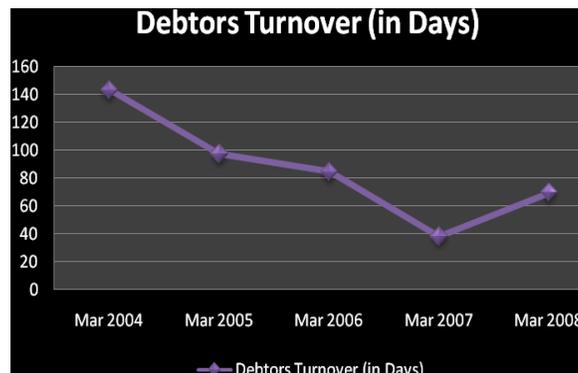
Saregama India Ltd. has also focused on managing receivables properly. They have clearly spelt out the terms of trade for various classes of debtors. They direct their efforts on following the same. The major share of debtors comes from the company's music business. Primarily, it relates to the debtors who arise in relation to the credit extended by the company to the wholesalers, retailers and large-format outlets. The company also has some debtors in the television business who arise mainly on account of the free commercial time sold by the company.

Terms of Trade:

The company cannot reach out to its customers directly. Hence, it sells its products to wholesalers, retailers and large format outlets so that they can ultimately sell it to the final customer. The company extends a credit period to these parties based on their credit history. The terms are as follows:

- Wholesalers: The Company extends a credit period of 30 days to wholesalers like Suranjali, Shibham Enterprise, etc. They are expected to clear their dues within 30 days of the invoice date.
- Retailers: Retailers like Melody, M. Biswas and Symphony are also extended a credit period of 30 days by the company.
- Large format outlets: Players like Music World, Planet M, etc. are extended a credit period of 45 days by the company.

The music industry is a classic case of a buyer's market. The tastes and preferences of ultimate consumers go a long way in determining whether a product will sell or not. In such a scenario, the link between the company and the ultimate consumers i.e. the wholesalers, retailers and large format outlets, have greater bargaining power. The company always runs a risk that the products it has sold may come back as returns if it lies unsold with the middlemen.



On keen analysis of the company's debtors, it comes to light that the company has done reasonably well as far as improving debtors turnover is concerned. Over a five year period from 2003 to 2008, the company has managed to reduce its debtors' turnover from 143 days to a considerably low figure of 69 days on an average as can be seen in the graph above.

This means that, earlier the debtors made payments in 143 days on an average but now it has come down to 69 days. But, a *disconcerting fact* is that as on March, 2007 the debtors' turnover stood at 38 days and it spiked to 69 days as on March, 2008. This can be attributed to the fact that the economic conditions prevailing across the globe has led to a tightening of the credit market and debtors are trying to delay payments

as long as possible. Moreover, until the stock is sold the debtors do not make payments to the company. This is a common phenomenon across the music industry.

Hence, they also have clear cut provisioning norms as far as doubtful and bad debts are concerned. They are as follows:

Debtors Provisioning Norms

Days Sales Outstanding	Percentage of provision
Due over 180 days	10%
Due over 270 days	33%
Due over 365 days	100%

Every month, all the regions send the party-wise debtors details to the corporate office in Kolkata. The finance department in the corporate office then allocates the requisite amount of money as provisions for bad and doubtful debts. It is noteworthy that *provisioning is done only at the corporate level*. This is a good practice because *centralization of provisioning* helps the company to free up precious working capital that may have been otherwise tied up in the guise of provisions at regional level.

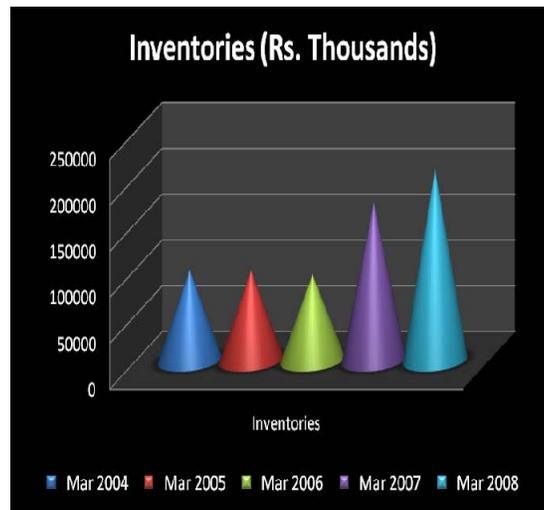
INVENTORY MANAGEMENT

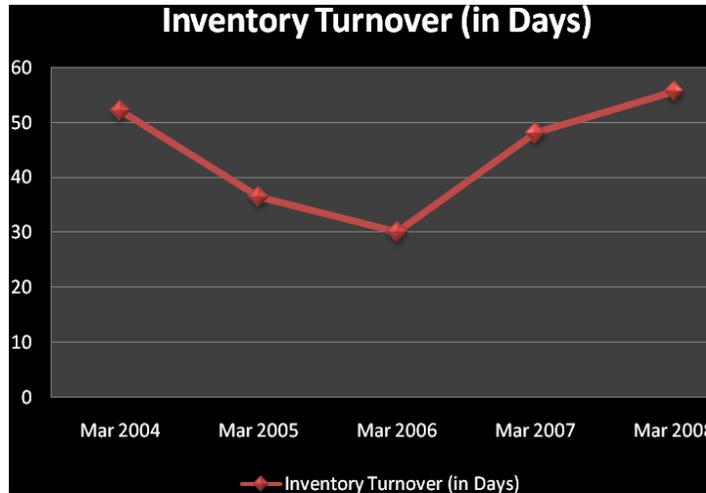
Inventories form a major component of current assets in which working capital funds are invested. The objectives of inventory management consist of two counterbalancing parts:

- i. To minimize investment in inventory
- ii. To meet the demand of products by efficiently organizing the production and sales operations.

The finance manager has the big responsibility of determining the adequate investment in inventory which will maximize the shareholder’s wealth.

At Saregama, the major components of inventories are physical goods of the music vertical, unreleased films of the films division and untelecasted serials and free commercial time of the television division. As we can see from the graph given below, the investment in inventories has increased substantially in the past two years. Earlier, it was about 12-13% of the current assets but for the past two years it has seen a sharp increase to 26-27% of the current assets.





As is evident from the graph above, the company had managed to improve its inventory turnover during the period 2004-2006. The inventory turnover in days had come down from 52 days to 30 days on an average. This meant that the company was able sell its inventory faster which was a good sign for the company. However, it was 48 days in 2007 and it went up further to 56 days in 2008. In the recent years, physical sales have dropped sharply and the demand estimated by the salespeople has not actualized. It has led to a pile up of unsold stock. This is not an encouraging sign as it means that precious working capital is tied in inventories for a longer period of time.

SALES PLAN AND PRODUCTION PLANNING

The planning horizon for music cassettes is 1 month and for *CDs, MP3s, VCDs and DVDs*, it is 3 months. At present, Saregama does not follow any *forecasting model* to forecast the demand of its products. The sales force estimates the demand based on the market conditions and historical sales. The regional offices send *monthly requirements for music cassettes* and *quarterly requirements for CDs, MP3s, VCDs and DVDs* to the production planning team located at Dum Dum. These requirements are sent according to coupling numbers. Coupling numbers are in-house identification codes which allow the company to assess the stock position of any product. It also acts like an indicator for pricing of the product. The coupling codes are as follows:

Coupling Code	Item
8	Music Cassettes
1	CDs
M	MP3s
V	VCDs
D	DVDs

The complete identification code has the following format:

Coupling Code – Title – Format – Genre

After receiving the sales plan from the regional sales offices, the production planning team at Dum Dum collates and consolidates the entire information. Then it runs an *excess stock allocation program*. Herein, the team identifies whether the product required by one regional office is lying unsold at another. If it is able to find excess stock at any location, it sends those products to the location which requires it. If there is a product for which demand still remains unsatisfied after the excess stock allocation program has been run, the company goes in for production. However, there is an economic order quantity below which production cannot be carried on. For music cassettes, the economic order quantity is 35 units and for CDs, MP3s, VCDs and DVDs it is 300 units. It must be noted here that *production is strictly based on indent*.

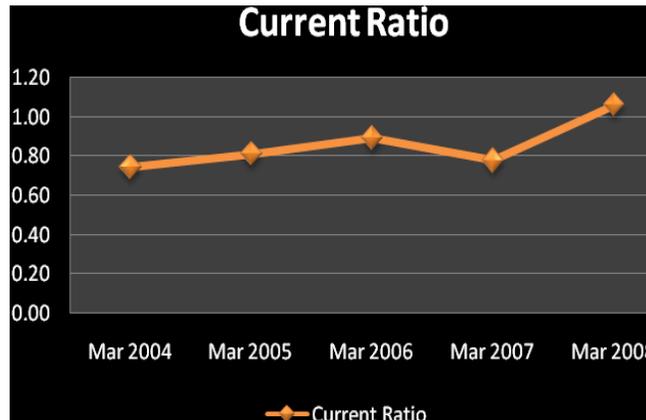
ANALYSIS OF LIQUIDITY

An important task of the finance manager in the area of working capital management is managing adequate liquidity in the organization. The firm needs to have adequate funds at all times in order to meet its short-term obligations and avoid the risk of bankruptcy. Managing liquidity is a challenge because a lot of external factors have an impact on it and they are beyond the control of the finance manager. I am analyzing the liquidity of Saregama India Limited by using the following ratios:

- ❖ Current Ratio
- ❖ Quick Ratio
- ❖ Cash to Current Assets Ratio

CURRENT RATIO: Current ratio is the ratio between current assets to current liabilities. Over the past five years, the current ratio of the company has shown an increasing trend barring the year 2007. But, a fact to take note of is that the company's current ratio has always been below the accepted standard of 2:1. It may be said that the company was following an aggressive working capital policy. But, for four of the past five years, it has been even below 1:1. This was a dangerous situation. The company faced a risk of inability to meet short term obligations

in such a scenario. However, it is heartening to see the company tided over the difficult times and is on the path of progress now. The current ratio currently stands at a little over 1:1.

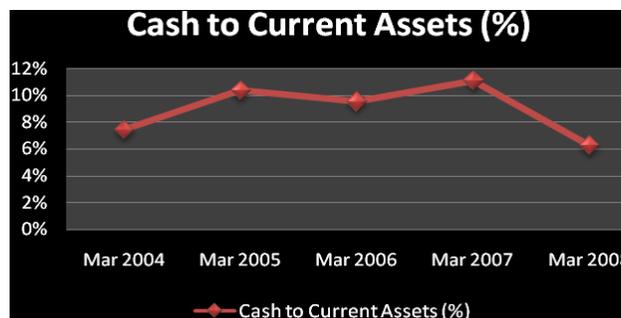


QUICK RATIO: The quick ratio of the company over the five-year period under study has been marginally below the accepted standard of 1:1. It has shown an improvement over the years. Though there was a sudden dip in the year 2007, it had stabilized again in 2008. The trend reveals that over the years, the company has improved its ability to meet its short-term obligations by enhancing its liquidity. As can be seen in the graph below, the quick ratio for Saregama has been improving over the years with the exception of 2007. This is a healthy sign for the company.



CASH TO CURRENT ASSETS: Cash component of the current assets has a lot of significance because we know that in business *Cash is King*. Cash is the most liquid form of the current assets. Ready availability of cash augurs well for the short-term financial health of the company. But, too much idle cash also is a risky proposition as the company would not get any returns on it. Over the five-year period under study, the cash component of the current assets had seen a stable increase but in the year 2008 it saw a sudden sharp drop. This drop has coincided with the high interest rate environment domestically.

As can be seen in the graph that below, cash represented about 10% of current assets on an average during the period 2004-2007. However, in 2008, it fell sharply to about 6% of the current assets. This should be taken as a warning sign. Hence, the cash position of the company should be closely monitored as it plays a crucial role in meeting the short-term obligations of the company.



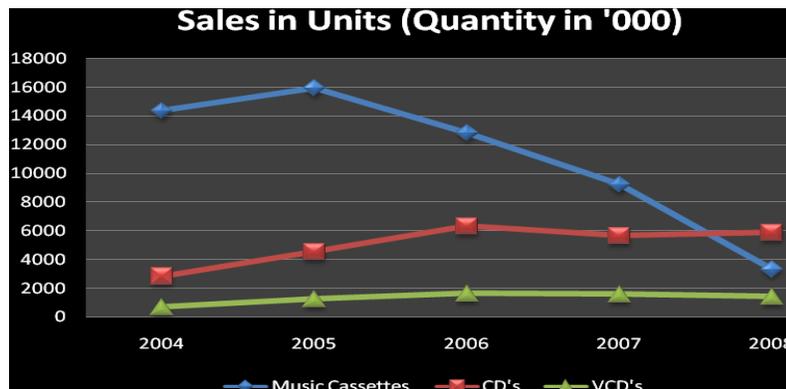
CONCERN AREAS

On keen analysis of the operations of the company, few concern areas have come into focus. They are as follows:

DECLINE IN PHYSICAL SALES

It's a fact of life the world over, that even though more and more music is being heard by consumers, physical sales have been declining rapidly over the years. Today, music is being consumed over I-pods, internet and radio. Music cassettes like the older LP records are losing their

relevance and even CDs are yielding to cheaper MP3 disks and USB memory sticks. As we can see from the graph below, music cassettes sales have fallen drastically over the years and other formats like CDs and VCDs have more or less stagnated. In addition to this, piracy remains a major menace for the company and it adversely impacts the top-line and bottom-line of the company.



NO FORECASTING MODEL

At present the company does not follow any forecasting model to estimate the demand for its products. The sales plan is based on *off-the-hand estimates* made by the salespeople. This leads to a build-up of inventory which eventually remains unsold and ends up blocking a lot of working capital. Rough estimates by the company show that out of 800000 units produced, a pretty high volume of 300000 units remain unsold every month on an average. This is a serious concern for the company as liquidating such inventory becomes very difficult.

DELAY IN PAYMENTS

The large format outlets like Music World, Planet M, etc. are extended a credit period of 45 days by the company. They are expected to clear their dues with 45 days of the invoice date. However, on analysis of the debtors' history, it was observed that the large format retailers have a poor payment history. Credit extended to them is not realized within the due date. This creates a problem for the company as its cashflow forecasts go haywire. Moreover, it has a ripple effect on other activities of the company. As we can see from the table given below, a huge amount of money is still lying unpaid by the large format outlets. If this cash can be promptly collected from these players, the company will be hugely benefitted.

Debtors (In Rs. '000)	0 to 30 Days	31 to 60 Days	61 to 90 Days	91 to 180 Days	181 to 365 Days	> 365 Days
Music World	224	254	446	1093	896	14
Planet M Retail Ltd.	115	190	169	386	250	66

RETURNS FROM WHOLESALERS

The company has been facing a problem of returns as far as the wholesalers are concerned. These returns are a major concern for the company as a lot of useful working capital gets tied-up in the process. Liquidating such stock becomes a difficult task. This build-up of non-moving stock has an adverse impact on the profitability of the company and such stock, which gets too old, is also not considered by the banks when they evaluate the company's request for working capital finance.

BUILD-UP OF UNSOLD INVENTORY

The company is saddled with a huge volume of unsold inventory in the music business. Liquidating this inventory is a challenging task for the company as there is no demand for these products. It also blocks a lot of working capital which may be used alternatively to fund the growth of the company. With formats like music cassettes dying and audio CDs seeing a decline in appeal, the company also faces a risk of further increase in non-moving stock.

LONG GESTATION PERIOD OF FILMS

Film production, in general, has a long gestation period. A lot of working capital is tied in such projects and it may run into months at a stretch. The funds which are blocked earn no returns till the film is released. Hence, timely execution and completion of the projects become extremely important because a failure to do so would have a negative impact on the company.

RECOMMENDATIONS

- In order to overcome the challenges faced, the company is advised to look into the following points:
 - Give impetus to digital sales: It is quite evident from the recent trends that physical sales have been dropping over the years. Digital space is the battleground of the future. The way music is being consumed has changed. People now prefer listening to music on the I-pods, MP3 disks and USB memory sticks. In such a scenario, physical formats may die a natural death. In line with this development, the company has also undertaken a massive exercise to digitize its entire collection of songs. This would also help the company reach out to the young generation and thus provide a new revenue stream to it. Hence, the ability to compete in this space will be *critical to the success* of Saregama.
 - Incentivize cash sales: It is an industry practice that music companies make sales to wholesalers, retailers and large-format outlets on an approval basis. These middlemen make payments to the companies only when the product gets sold. If products remain unsold, they

- return it to the companies. Hence, Saregama always runs a risk that it might be saddled with stocks lying unsold at the end of those players. So, it will be a better option for the company to sell its products on a cash basis and price them accordingly to attract the players.
- Agreements with PSU's and other companies: It is very important for the company to liquidate the stock lying unsold with it as it consumes a lot of working capital and the company gets no returns from it. Hence, the company is advised to explore the options of entering into agreements with public sector behemoths like Indian Railways, State Bank of India, etc. and other private sector companies whereby it can sell such stock at a mutually agreed price to them. The other companies can use this stock in promotional schemes and bundle them with their core offerings. If such a deal can be struck, it will be a win-win situation for both the parties.
 - Follow a forecasting model for catalogue products: The problems faced by the company due to the lack of a forecasting model have been discussed earlier. Hence, the company would be well advised to use a forecasting model that captures the recent trends in sales as well as the tastes and preferences of consumers based on current market scenario. This will help the company in optimizing its investment in inventories. Working capital which may have been otherwise stuck in inventories will be freed up and can be utilized alternatively.
 - Manufacturing based on confirmed sales order for new products: For new products, the company should start manufacturing based on confirmed sales order instead of going in for production based on the projected sales. It will help the company optimize its investment in inventories and thereby give it headroom to utilize its working capital more efficiently.
 - Discontinue the production of music cassettes: Given the fact that physical sales are on the decline and may die a natural death soon, the company should critically evaluate the value added by the production of music cassettes. Music cassettes sales have fallen dramatically in the past few years and it is anticipated that music cassettes, as a format, will have to be phased out very soon. The company has a huge cassette production facility in Dum Dum. The company should stop cassette production there and use the land bank to generate revenue from alternative sources.
 - Strict implementation credit policy: Though the Company has a credit policy in place, it is evident from keen analysis of receivables that parties make delay in payments. It is important for the company to ensure that its credit policy is strictly followed and defaulters, if any, are dealt with according to the terms of the contract. The company should charge interest for late payments made by debtors. It should also try to persuade its debtors to make timely payments as it will considerably reduce its working capital requirements.
 - Regular debtors balance confirmation to avoid disputes: There are instances when debtors delay payments citing differences in balances as maintained by them and those maintained by the company. The Company should confirm its debtors balance on a regular basis so that there are no disputes later which hold up cash. This would ensure prompt payment by the debtors and help the company manage its receivables more efficiently. It will be in a better position to forecast its cash inflows and thereby ensure efficient utilization of working capital.
 - Regular reconciliation of creditor accounts to avoid future disputes: The Company should also focus on precise reconciliation of amounts due to creditors so that it can avoid disputes in future. This will allow the company to forecast its cash outflows accurately and thereby manage its working capital effectively. It will also help the company to enhance its relationships with the creditors.

CONCLUSION

Working capital is the lifeblood of any organization. Without proper working capital management no organization can function properly. A firm is required to maintain liquidity in its day-to-day operations to ensure smooth running of the operations and to meet its short-term obligations. But, this is not a simple and straightforward task, as it has to operate its business both efficiently and profitably.

Working capital management is highly important in firms as it is used to generate further returns for the stakeholders; however, it has attracted less attention of researchers and practitioners. When working capital is managed improperly, allocating more than enough of it will render management non-efficient and reduce the benefits of short term investments. On the other hand, if working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short term liquidity crisis, leading to degradation of company credit, as it cannot respond effectively to temporary capital requirements. There may various external and internal factors that may induce the firms to strike a balance between meeting unforeseen capital requirements and avoiding non-efficient management of capital. Efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet short term obligations which are due, on one hand and avoids excessive investment in these assets on the other hand.

My project was aimed at understanding the policies and practices of working capital management at Saregama India Limited, identifying the concern areas and recommending solutions for the same. I have tried to be quite comprehensive and cover all the critical areas.

On keen analysis of the operations of Saregama India Limited certain issues have come up. It has some concern areas which need close monitoring. These include *declining physical sales, delays in payments by debtors, build-up of unsold inventories and long gestation period of films*.

Some solutions have been recommended for the concerns mentioned above. They include *focusing on digital sales, incentivizing cash sales, discontinuing production of music cassettes and strict implementation of credit policy*. The company has also been recommended to *follow a forecasting model* which captures tastes and preferences of the consumers so that it can avoid excess investment in inventories. The company can draw significant benefits if appropriate actions are taken based on the recommendations made.

The liquidity analysis of the company revealed that the past few years have been challenging but the company has managed to tide over the difficult phase and is now poised to move on the path of progress. Overall, the company is doing a commendable job of managing its working capital given the challenges it faces. At the end, it can be said that *working capital management does impact the financial health and profitability of the company*.

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IMPACT OF FINANCIAL REFORMS ON BANKING SECTOR – EVIDENCE FROM INDIA**HARESH BAROT****ASST. PROFESSOR****V.M.PATEL INSTITUTE OF MANAGEMENT****GANPAT UNIVERSITY****KHERVA – MEHSANA- 382 711****ABSTRACT**

The prime objective of financial sector reforms was to ensure financial stability, improve the efficiency of resources and maintain confidence in the financial system by enhancing its soundness and efficiency. Financial sector reforms in India introduced as a part of economic reforms programme in the early 1990s. The reforms were not an outcome of any banking crisis nor they were an outcome of any external support package, they were undertaken by international agencies and other countries before the Asian financial crisis. As the banking sector is the leading sector in most financial systems, the reforms were mainly directed towards the banking sector. The reforms were outlined to improve private sector participation in financial sector, removal of restrictions on banking products such as interest rate and loans, exchange rate relaxation, opening up of financial markets for foreign and domestic competition and to encourage efficient functioning of financial market with less government interferences. Though, the programme of reforms is still not completed, substantial impact appearing on Indian banking industry. The objective of this study is to examine the impact of these reforms on Indian banking sector considering certain key indicators.

KEY WORDS

Banks, Financial Reforms, Impact

INTRODUCTION

India experienced more than a two decades of financial sector reforms during which there has been substantial transformation and liberalization of the whole financial system. Until the beginning of the 1990s, the financial sector in India was characterized by administered interest rates and extensive micro-regulations directing the major portion of the flow of funds to and from financial intermediaries. The true health of financial intermediaries was masked by relatively thick accounting norms and limited disclosure.

The initiation of financial reforms in the country during the early 1990s was to a large extent conditioned by the analysis and recommendations of various committees set up to address specific issues. The process has been marked by 'gradualism' with measures being undertaken after extensive consultations with experts and market participants. From the beginning of financial reforms, India has resolved to attain standards of international best practices but to fine tune the process keeping in view the underlying institutional and operational considerations (Reddy, 2002 a). Reform measures introduced across sectors as well as within each sector were planned in such a way so as to reinforce each other. Attempts were made to simultaneously strengthen for commercial decision-making and market forces in an increasingly competitive framework. At the same time, the process did not lose sight of the social responsibilities of the financial sector. Despite several changes in government there has not been any reversal of direction in the financial sector reform process over the last 15 years¹.

OBJECTIVES OF THE STUDY

The major objective of the research is to study the impact of financial sector reforms on Indian economy with specific reference to banking sector considering certain definite key economic indicators.

MEASURES INTRODUCED IN BANKING SECTOR²

A salient feature of the move towards globalization of the Indian financial system has been the intent of the authorities to move towards international best practices. This is illustrated by the appointment of several advisory groups designed to benchmark Indian banking practices. In line with adoption of international best practices, following measures have been adopted in banking sector.

A. PRUDENTIAL MEASURES

- Introduction and phased implementation of international best practices and norms on risk-weighted capital adequacy requirement, accounting, income recognition, provisioning and exposure.
- Measures to strengthen risk management through recognition of different components of risk, assignment of risk-weights to various asset classes, norms on connected lending, risk concentration, application of marked-to-market principle for investment portfolio and limits on deployment of fund in sensitive activities.

B. COMPETITION ENHANCING MEASURES

- Granting of operation autonomy to public sector banks, reduction of public ownership in public sector banks by allowing them to raise capital from equity market up to 49% of paid-up capital.

¹ Mohan Rakesh, (2005) 'Financial Sector Reforms in India', *The Chartered Accountant*, February, pp: 962-972

² Mohan Rakesh, (2005) 'Financial Sector Reforms in India', *The Chartered Accountant*, February, pp: 962-972

- Transparent norms for entry of Indian private sector, foreign and joint-venture banks and insurance companies, permission for foreign investment in the financial sector in the form of Foreign Direct Investment (FDI) as well as portfolio investment, permission to banks to diversify product portfolio and business activities.

C. MEASURES ENHANCING ROLE OF MARKET FORCES

- Sharp reduction in pre-emption through reserve requirement, market determined pricing for government securities, disbanding of administered interest rates with a few exceptions and enhanced transparency and disclosure norms to facilitate market discipline.
- Introduction of pure inter-bank call money market, auction-based repos-reserve repos for short-term liquidity management, facilitation of improved payments and settlement mechanism.

D. INSTITUTIONAL AND LEGAL MEASURES

- Setting up of Lok Adalats, debt recovery tribunals, asset reconstruction companies, settlement advisory committees, corporate debt restructuring mechanism, etc. for quicker recovery/restructuring. Promulgation of Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act and its subsequent amendment to ensure creditor rights.
- Setting up of Credit Information Bureau for information sharing on defaulters as also other borrowers.
- Setting up of Clearing Corporation of India Limited (CCIL) to act as central counter party for facilitating payments and settlement system relating to fixed income securities and money market instruments.

E. SUPERVISORY MEASURES

- Establishment of the Board for Financial Supervision as the apex supervisory authority for commercial banks, financial institutions and non-banking financial companies.
- Introduction of CAMELS supervisory rating system, move towards risk-based supervision, consolidated supervision of financial conglomerates, strengthening of off-site surveillance through control returns.
- Recasting of the role of statutory auditors, increased internal control through strengthening of internal audit.
- Strengthening corporate governance, enhanced due diligence on important shareholders, fit and proper tests for directors.

F. TECHNOLOGY RELATED MEASURES

- Setting up of INFINET as the communication backbone for the financial sector, introduction of Negotiated Dealing System (NDS) for screen-based trading in government securities and Real Time Gross Settlement (RTGS) system.

As the economy grows and becomes more sophisticated, the banking sector has to develop in a manner that it supports and stimulates such growth. It was expected that these reforms will bring significant economic benefits through a more effective mobilization of domestic savings and efficient allocation of resources. Therefore there is a need of comprehensive assessment of the impact of financial sector reforms on banking industry. Keeping the above objective in mind, this study attempts to use a number of economic and financial indicators, specifically more banking related indicators to examine the impact of financial reforms on banking sector.

KEY INDICATORS OF BANKING SECTORS REFORMS

Various measures initiated over the two last decades have significantly strengthened the commercial banking sector in terms of profitability, mobilization of savings, capital sufficiency, asset quality etc. The soundness parameters of the banking system, in particular, have shown sustained improvement.

CAPITAL ADEQUACY NORMS (CAR)

In 1988, BCBS (Basel Committee on Banking Supervision) introduced risk-based capital adequacy norms through Basel I accord. Basel I mainly incorporated credit risk in calculating the capital adequacy norms of banks. It recommended a bank's regulatory capital at 8 per cent of its risk-weighted asset. As a part of financial reforms, India adopted Basel I norms for scheduled commercial banks in April 1992, and its implementation was spread over the next three years. It was stipulated that foreign banks operating in India should achieve a CAR of 8 per cent by March 1993 while Indian banks with branches abroad should achieve the 8 per cent norm by March 1995. All other banks were to achieve a capital adequacy norm of 4 per cent by March 1993 and the 8 per cent norm by March 1996. In October 1998, the Reserve Bank of India raised the minimum regulatory CAR requirement to 9 per cent, and banks were advised to achieve this 9 per cent CAR level by March 31, 2000.³ The Reserve Bank of India 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.

Table – I: Capital Adequacy Ratio – Bank Group-Wise
(As at end-March)

(Per cent)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Overall schedule commercial banks	11.5	12.1	11.8	12.3	12.9	13.0	12.8	12.3	12.2	13.5	14.4
Public sector banks	11.5	10.8	11.2	11.8	12.6	13.2	12.9	12.2	12.4	12.5	12.3
Old private sector banks	12.1	12.4	11.9	12.5	12.8	13.7	12.5	11.7	12.1	14.1	14.3
New private sector banks	11.8	13.4	11.5	12.3	11.3	10.2	12.1	12.6	12.0	14.4	15.1
Foreign banks	10.8	11.9	12.6	12.9	15.2	15	14	13	12.4	13.1	15.9

Source: Report on Trend and Progress of Banking in India, 2005-2006 to 2008-09

As seen in above table, overall CAR for the banking industry has maintained to nearly 13% since last ten years. Between 2004 to 2007, the overall CAR declined by 0.8 percent but again rose to 13.5 and 14.4 percent in 2008 and 2009 respectively. One of the major indicators suggesting that the Indian banking system has withstood the pressure of global financial turmoil is the improvement in the CAR. The overall CAR

³ Sarma, M. and Nikado, Y. (2007) 'Capital Adequacy Regime in India: An Overview', *Indian Council for Research on International Economic Relations*, pp: 1-28

of all SCBs improved to 13.5 per cent at end March 2009 and 14.4 percent, thus, remains significantly above the stipulated minimum of 9.0 per cent. Bank group wise between 2004 and 2005, 'old private banks' recorded the highest decline of 1.2 percentage points in CAR while the 'new Private Banks' recorded a rise of 1.9 percentage points in CAR. The net result was a marginal decline in CAR 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 2006). Following a similar pattern, CAR levels for all 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 0.7 percentage points for 'public sector banks' and 'old private banks'. During this period 'new private banks' showed a rise of 0.5 percentage point in CAR. The resultant change in CAR for the banking system as a whole was a decline of 0.5 percentage points. 'This overall decline in CAR 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). Notwithstanding the overall decline in CAR since last few years, the CAR level remains at a more than satisfactory level of 9 percent during last decade.

NON PERFORMING ASSETS (NPAs)

Gross and Net NPAs of Scheduled Commercial Banks

Table – II: Gross and Net NPAs of Public Sector Banks*

Year	Non-Performing Assets			
	Gross		Net	
	As percentage of gross advances	As percentage of total assets	As percentage of net advances	As percentage of total assets
1996-97	17.8	7.8	9.2	3.6
1999-00	14.0	6.0	7.4	2.9
2002-03	9.4	4.2	4.5	1.9
2005-06	3.6	2.1	1.3	0.7
2006-07	2.7	1.6	1.1	0.6
2007-08	2.2	1.3	1.0	0.6
2008-09	2.0	1.2	0.9	0.6

Source: Handbook of Statistics on the Indian Economy 2005-06 & 2008-09

*public sector banks include nationalized banks, state bank of India and its group banks and other public sector banks

Table – III: Gross and Net NPAs of Old Private Banks

Year	Non-Performing Assets			
	Gross		Net	
	As percentage of gross advances	As percentage of total assets	As percentage of net advances	As percentage of total assets
1996-97	10.7	5.2	6.6	3.1
1999-00	10.8	5.2	7.1	3.3
2002-03	8.9	4.3	5.2	2.5
2005-06	4.4	2.5	1.7	0.9
2006-07	3.1	1.8	1.0	0.6
2007-08	2.3	1.3	0.7	0.4
2008-09	2.4	1.3	0.9	0.5

Source: Handbook of Statistics on the Indian Economy 2005-06 & 2008-09

Table – IV: Gross and Net NPAs of New Private Banks

Year	Non-Performing Assets			
	Gross		Net	
	As percentage of gross advances	As percentage of total assets	As percentage of net advances	As percentage of total assets
1996-97	2.6	1.3	2.0	1.0
1999-00	4.1	1.6	2.9	1.1
2002-03	7.6	3.8	1.5	0.7
2005-06	1.7	1.0	0.8	0.4
2006-07	1.9	1.1	1.0	0.5
2007-08	2.5	1.4	1.2	0.7
2008-09	3.1	1.8	1.4	0.8

Source: Handbook of Statistics on the Indian Economy 2005-06 & 2008-09

Table – V: Gross and Net NPAs of Foreign Banks

YEAR	Non-Performing Assets			
	Gross		Net	
	As percentage of gross advances	As percentage of total assets	As percentage of net advances	As percentage of total assets
1996-97	4.3	2.1	1.9	0.9
1999-00	7.0	3.2	2.4	1.0
2002-03	5.3	2.4	1.7	0.8

2005-06	1.9	1.0	0.8	0.4
2006-07	1.8	0.8	0.7	0.3
2007-08	1.8	0.8	0.8	0.3
2008-09	4.0	1.5	1.8	0.7

Source: Handbook of Statistics on the Indian Economy 2005-06 & 2008-09

The asset quality of the Indian banking system has improved significantly over the past one decade. The NPAs of public sector banks, which stood at 17.8 per cent of gross advances and 7.8 per cent of total assets in 1996-97, declined to 2.0 per cent of gross advances and 1.2 per cent of total assets in 2008-09. As far as net NPAs concern, it stood at 9.2 percent of net advances and 3.6 percent of total assets declined to 0.9 and 0.6 percent during the same period. Similar trend can also be seen in the net NPAs ratios during the same period of both old and new private sector banks reflecting better recoveries and better allocation of funds. There has been a distinct improvement in the recovery climate in recent years facilitated by strong macroeconomic performance and institutional measures initiated by the government. It is also significant to note that the asset quality of public sector banks has been better than private sector banks both old and new.

PROFITABILITY

**Table –VI: Net Profit/Loss as Percentage of Total Assets
Scheduled Commercial Banks**

Percent

Sr. No.	Name of the Bank	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
1	Public Sector Banks*	1.0	1.1	0.9	0.8	0.8	0.9	0.9
2	Private sector banks**	1.0	1.0	0.8	0.9	0.9	1.0	1.1
3	Foreign banks	1.6	1.7	1.3	1.5	1.7	1.8	1.7

Source: Report on Trend and Progress of Banking in India, 2005-2006 to 2008-09

*Public sector banks include nationalized banks, state bank of India and its group banks and other public sector banks

**Private sector banks includes old and new private sector banks

In the environment of global financial crisis and its impact on the Indian economy, the year 2008-09 has been a testing year for the Indian banking sector. The Indian banking sector, however, withstood this test and the buoyancy of this sector was more than evident. The Indian banks were largely untouched from the crisis, as their exposure to poisonous assets was minimal. More importantly, the Reserve Bank's initiatives regarding adoption of counter-cyclical prudential regulations framework, both during credit boom period as well as during the slowdown, proved to be successful. The Return on Assets also remained at almost last ten years level of 1.0 per cent, indicating efficiency with which assets used by the banks. Thus, though the expansion of the balance sheet moderated, the profitability was maintained.

DEPOSIT OF SCHEDULE COMMERCIAL BANKS

**Table - VII: Deposit of Scheduled Commercial Banks
According to Population Group**

Year	Rural		Semi-urban		Urban		Metropolitan	
	No. of Accounts	Amount Outstanding						
1991	108876	31010	98084	41439	80889	49140	67342	78979
1995	109944	51820	108129	71464	88828	84129	83134	171761
2000	125852	120539	114109	161972	89831	188963	83023	349945
2005	141908	213104	125198	295685	101376	374891	98310	863134
2008	168034	303423	148361	430280	128021	657699	137241	1858544
2009	199695	363910	169725	529758	142272	822914	150611	2205399

Source: Reserve Bank of India

Number of accounts in thousands & Amounts in Rs. crore

The Scheduled Commercial Banks (SCBs) in India have shown an impressive growth since the initiation of financial sector reforms. 'Banking sector recorded credit growth of 33.3% in 2005 which was highest in last 2 and half decades and credit growth in excess of 30% for three consecutive years from 2004 to 2007, which is best in the banking industry so far'⁴. From the above table it can be seen that the growth in number of accounts among different population group is almost double in all population groups. Even the amount outstanding in last two decades has shown phenomenon growth. Increase in economic activity and robust primary and secondary markets during this period have helped the banks to gain larger increase in their incomes.

⁴ R.M. (1988) 'Indian Banking Sector' as appeared in www.researchandmarkets.com/reportinfo.asp.
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FOREIGN EXCHANGE ASSETS

Table – VIII: Net Foreign Exchange Assets of Indian Banks

Rs. in crore

Year	Net Foreign Exchange Assets of Indian Banking Sector*
1990-91	2598
1995-96	8049
2000-01	52645
2005-06	53211
2006-07	47026
2007-08	59001
2008-09	72068

Source: Handbook on Indian Economy- 2008-09

*Except RBI

In 1998 and 1999, Indian government has announced a number of reforms designed to encourage foreign direct investment in banking sector. It has played an important role in the development of the banking sector. FDI in banks has enabled them to achieve a certain degree of financial stability, growth and development. Below tables reveals that since the opening of for foreign direct investment for banking sector, there is a significant increase in net foreign exchange assets held by banks in India. It has been increase from 2598 crore to 72068 crore during 1990-91 to 2008-09. The increase in amount itself reveals the unique growth and development in financial stability as far as foreign exchange is concern. Besides subsequent recent development in financial reforms would be certainly helpful Indian banking sector to build up rapid growth. Foreign investors can invest up to 74% in an Indian private sector bank, through direct or portfolio investment. The Government has also permitted foreign banks to set up wholly owned subsidiaries in India. A foreign bank or its wholly owned subsidiary regulated by a financial sector regulator in the host country can now invest up to 100% in an Indian private sector bank. This option of 100% FDI will be only available to a regulated wholly owned subsidiary of a foreign bank and not any investment companies⁵.

CONCLUSION

Beginning with reform policies Indian banks have evolved to a more efficient and competitive market. This study found that the financial sector reforms have had a considerable impact on banking sector to mobilize financial savings. The restructuring of the banking sector and the liberal entry and exit policies resulted in dynamic growth of banks. This efficiency gains profit enhancement, improvement in the quality of assets, and the reduction of non-performing assets. There has also been a significant improvement in the banks' capital adequacy positions also. The liberalization of the foreign exchange market resulted in considerably increase in foreign exchange assets of the banks. However, financial market in India needs to go further to improve their efficiencies to bring them up to the standard of international financial markets. It is obvious that changes are progressing but slowly towards a more competitive financial service industry in the country. Furthermore, substantial empirical studies are needed to examine the impact in a more robust way however, lack of necessary micro level data has been a major obstacle. For instance, more analysis on micro finance markets in India would have been more useful to identify competitive improvements within the financial markets. This would have resulted in identifying areas where further reforms are needed to ensure the operation of an efficient financial market.

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AN OVERVIEW OF FINANCIAL RATIOS FROM 1900'S TILL PRESENT DAY

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ABSTRACT

Ratios have evolved substantially over a period of time. Ratios are an excellent analytical tool. They help to set standards of various industries. Financial Performance Analysis can be carried out by calculating various important ratios. There has been a various studies conducted on the basis of ratios but they have not been put in any chronological order. This research paper is an attempt to trace the changes that ratios have gone through time. The study traces the movement of financial ratios from the historical perspectives till the present day. The study also shows the usage of financial ratios that where conducted abroad in the Government Sponsored Enterprises as well as Public Sector Undertakings in India. The Research paper is limited to the government sector of India as well as abroad.

KEY WORDS

Financial Ratio's, Government Sponsored Enterprise, Public Sector Enterprise.

INTRODUCTION

The purpose of this research paper is to familiarize the readers with various studies and articles focusing on ratios and their usefulness in the financial analysis of an organization.

The chapter begins with the historical perspective of ratios highlighting their development over many years as well as their application in financial analysis. Subsequent sections discuss relevant literature of financial analysis in India as well as Abroad. Finally the chapter closes with the summary of the major points evident in the literature.

HISTORICAL PERSPECTIVE

Ratios have evolved as a result of Euclid's analysis of properties of ratios in the book V of his elements in approximately 300 B.C. However, the use of ratios is of recent development.

The earliest traces of financial statement analysis are found in the last half of the nineteenth century when America was approaching industrialist maturity. At that time, corporate management were been transferred over from enterprising capabilities to the professional manager and the financial sector was becoming a more predominant force in the economy. Both of these changes were the primary causes for financial statement analysis.

There is a significant overlap in the development paths of ratio analysis for creditor's purpose and managerial purposes. Credit analysis focused on the ability to pay and managerial analysis emphasized profitability. The development of ratio's for use in credit analysis dominated the general development of ratio's analysis, so one must look primarily to credit analysis to understand the evolution of ratio analysis.

Several ratios were developed in the 1890's. During that time, the practice of comparing the current assets of an entity to its current liabilities developed. This relationship came to be known as the current ratio and has had a more significant and long-lasting impact upon financial statements analysis than any other ratio. The use of ratios in financial statement began with the advent of the current ratio.

During the period between 1900-1919, several important developments occurred. First, a rather large variety of ratios were developed. Second, absolute ratio criteria began to appear such as the 2 to 1 current ratio criterion.

In 1919, Alexander Wall conducted a study in which he compiled a large statement of financial statement. This study became the catalyst for ratio analysis development and was conducted in response to the apparent need for more types of ratios and for relative ratio criteria. Firms were stratified by industry and by geographical location in the study. Although his results would be vulnerable to criticism by today's standards, his study is significant because it was widely-read and marked departure from the customary usage of a single ratio with an absolute criterion. Wall popularized the idea of using many ratios and using empirically determined relative ratio criteria.

Another important development in managerial usage of ratios occurred at about the same time. The DuPont Company began the most important comprehensive managerial usage of ratios such as profits/total assets, profits/sales and sales/total assets. This held promise for serving as the basis for a framework where ratios could be developed in a logical fashion. However, it went unnoticed until recent times.

During the 1920's, interest in ratios increased markedly. As a result, many articles were published on the subject of ratio analysis.

Analysts of this time period were attempting to bring some level of sophistication to ratio analysis. James H.Bliss (1923) developed the first coherent system of ratios which were tied together in a logical, deductive fashion. He considered ratios to be indicators of the status of relationship with business. From this premise, he developed a model of the firm which consisted entirely of ratios. Although his model was naïve, it represented a promising beginning for the development of a theory of ratio analysis.

While the twenties were a period of great enthusiasm about ratios, it also was a period in which the first serious criticism of ratios emerged. In 1925, Stephen Gilman raised four objectives to ratios. His objections were that changes in ratios over time cannot be interpreted because the numerator and denominator both vary, they are artificial measures, they divert the analysts' attention from a comprehensive view of the firm and their reliability as indicators varied widely between ratios. Given these objections, it is obvious that Gilman was diametrically opposed to Bliss as well as any other enthusiast. The contributions of both men were acknowledged but, because neither was expanded upon, their value for furthering the development of a theory of ratio analysis was lost. Attention was given to the empirical bases of ratio.

The Overriding feature of the 1930's was the increased attention given to the empirical bases of ratio of ratio analysis. The Securities and Exchange Commission was formed at this time and quickly became an external influence that both increased the supply of financial statements and influenced their content.

There were two major developments in this decade directly related to ratio analysis. The first pertains to the determination of the most effective group of ratios. Roy A. Foulke (1931) was the most successful promoter of own group of ratios. His success was mostly due to the fact that he could supply annual industry data for his group of ratios. The collection of ratios he developed quickly became the most influential and well-known industry average ratios series.

Foulke (1931) was an important figure in the development of ratio analysis because he was the father of the approach which became the essential mode of operation of ratio analysis in this country. In this approach, deductive analysis and/or empirical evidence were rarely provided in support of an author's claim that his group of ratios represented the most efficient collection for analyzing financial statements. Instead, the degree to which an analyst's group of ratios were accepted was dependent on the authority of his experience in statement analysis. This approach left the subject of ratio analysis without any—developed, testable theory.

The second significant development of this decade was that several studies, although fraught with shortcomings, were the first carefully developed attempts to use the scientific method to examine the usefulness of ratios. Winker and Smith (1935) conducted an early study of a sample of firms to assess the efficiency of ratios as predictors of business financial difficulty. Another major study of ratios and their relationship to financial difficulty was directed by Paul J. Fitzpatrick (1931).

Development of the empirical base of ratio analysis continued during the 1940's and culminated in a study by Charles L. Mervin (1942). He analyzed the trends of various ratios in "continuing" and "discontinuing" firms. This study was the first sophisticated analysis of the predictive power of ratios. The findings still appear credible today.

Another development which gained popularity during this period was the practice of using a number of ratios to describe a wide variety of a firm's characteristics. Studies of this nature provided a wealth of information about the behaviours of ratio over time and the variation of ratios between different types of organizations. A few of these studies looked at the potential for utilizing ratios in financial statement analysis. These studies supplied materials which could be used for the formulation of hypotheses in the development of a formal theory of ratio analysis. However, they were never translated into the field of ratio analysis.

Since the mid-1940's, the development of ratio analysis has taken various paths. There was increased emphasis on the role of ratios in the operations of small businesses. Ratios were also being used as variables for analyzing and describing economic activity which further widened the empirical base of ratio analysis. William H. Beaver (1967) conducted a study in which he analyzed the ability of ratios to predict the failure of firms during 1954-1964. Similar to the Merwin study, he found that certain ratios predict failure up to five years in advance. Beaver's study used more powerful statistical techniques than those used by Merwin and some of his ratios were taken from funds statement data. His study represents a landmark for future research in ratio analysis.

Another important study was conducted by Sorter and Becker (1964). They found that conservative corporations maintain higher liquidity and solvency ratios. This research would also prove to be a valuable addition to the empirical base of ratio analysis.

The other important development since the mid-1960 is the beginning of a period of more rigorous scrutiny of the nature of financial ratios as such. First, the effects on ratios of different accounting practices were examined. George C. Holdren (1964) found that different types of inventory valuation procedures changed inventory turnover ratios. A. Tom Nelson (1963) discovered that the capitalization of leases also changed a large number of ratios.

In other countries such as England, a common thread in ratio analysis has developed. The British Institute of Management has generated interest in ratios as tools for making inter-firm comparisons to help managers appraise efficiency and to make policy decisions for the future. Actually, ratio analysis has taken a more distinct management orientation in other countries in contrast with the creditor orientation in the United States.

FINANCIAL PERFORMANCE ANALYSIS ABROAD

While there is a large base of literature on the subject of ratio analysis, the researcher has chosen to limit his review to studies done in city/government sector of all abroad regions. They are the Government sponsored Enterprises (GSE). Basically, the researcher has eliminated the large number of studies conducted in the private sector. It may be true that financial ratios used in the private sector studies can, and should, be used in Public Sector analyses. However, it was decided to focus this review on studies which have been conducted in an accounting environment similar to that found in public sector undertakings. Both Government Sponsored Enterprises and Higher Educational Institutes follow fund accounting practices. This review was designed to examine the types/purposes of studies which have been conducted as well as the financial ratios that are applicable in the fund accounting environment. These would seem to be the most appropriate to consider when developing a study on Public sector undertakings in India.

In recent years, several articles have been written illustrating the importance and need for ratio analysis in the public sector. Several of the articles have appeared in practitioner oriented journals which speaks to the importance of this area as a tool for the practicing business officer.

James Howard (1987) wrote an article focusing on cost management as a key to survival. He specifically points to financial ratios as a valuable tool to assist private sector financial managers in this area. Although balance sheet ratios are only indirectly related to costs, they can be as important as the actual standard cost data used for the income statement. Certain ratios measured over a period of time and compared with other companies can reveal how efficiently money is being utilized. Howard suggests that comparison should be made with industry standards for companies of similar size.

Karl Zehms (1991) encourages the development of financial ratio analysis in the public sector. Municipal statements are often extremely complex and lengthy enough to discourage careful reading. Given that fact, Zehms claim that it would be worthwhile to develop a set of financial ratios appropriate for aiding in the analysis of municipal annual financial reports. He suggests the development of national standards for the various ratios to facilitate meaningful comparisons. Zehms identifies citizen, legislators and oversight officials, investors and creditors as the major user groups of municipal financial reports. It is with the needs of these user groups in mind that we should begin the development of financial ratios.

Brent Wrasman (1993) prepared an article entitled "Using the Financial Indicators Database for Policy Analysis" in which he discussed the usefulness of the database to a Nevada school district as it prepared to enter salary arbitration. Since the negotiating points concerned the components of year-end fund balance, the district administration wanted to determine how they compared to other districts with hopes that the comparison would enhance their bargaining position. The government Finance officers Association maintains the financial database which provides three primary types of financial variables: absolute measures such as general fund operating results in dollars, relative measures such as total property tax levy per capita and composition measures such as components of long term debt. The minimum, maximum and median

values are summarized for each indicator for cities falling into various size classifications. Data on fund balance is also provided as an effective means of comparison.

Ken W. Brown (1993) of Missouri State University developed the "The 10 –Point Test of Financial condition" which is an easy-to –use assessment tool for cities whereby they can compare their own condition to that of others. His self assessment worksheet contains ten financial ratios applicable to government financial statements. Cities can compare their indicator values to those of comparably sized cities and arrive at an overall point-score. The scores indicate an overall grade relative to cities in the database ranging in classification from "among the best" to "among the worst".

The International City Management has recently published a book entitled Evaluating Financial Condition: A Handbook for Local Government. Authored by Sanford M. Groves and Maureen Godsey Valente (1986), the book represents a financial trend monitoring system for use in the public sector. Their framework consists of environmental and financial organizational factors which are monitored through the use of a series of ratio indicators associated with each factor. This appears to be an excellent management tool complete with detailed explanations of each indicator as well as descriptions of what trends might indicate and what should be analyzed if trends indicate a problem.

Lorrie DuPont (1994) states that change and the ability to adapt to it is the new challenge for higher education in the 1990's. Faced with many new pressures, colleges and universities are reexamining their finances and their future to determine the best strategies for meeting budget demands and growth objectives. DuPont contends that in most cases, the foundation for their success is based on accurate, realistic evaluations of their institutions' debt capacity. Debt capacity is the level of debt the entity can afford to bear prudently. Debt capacity is based on an assessment of specific factors such as cash flow, fund balance and expenditure control to name a few. An institutions' overall debt level is a crucial components in determining credit rating on debt issued by that institution.

Although debt capacity is typically measured before an organization issues new debt, it can also be used as a tool for financial planning. The author suggests that the analysis begin with a routine financial ratio analysis which will clearly indicate trends in debt capacity. Changes in ratios from year to year will address pertinent issues. In addition to internal measurements, ratios should be compared to other institutions with similar characteristic according to DuPont.

The most striking aspect of the field of ratio analysis is the absence of an explicit theoretical structure. Users of ratios are required to rely upon the experience of the analyst. The bulk of the ratio analysis literature consists of instructions on the computation of ratios. However on the positive side, a need does exist for analytical tools that will enable analysts to compare financial statements between firms over time. Ratios fill that need as a simple, quick method of comparison. Available evidence also suggests that ratios do have predictive value, at least with respect to financial difficulty (Horrigan, 1968).

In 'GFOA's Financial Indicators Database: Benchmarking and other Uses,' Patricia Tigie (1994) provides an overview of the database and the specific types of information that are available to municipal finance officers. Included are overall operating results, several categories of fund balance information, revenue and expenditure data by type of expenditure and cash/investment data. The author notes that a set of ratios can be constructed with these data and used to measure a jurisdiction's financial condition internally or as benchmarks in comparing its financial results with other jurisdiction. Tigie writes that with the GFOA'S database, governments have at their disposal another tool to help them manage their financial position more effectively.

Ronald Everett (1995) calls for more research to enhance the use of financial ratios in public school districts. His article describes ratio analysis and its traditional use in the private sector. He discusses specific ratios commonly used in financial analysis as well as the potential value of ratio analysis to school officials. An important part of deciding how to respond to internal and external pressures understands the financial condition of public educational organizations. Managers can use this information to improve the efficiency and the profitability of their operation. Everett calls for more research and sophistication to add reliability and credibility to ratio usage in the public school domain.

The most striking aspect of the field of ratio analysis is the absence of an explicit theoretical structure. Users of ratios are required to rely upon the experience of the analyst. The bulk of the ratio analysis literature consists of instructions on the computation of ratios. However on the positive side, a need does exist for analytical tools that will enable analysts to compare financial statements between firms over time. Ratios fill that need as a simple, quick method of comparison.

FINANCIAL PERFORMANCE ANALYSIS IN INDIA

After a lot of research work, it was found that very few works was done on financial ratio by Indian Author. Few related work have been mentioned below.

Dash D .K (1999) titled "Case Study of Namangan Cooperative bank Jamnagar, Gujarat- Performance Analysis through Ratio Analysis. Dash carried out financial analysis of the financial statements of Namangan Cooperative Bank.

"Basics of Ratio Analysis "(2001) done by Parasuraman N.R. Rather than carrying out any ratio analysis on any financial statements, the author tried to give the rationale behind each ratio's.

"The road beyond ratios: A. Krishnan on how to interpret financial statements."(2002) . The author worked on a creditors look into a balance sheet for analysis of various ratios and tires to draw some conclusions. He argued that balance sheets just show the balances, but a close look into the various headings will give us a better understanding of their effects. He has taken the example of raw materials. They are meant to be converted into semi-finished goods and then to finished goods. They may be bought in bulk, especially if they are available at short notice. Unused raw materials are a drain on the company's working capital, affecting liquidity, increasing the interest burden for the loan taken and possibly depreciating in value. What is seen in the balance sheet is merely inventory control. But when an analysis of the inventory is done many hidden truths emerge.

"Analysis of financial ratio's commonly used by US lodging financial executives." authored by A.J. Singh (2002) the purpose of this study was to identify commonly used ratios in the lodging industry and discover their importance level for lodging financial executives. Operating and Profitability ratios clearly stand out as the most important ratios for lodging managers. The study makes a contribution by educating managers about the range of ratios, their relative importance, and opportunities for using ratios not currently considered useful.

Mansur A. Mulla (2003) wrote an article titled "Forecasting the viability and Operational Efficiency by use of Ratio Analysis-A case Study". This case study assesses the financial performance of a textile unit using ratio analysis as a tool to determine the financial and operational efficiency of the unit. It seeks to improve the financial health and viability of the undertaking in the years to come using ratio analysis as a diagnostic instrument to remove financial and operational maladies plaguing the company. He concluded that ratio analysis is an invaluable mechanism

for highlighting areas which require attention and diagnosis. The ratio analyzed showed that managerial inefficiency led to the downfall of the textile industry.

R.Hamsalakshmi & M.Manicham (2005) worked on an article titled "Financial Performance Analysis of Selected Software Companies". The study has been undertaken to examine and understand the management of finance playing a crucial role in the growth of the selected industries. It is concerned with examining the structure of liquidity position, leverage position and profitability position of selected thirty four software companies in India quoted at BSE for a period of five years (1997-1998 to 2001-2002). The study revealed that liquidity position and the working capital were favourable during the study of the period. It also showed that the overall profitability position of selected software companies had been increasing at a moderate rate.

"Ratio Analysis and Its Use in Portfolio Diversification Using RMA's Annual Statement Studies" (2006) was written by D K Malhotra, Andy Lafond, Francis Garritt. It deals with two ways to mitigate credit risk in your loan portfolio are to diversify its composition and to set limits. The roots of a diversification effort are in a detailed analysis of the financial statements of borrowing companies -- more specifically, a look at the financial ratios. This article uses Annual Statement Studies to analyze trends in the performance of seven different industries and to show how they are correlated to various macroeconomic factors over a 15-year period (1989-2004). Industries selected include: 1. industrial machinery and equipment merchant wholesalers, 2. new-car dealers, 3. general freight trucking, long distance, truckload, 4. offices of real estate agents and brokers, 5. engineering services, 6. offices of physicians, except mental health specialists, and 7. full-service restaurants. This article also explores the relationship between macroeconomic variables -- such as interest rates, inflation, and gross domestic product -- and the liquidity, borrowings, and profitability of the seven industries.

"Financial Management in the Non-profit Sector: A Mission-Based approach to Ratio Analysis in Membership Organizations" authored by Dr. Anne Abraham (2006). The author has based her study on Non-profit Organizations (NPO's). They are melting pots combining mission and money. The author has tried to measure the financial performance by ratio analysis. It helps in identifying organizational strengths and weaknesses by detecting financial anomalies and focusing attention on issues of organizational importance. Her paper discusses the centrality of mission in the use of financial ratio analysis and extends previous financial performance models to develop one that can be applied to nonprofits organizations. Thus, ensuring that financial performance analysis is not carried out in isolation from any consideration of an organization's mission, but for a specific purpose. The paper concludes by identifying the limitations of such an analysis and makes suggestion for further application of these models.

Dr. Paraschos Maniathis conducted a study titled, "Comparison of Gearing Ratio and Earnings per share in Two Branches: A Statistical Investigation" (2007). His study was based on the study to compare the gearing ratios and the earning per share (EPS) in two relative sectors: that of the food processing industry and the food-retailing branch. For the study, the author has considered firms whose shares are quoted in the London Stock Exchange. Further, the author has tried to investigate the possible relationship of the above mentioned financial ratios within and between the two branches.

D.K.Malhotra and Rashmi Malhotra worked on an article titled, "Analyzing Financial Statements using Data Envelopment Analysis." (2008). They were of the opinion that financial statements are a summary of the operating, financial and investment activities of a firm over a period of time. Financial statement analysis usually begins with financial ratios based on information in the income statement, balance sheet and statement of cash flows. Ratio analysis is designed to show the relative strengths and weaknesses of a company as compared to the other firms in the industry, leading firms and the previous year of the same firm. But ratio analysis is often criticized on the grounds of subjectivity, because an analyst must pick and choose ratios in order to assess the overall performance of a firm. In this article the author, illustrates the use of data envelopment analysis (DEA), an operations of research technique, to analyze financial statements of firms by benchmarking financial ratios of a firm against its peers as well as the industry averages. It is a powerful technique for measuring performance because its objectivity and ability to handle multiple inputs and outputs that can be measured in different units. Thus, there study focused on a new technique DEA, but believed that ratio analysis are the basis of all financial analysis.

"Sachiko Corporation: A case in International Financial Statement Analysis." By Mahendra R Gujarathi (2008). The author does a comparative study within an International context. Upon reviewing the financial statements and relevant foot-notes of Sachiko corporation, a Japanese Company, and U.S.- based Radiance Inc., the author has used financial ratio analysis to compare and evaluate whether the revised ratio's are consistent with each company's strategy and business environment and subsequently, to recommend the better investment prospect. The article is useful for us to examine the role of environmental differences (cultural, institutional, business and financial reporting) in interpreting the risk and profitability ratios in an international context.

CONCLUSION

From the above it can be summarized that ratio analysis has evolved substantially over time and has grown in importance as an analytical tool. There has been numerous studies in Government sponsored Enterprises, although most of those focus on predicting fiscal distress, assessment of financial condition and self-assessment. There is an absence of explicit theoretical structure for ratio analysis. All studies give wider importance to instructions of how to calculate the structure rather than a theory base of the ratios. The public sector has seen relatively little in the way of financial ratio analysis. One recent study was cited which illustrates the use of ratios as a tool for municipalities to conduct self assessment of their financial conditions.

This research paper is concluded on the studies based by many scholars in the various aspects of the financial analysis made by Indian authors. It can be summed up by stating that works have been carried out on financial analysis with the use of Ratio Analysis. But no literature was found on analysis of the financial statements on Public Sector Undertakings of India. Various other literature reviews that have been included in this research paper are stated below, to give an idea what work has been carried out till date.

Dash D.K analyzed the statements of Namangan Cooperative Bank, with the help of Ratios. Parasuraman N.R. carried out research work on the rationale of each ratio's. The author did not analyze any financial statements but gave an understanding & explained the significance of each ratio's. "The road beyond ratios: A. Krishnan on how to interpret financial statements." This study also explains the various rationales behind each ratio's rather than analyze any statement. A.J. Singh worked on an article titled "Analysis of financial ratio's commonly used by US lodging financial executives."

This study also is based upon private sector. The author listed out the most significant ratios in the lodging sector. Mansur A. Mulla wrote an article titled Forecasting the viability and Operational Efficiency by use of Ratio Analysis. He carried out a case study on textile mills & analyzed their profitability, liquidity, solvency position by using Ratio's. R.Hamsalakshmi M.Manicham worked on an article titled "Financial Performance

Analysis of Selected Software Companies. They used regression analysis and correlation to view the statements of software companies. This study is the closest to the project that I am working on. They analyzed the financial position of Software companies while I am attempting to analyze position of five Public Sector Undertakings.

"Ratio Analysis and Its Use in Portfolio Diversification Using RMA's Annual Statement Studies" was written by D K Malhotra, Andy Lafond, and Francis Garritt. This study compares seven different businesses for a period of fifteen years with the help of Ratio Analysis. Another study was carried out by Dr. Anne Abraham titled "Financial Management in the Non-profit Sector: A Mission-Based approach to Ratio Analysis in Membership Organizations" The author used Ratio Analysis in analyzing statements of Non-profit organization. Dr. Paraschos Maniathis conducted a study titled, "Comparison of Gearing Ratio and Earnings per share in Two Branches: A Statistical Investigation". The author used ratio analysis to compare two different kinds of industries which are food processing industry and the food-retailing branch. D.K.Malhotra and Rashmi Malhotra worked on an article titled, "Analyzing Financial Statements using Data Envelopment Analysis." The author tried to use a new research technique, to analyze financial statements of firms by benchmarking financial ratios of a firm against its peers as well as the industry averages. It is a powerful technique for measuring performance by using number of financial ratios and putting it through development analysis test.

Sachiko Corporation: A case in International Financial Statement Analysis." By Mahendra R Gujarathi. The author worked on an article which compared the Japanese accounting system with the American. He tried to compare both the systems with the help of financial ratio Analysis.

It may be concluded that various authors have worked on various subject matter keeping Ratio Analysis as their base of studies. Major work has been done in the private sector, non-profit organization as well as comparison between two different accounting systems.

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SOCIO-ECONOMIC CONTRIBUTION OF INDIAN DIASPORAS TO HOMELAND: EMPHASIS ON IT INDUSTRIES

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ABSTRACT

In recent years, the Diaspora's participation in the development activities back home has been getting attention from the Government, academia, and media. This paper discusses the Indian Diaspora's contribution to the home country in terms of economic remittances, transfer of knowledge, entrepreneurial networks and social remittances. This paper also explains the Indian Diaspora policies and recommendations of High Level Committee on the Indian Diaspora. The paper concludes with the recommendations for future activity by Government to maximize the contribution of Indian Diaspora in the development activities in India

KEY WORDS

Indian Diaspora, Remittance, Skilled labour migration

INTRODUCTION

Currently, the globalization debate is largely overlooking the massive impact that international migration has on the sending country from the loss of intellectual capital to the gain of remittances, social capital, and transfer of knowledge. The new policy interest in Diasporas reflects a broader concern with globalization, and specifically the very recent appreciation of the volume of remittances to developing countries by emigrant workers and their descendants.

Migration does not always result in the long-term dispersal of a people; some migrants leave their home countries only temporarily, or assimilate into countries of settlements so completely that they lose their distinctive identity and ties on their homelands. Migration does not always result in the formation of a Diaspora community; and development does not always lead to poverty reduction, at least in the short-to medium term. For many countries, the Diaspora are a major source of foreign direct investment (FDI), market development, technology transfer, philanthropy, tourism, political contributions, and more intangible flows of knowledge, new attitudes, and cultural influence.

The term Diaspora comes from the Greek words "to sow" and "over", as in the scattering of seed, and for them it meant the "seeding" of Greek colonies in distant lands. It was later associated with forced expulsion and dispersal and acquired the sense of loss and the implication of a strong desire to return. "Diaspora" is often used as a collective noun ("the scattered"), referring to a dispersed people, but it is also used in the plural, as there are many different peoples who are dispersed among different countries, and as an adjective. In reference to India, the "Indian Diaspora" refers to all persons of Indian descent living outside India, as long as they preserve some major Indian ethno cultural characteristics. Only nationals of Pakistan and Bangladesh are excluded from this term since those countries were part of the larger British India before 1947 and thus constitute a special case. A common distinction with regard to ethnic Indians outside India, often referred to as overseas Indians, is made between non-resident Indians (NRIs), who hold Indian citizenship, and persons of Indian origin (PIOs), who do not.

INDIAN DIASPORA: HIGH LEVEL COMMITTEE

In September 2000, the Indian government tasked a High Level Committee on the Indian Diaspora to analyze the location, situation and potential development role of the estimated 20 million non-resident Indians (NRIs) and Persons of Indian Origin (PIOs). The report of the High Level Committee on the Indian Diaspora (also called the L.M. Singhvi Committee) was released to great fanfare by the Indian government in January 2002. The report recommended a "new policy framework for creating a more conducive environment in India to leverage these invaluable human resources."

According to the report the 18.5 million strong diaspora (including descendants of Indian migrants) is widely dispersed. The Indian government claims diaspora communities in as many as 110 countries; however, three-quarters of the diaspora population live in 12 countries (See table:1). Since 2005, Indian government claims that the community numbers approximately 25 million.

Table 1: The Indian Diaspora: places with more than 1.0 lakhs members

Places	Numbers (in Lakhs)
Asia	
Mayanmar	29.02
Malaysia	16.65

SriLanka	8.55
Nepal	5.83
Singapore	3.07
Africa	
South Africa	10.0
Mautitius	7.15
Reunion	2.20
Kenya	1.02
Oceania	
Fiji	3.36
Australia	1.90
Caribbean	
Trinidad and Tabago	5.0
Guyana	3.95
Suriname	1.50
Northern America	
USA	16.78
Canada	8.51
Europe	
UK	12.0
Netherlands	2.17
Gulf	
Saudia Arabia	15.0
UAE	9.5
Oman	3.12
Kuwait	2.95
Qatar	1.31
Bahrain	1.30
Yemen	1.00

Source: High Level Committee report on the Indian Diaspora (L.M. Singhvi et.al.2002)

In 2001, the largest number of diasporic Indians (36%) lived in Asia (see Figure 1). 20 percent of the diaspora were in the gulf region, with 14.17 percent in Europe, 15 percent in Northern America, and 12 percent in African Continent. The Caribbean and Oceania accounted for only a small share, 6 percent and 3 percent, respectively.

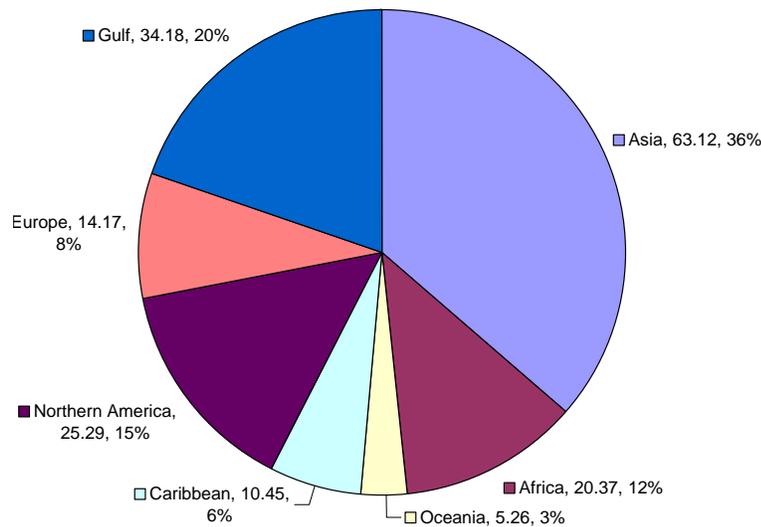


Figure1: The Indian Diaspora by World Region in Million and Percent, 2001 (as per the data given in Table 1)

Other than the number of Indian Diaspora, the report says that, the Indian government has ignored or even failed the Diaspora, and it is to blame for relatively low involvement of overseas Indians in India. The report also says that the Diaspora receptiveness to Indian concerns will depend greatly on the quality of their interaction with the country of their origin and the sensitivity to their concerns displayed in India. It is essential for India to create the necessary structures to facilitate this interaction.

The report emphasized the need for the Indian government to create an “investor-friendly” environment to attract Diaspora funds. The common complain of Indians living abroad is that the procedures for transferring funds for philanthropic activities was too cumbersome and also there is possibility of fraud or cheating in financial or land matters.

DIASPORA’S ECONOMIC CONTRIBUTIONS TO THE HOMELAND

Since 2003, India has been the world’s largest recipient, at least in absolute terms of remittances, defined as the inflow of private transfers. From a modest US \$12.1 billion in 1999-2000, remittances through formal channels were pegged at US \$ 52 billion in 2008-2009 (see Figure 2). Indian expatriates in the United States alone send more than half of the total remittances that India received – a level which is equivalent to almost two percent of India’s GDP.

Global financial crises have so far failed to significantly slow down inflow of remittances in India. As per Financial express (August 2009), the Reserve Bank of India (RBI) annual report 2009 says that “available information indicates that inward remittances to India have not been impacted significantly by the economic crisis”, contradicting popular perception of a severe impact on remittances.

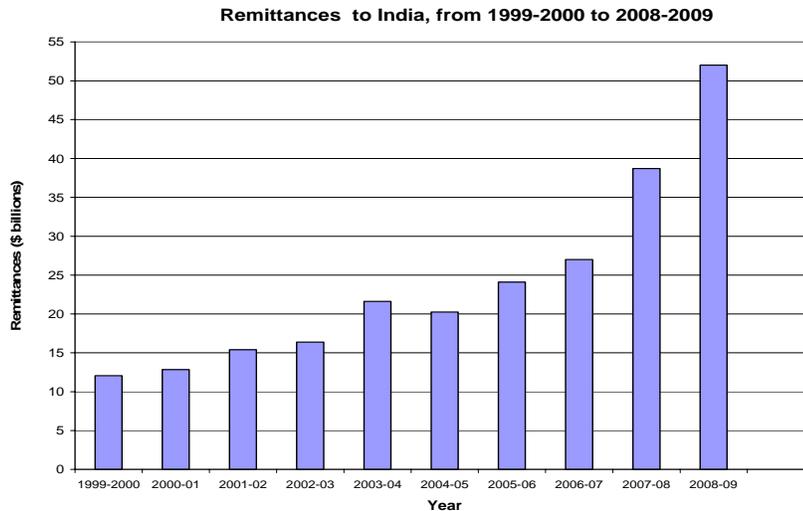


Figure 2: Variation of remittances to India from 1999-2000 to 2008-09
(Source: The Financial express, 5th August 2009 and RBI annual report 2009)

In addition to remittances, India has seen growth in capital inflows. In the 1970s, the government authorized special deposit schemes for non-resident Indians (NRIs) to increase its foreign-exchange reserves; depositors can hold their money in foreign currencies or in Indian rupees. NRI deposits grew steadily from US \$14 billion in 1991 to US \$43.7 billion in 2008.

At the time of urgent need of foreign exchange, India has used Diaspora bonds-dept instruments for raising money from a country’s Diaspora. In total, India received US \$11.3 billion in foreign exchange from the three schemes, each under different circumstances: during the balance of payment crisis in 1991, when it suffered from sanctions in 1998 after first nuclear tests, and during adverse global economic conditions in 2000.

THE INDIAN IT INDUSTRY AND THE DIASPORA

Chishti M (2007) reported that labour migration from India has been slowly changing over the last few decades; whereas the 1970s and 1980s, saw a large outflow of Indian workers to the Middle East, since the 1990, the new wave of labour migration has been of highly skilled migrants, particularly working in the software and information technology (IT) sector.

According to Ahmed S.A and Walmsley T.L (2009), these two sectors have experienced phenomenal growth rates in the past few years; the software sector alone is expected to account for 7.5% of GDP growth in India in 2008, grossing \$87 billion, \$50 billion of which is expected to come from exports.

The United States has emerged as the most popular destination for engineering graduates and IT professionals. Somini S (1998) reported in New York Times that indeed migration from India to the United States doubled in the 1990s and its contribution to the US IT boom is now well established. According to Hira R (2004), in 2001, out of 331,206 H1B visas granted, 49% went to Indian professionals of which 92% concerned IT related jobs.

According to the study done by Vinutha V (2005), this outflow occurred not only in response to the growing demand in countries of destination, but also owing to a lack of opportunities for IT specialists in India itself. However, the situation has since changed.

The current importance of the emigration of Indian skilled workers has accrued in at least five dimensions. First, the Indian Diaspora in United States ha contributed significantly to the rapid advancement of the IT industry in the United States. In turn, this advancement has benefited the Indian IT sector. Secondly, many Indian immigrants are employed in top positions in leading US companies and have played an important role in bringing these companies to India as potential buyers of Indian good or as investors. Third, the Indian Diaspora has also turned into a significant political force within the US and has been instrumental in promoting better political ties between the two countries. Fourth, the success of the Indian Diaspora also generates an “inspiration”, effect on those left behind. In particular, it encourages the young in India to seek higher education and to excel. In the long run, this effect promises to improve the quality of the Indian labour force. Finally, the Indian Diaspora has also contributed significantly through remittances. Currently, remittances contribute more than \$52 billion annually to the national income in India. Though, all of these remittances are not from skilled workers, but the share of the latter is very substantial.

INDIA'S DIASPORA POLICIES

In last decade, the Indian government has shown significant interest in the Diaspora and established a number of Diaspora policies. India's increasing interest in its Diaspora has three major factors.

First, India once had a closed economy that did not encourage foreign contributions, business, or investment. When the government liberalized the economy in 1991, diasporic Indians became more useful as agents of trade, investment and technology.

Second, Indian foreign policy began to recognize the value of the Diaspora in industrialized countries, especially the United States.

Third, only from the mid-1990s, ethnic Indians started surfacing as high-level executives of multinational corporations. The general success of the community, especially in the United States and Canada, and the community's positive influence on the overall idea of Indian qualities led successive Indian government to take a more proactive approach.

Shortly after India's first nuclear tests in 1998, the Indian government launched a huge sale of 5-year bonds guaranteed by the State Bank of India and available only to non-resident Indians (NRIs). Named "Resurgent India Bonds", the proceeds were in part intended to help offset the impact of the economic sanctions imposed after the nuclear tests. Though "patriotic fervour" or the "Hindu rate of growth" was a key theme underlying the sale, the government understood it could not count on patriotism alone, and therefore added significant benefits to make the bonds attractive: an interest 2 per cent higher in dollar terms than the US bond market, the option of redemption in US dollars or German marks, and exemption from Indian income and wealth taxes.

The Indian government launched a massive marketing campaign for the bonds in the US and Europe. The sale was a success: NRI's worldwide purchased bonds worth £2.3 billion in just over two weeks, more than 50 per cent of which came from the Middle East and South East Asia and 20 per cent from Europe and North America. The experience was repeated in 2000 with another bond issue, the India Millennium Deposits, which raised over £3 billion.

The L.M. Singhvi Committee recommended that 9 January – the day Gandhi ji returned to India from South Africa – be celebrated each year as *Pravasi Bharatiya Divas* to recognize the contributions of eminent PIOs and NRIs. The first celebration was held in 2003 in conjunction with the first major Indian Diaspora conference, which attracted more than 2000 NRIs and PIOs from 63 countries. The Conference was co-sponsored by the Indian government and the Federation of Indian Chambers of Commerce (FICC) and was opened by then-Prime Minister Atal Bihari Vajpayee.

In 2004, the Ministry of overseas Indian affairs started the "Know India Program" for Diaspora youth and includes annual awards for eminent Diaspora personalities. The Indian government also set up a Global Advisory Council to the Prime Minister, consisting of diasporic scholars, scientists, politicians and businessmen in 2009.

Number of new legislation were also announced in response to many of the issues raised in the L.M.Singhvi report, including measures to ease investment in India from overseas, the creation of a government body with the sole focus of acting as a liaison between India and its Diaspora, and the introduction of legislation to grant dual citizenship to PIOs, in certain countries. In 1999, India introduced the Person of India Origin card (PIO card) and in 2005 Overseas Citizenship of India (OCI). Both grant practical parity with Indian citizens but do not permit voting, standing for election, or government employment. PIOs cards are available to former Indian citizens and their non-Indian-born descendants (up to four generations) while OCI is limited to those whose parents or grandparents once had or were eligible for Indian citizenship on January 26, 1950. Also, OCI grants a lifelong visa and does not require reporting to the police for stays longer than 180 days.

As of March 2009, the Indian government has granted almost 400,000 OCI cards, 43 percent of them through Indian consulates in the United States and 13 percent in the United Kingdom.

The Investment Information Centre (IIC) is an agency for advice on all issues related to the investment in India. It works with Indians, foreign investors and NRIs and is considered the "nodal agency" for promoting investment in India by NRIs. It provides "all necessary services" for NRIs in setting up their investments, including explaining government policies and procedures, available incentives, necessary data for project selection, and assists in obtaining government approval. It also provides an information service available to all potential investors on the state of various industries in India and profile of industrial projects soliciting investment.

The employment of Indian IT professionals in the US computer industry and the resulting build-up of links between US and Indian high-tech firms have little to do with Indian government Diaspora policy, and more with its support of outstanding institutions of higher education and general macro-economics reforms.

Prime Minister S. Manmohan Singh while inaugurating the Pravasi Bharatiya Divas 2010 at Vigyan Bhavan in New Delhi said that, "we seek the active involvement of the overseas Indian communities in accelerating the pace of our economic and social development". He also said that government is working on this issue and hoped that they will get a chance to vote by the time of next general elections in 2014. He added that why more overseas Indians should not return home to join politics and public life as they are increasingly doing in business and academics.

DIASPORA'S SOCIAL CONTRIBUTIONS TO THE HOMELAND

Beside economic contribution of Diaspora to their home country, their social and political activities may have an even more profound, if direct, effect on the prospects of the poor. Peggy Levitt (1998) defines "social remittances" as the ideas, behaviours, identities and social capital that flow from receiving country to sending country communities. Social remittances are transferred by migrants and travelers or they are exchanged by letter or other forms of communication, including by phone, fax, the internet or video.

To assess the social contribution is more difficult than economic contributions but such changes can affect attitudes towards human rights, women's rights, and the value of education for girls, the benefits of women's employment or the use of violence to resolve political disputes. Building or rebuilding, social capital is particularly important in the aftermath of conflict.

During Pravasi Bharatiya Divas 2010, which was attended by some 1,500 delegates from 50-plus countries, the prime minister said that the rapid growth in the last few years helped lift millions of people out of poverty and expand access to education, healthcare and economic opportunities to a vast majority of the population. He also added "But this is a work in progress and much more remains to be done. I solicit your assistance to achieve those goals. We wish to accelerate efforts to effectively address key constraints in infrastructure, agriculture, health and education."

TECHNOLOGY TRANSFER

Saxenian, (1999) study done on Indian Diaspora in Silicon Valley has provided interesting insights on the socio-economic effects on India. The Indian diaspora's success in Silicon Valley has influenced how the world views India, reflecting the reputational spillover effects of success in a leading sector in a leading country. It has created a 'brand-name', wherein an 'Indian' software programmer sends an *ex ante* signal of quality just as a 'made in Japan' sends an *ex ante* signal of quality in consumer electronics.

The IndUS Entrepreneur (TiE) — a networking group of Indian IT entrepreneurs and network professionals founded in 1992 — has emerged as an extremely successful networking organization. TiE's *modus operandi* applies India's classic guru–shishya, or teacher–student, relationship, to a business context with the 'guru' role played by experienced entrepreneurs and the 'shishya' the startup managers. At the core of the Indian network is a group of angel investors, who got rich by starting companies and are now, recycling some of their wealth as venture capitalists both in the US as well as in India. While most of their wealth goes to US companies, they are also funneling funds into a new generation of start-ups in India as well as hybrid companies and investment funds that operate in both India and the US.

PHILANTHROPY

Some Diaspora organizations and individuals seek no personal return on investment, but rather pursue charitable enterprises. Such enterprises range from very small-scale, one-off efforts of community groups to more organized and durable efforts; from the donations of single individuals to powerful networks of like-minded donors. Many wealthy Indians residing abroad have established private charities on an individual basis and run health or education or public works projects in their home towns or villages.

SOCIAL NETWORK

Due to good social-network among Diaspora and good reputation among the employers very small numbers in the overall population concentrate spatially and in occupations/trades. Employers have strong reasons to hire individuals with a credible imprimatur and referral by existing employees is an important mechanism. Hiring new employees or contractors from networks that have delivered reliability in the past reduces search costs. The mentoring role and serving as role models have been important for India as well in several important ways. Companies like Yahoo, Hewlett Packard and General Electric have opened R&D centers in India largely because of the confidence engendered by the presence of many Indians working in their US operations.

CONCLUSION

Members of Indian Diaspora (NRIs and PIOs) have significantly contributed towards the growth and development in India. They are major source of remittances, market development (including outsourcing of production), technology transfer, philanthropy, political contribution and more intangible flows of knowledge, new attitudes and cultural influences. Remittances sent by expatriate Indians have supposedly contributed positively to the Indian economy. From all the countries of the world, remittances to India had reached from US \$12.1 billion in 1999-2000 to US \$ 52 billion in 2008-2009.

Many of the changes that Diaspora give to their home country, do not result only from monetary remittance flows but they also contribute the social remittances to the homeland that play an important in reshaping individual and social preferences as well as social norms and expectations in the country of origin with attendant political and economic consequences.

However in order to get better results out of Diaspora's contribution to their homeland, government should focus more on some area so that Indian Diasporas should feel comfortable in investing to their home country. In brief, the areas of focus are:

- Lowering transaction costs and increasing the security of transfers.
- Encouraging collective remittances from migrant organizations, by offering them technical assistance, help with institutional development, matching funds, marketing assistance, and other business and financial services.
- Encouraging more "productive", or developmental, uses of remittances
- Donors should encourage and assist Diaspora philanthropy that has a direct impact on poverty or its effects.
- Can be assisted by visa policies that make it easier for members of Diasporas to come and go among country of origin.
- Chance to vote in general elections.

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CONTRIBUTION OF HOFSTEDE'S CULTURE MODEL TO INTERNATIONAL BUSINESS

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ABSTRACT

Culture has been identified as a variable of paramount importance in international business. But it has been difficult to operationalize culture for international research before Prof. Geert Hofstede's Model. Hofstede's dimensions have made it possible to measure culture and to be applied across various aspects of International business. This article paper puts forward this model and discusses the various application of it.

KEYWORDS

culture, Hofstede, power distance, masculinity, uncertainty avoidance, individualism, long term orientation

INTRODUCTION

Culture's role in International business has been widely recognized and accepted. It is the man-made part of environment and largely determines the course of our lives (Herskovits, 1969). Culture as a subject of study was closely associated with anthropology and sociology for about last one and half century, but in recent decades it gained importance in disciplines like management (Ganesh, 2005). It is an all pervasive construct in social science research, thus reflecting its importance (Singh, 2007). In business management, culture is important at "various levels: marketing, human resource management, product development, negotiation, supply-chain management, leadership among others" (Ooi, 2007). The importance of culture is evident in business literature and it's effect has been analyzed on various dependent variables such as brands (Roth, 1995), consumer decision making styles (Lysonski and Durvasula, 1996); economic growth (Johnson and Lenartowicz, 1998); consumer innovativeness (Steenkamp, Hofstede and Wedel 1999); entrepreneurial orientation and global competitiveness (Lee and Peterson, 2000), price perceptions (Sternquist, Byun and Jin 2004), reward management (Chiang, 2005), product diffusion (Dwyer, Mesak and Hsu, 2005), ethics (Arnold et al., 2007), leadership (Singh and Krishnan, 2007), and sexual harassment (Luthar and Luthar, 2007).

Though there have been different frameworks proposed by different scholars for operationalization of culture but Hofstede's (1980) framework of cultural values has been the most famous and widely used for calculating the cultural values of nations. Till the publication of Hofstede's book most of the research was "atheoretical", simply comparing a managerial phenomenon in different countries and it was only after Hofstede's work that measured dimensions of culture began to be linked to every aspect of management (Triandis 2001). Bond (1994) regards Hofstede's work as "godsend, providing the integration of cultural differences that was so desperately needed" (Allick and Realo 2004). Recognizing the importance of this model this paper explains Hofstede's model and enlists the application of this model.

HOFSTEDE'S DIMENSIONS OF CULTURE

Hofstede (1980; 2001) developed the most influential national culture framework (Roth 1995; Steenkamp 2001). His model has been path breaking and influential theoretically and methodologically in the discipline of International Business. This seminal work is one of the most cited on Social Science Citation Index (Hofstede 2001). It was cited 1,101 times from 1987 to 1997 (Sivakumar and Nakata 2001). Chandy and Williams (1994) observe that Hofstede is the third most cited author after John Dunning and Michael Porter in international business research published between 1989 and 1993 (Sivakumar and Nakata 2001). Hofstede through his study across more than fifty countries on IBM employees has identified five independent dimensions of national culture differences. The five dimensions of national culture are as follows (Hofstede 2001):

POWER DISTANCE (PDI)

It is "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede 2001). This dimension is related to the basic problem of social inequality in a society. Hofstede (2001) has listed the societal norms for Power Distance differences in a society. In a low PDI society inequality is minimum while in high PDI society there is an order of inequality in which everyone has his/her rightful place. The hierarchy in case of low PDI society is for inconvenience in which subordinates and superiors are like each other. Whereas in a high PDI society the hierarchy means existential inequality in which superiors and subordinates are regarded of being different kind.

The welfare societies usually score lower on power distance. Power distance within a society influences the hierarchy in the family, society and organizations. There are correlations between PDI and work areas and media relations mostly though are correlations with consumption patterns. In high power distance country the organizations have tall hierarchy, more concentration of authority and usually centralized decision making while in a low power distance country the organizations are flat, less concentration of authority and there is decentralized decision making. There are usually large number of supervisory personnel in organizations and formal rules in high PDI societies compared to low PDI in which there is proportionately less number of supervisors and managers rely more on personal experience and that of their subordinates. Similarly the leadership in high PDI society is autocratic, authoritative and close supervision leads to satisfaction, performance and productivity as against the low PDI society in which leadership is democratic and consultative which leads to satisfaction, performance and productivity. In organizations in high PDI societies subordinate-superior relations are polarized, subordinates influenced by formal authority, there is no defense against power abuse and MBO (Management by Objectives) cannot work whereas in low PDI the superior-subordinate relations are pragmatic, subordinates are influenced by bargaining and reasoning, there are grievance channels in case of power abuse and MBO is feasible. The privileges and status are expected for managers, there is wide disparity between the salary of the top and bottom managers, more career dissatisfaction, role ambiguity in high PDI society as compared to low PDI society (Hofstede 2001).

UNCERTAINTY AVOIDANCE (UAI)

It is rooted in the basic problem of level of stress in the society in the face of uncertain future. The Uncertainty Avoidance "is defined as the extent to which the members of institutions and organizations within a society feel threatened by uncertain, unknown, ambiguous, or structured situations" (Hofstede 1994). Uncertainty avoiding societies look for the organizations, institutions and relationships to interpret and predict events (Hofstede 2001).

In weak uncertainty societies both known and unknown risks are accepted in contrast to high uncertainty societies where only known risks are taken. People in low uncertainty society are less company loyal, switch jobs frequently, prefer small organizations, admit dissatisfaction with the employer, more ambitious for management positions and have favorable attitude towards younger people, whereas in high uncertainty society people are more company loyal, stay with the same, prefer big organizations, don't admit dissatisfaction with the employer, prefer specialist positions and have critical attitude toward younger people. There is low average seniority in jobs, optimism about employers' motives, less resistance to change, employees may break rules if necessary, most people can be trusted and foreign managers are accepted in a low uncertainty society in contrast to high uncertainty society, where there is high average seniority in jobs, optimism about employers' motives, more resistance to change, company rules should never be broken, most people can't be trusted and there is suspicion about foreign managers.

INDIVIDUALISM AND COLLECTIVISM (IDV)

IDV is "related to the integration of individuals into primary groups." This dimension describes the type of relationship the individuals have with the other people in the society. This affects thinking of the people, the structure and functioning of the institutions: family, political, religious, educational and utilitarian. "Individualism stands for a society in which the ties between the individuals are loose. Collectivism stands for a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty."

Hofstede (2001) enlists the various consequences in high or low IDV societies. Management in low IDV society is the management of groups and theories based on individual psychology is of limited use whereas in high IDV society management is the management of individuals and theories based on individual psychology is useful. In low IDV incentives should be given to in-groups, direct appraisal should be avoided and open sharing of one's feelings about him may jeopardize cooperation whereas in high IDV society incentives should be given to individuals, there should be direct appraisal and opening sharing of feeling towards someone may be productive. People in low IDV societies read fewer books, use fewer home computers, watch TV more and rely on social network for information whereas in high IDV society individuals read more books, employ answering machine and media is the main source of information.

MASCULINITY AND FEMININITY (MAS)

MAS is "related to the division of emotional roles between men and women." Masculinity stands for a society in which social gender roles are clearly distinct: Men are supposed to be assertive, tough and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life. Femininity stands for a society in which social gender roles overlap: Both men and women are supposed to be modest, tender, and concerned with the quality of life." (Hofstede 2001).

In low MAS societies buying decisions and shopping is shared by the partners whereas in high MAS men make buying decisions and women shop for food. In low MAS more coffeemakers used, homemade products are popular, less demand for foreign products, and purchases are made for consumption whereas in high MAS society less coffeemakers are used, less homemade products, more demand for foreign products, and purchases are usually made to show off. In low MAS car engine powers are irrelevant, motor houses are popular, there is more fiction reading, and there is less confidence in advertising whereas in high MAS engine power of cars is important, no motor homes but vacations include air flights, nonfiction is more read and there is more confidence in advertising.

LONG-VERSUS SHORT-TERM ORIENTATION (LTO)

It "is related to the choice of focus for people's efforts: the future or present." "Long Term Orientation stands for the fostering of virtues oriented towards future rewards, in particular perseverance and thrift. Its opposite pole, Short Term Orientation, stands for the fostering of virtues related to the past and present, in particular, respect to tradition, and preservation of 'face' and fulfilling social obligations." People in short term oriented societies value traditions, expect quick results and persistence is not important, while long term oriented societies adapt to new traditions and value perseverance and persistence. In long-term societies leisure is not important and emphasis is laid on saving for future while in short term oriented societies emphasis is on spending rather than saving.

In a low LTO society quick results are expected, status is not a issue in relationships, people spend, personal steadiness and stability is a common desire and there is respect for traditions whereas in high LTO society persistence and perseverance is valued, status is the criteria for relationships, people are thrifty, personal adaptability is desired and there is adaptability to new circumstances. Family and business are separated, short term results expected in business and merit is the criteria for social and economic life in low LTO society whereas there is vertical and horizontal coordination in family and business, long term relationships and markets are desired and equality is the preferred way of life in high LTO societies.

Application of Model

Hofstede's dimensions have been used by innumerable researchers as independent variables to prove the effect on various dependent variables like brands (Roth 1995), new product development (Nakata and Sivakumar 1996), Economic growth (Johnson and Lenartowicz 1998), entrepreneurial orientation and global competitiveness (Lee and Peterson 2000), Leadership Theories (House et.al 2002), construction projects (Pheng and Yuquan 2002), Commercial airline Pilots (Merritt 1998), reward management (Chiang 2005), Product diffusion (Dwyer, Mesak and Hsu 2005), Brand Loyalty (Lam and Lee 2005), Customer Relationship Management (Sigala 2006). Hofstede's work is increasingly used in business research making it the dominant cultural paradigm (Sivakumar and Nakata 2000).

The effects of culture and socioeconomics on the global brand image performance have been examined by Roth (1995) employing Hofstede's dimensions. The findings show that cultural power distance, cultural individualism, and regional socioeconomics affect the performance of functional brand image strategies like problem prevention and solving. The effect of National culture on new product development has been

examined by Nakata and Sivakumar (1996). The researchers have incorporated Hofstede's cultural dimensions to find the relationship between culture and new product development. The findings show that four of the five cultural factors: individualism, power distance, masculinity, and uncertainty avoidance have positive and negative effects on new product development. Aaker and Williams (1998) examine the persuasive effect of emotional appeals in advertising, on members of collectivistic versus individualistic cultures. The Chinese respondents are regarded as collectivistic and the respondents from United States represent individualistic culture based on the categorization of these countries by Hofstede (1980).

To measure the cultural values of Russia, Naumov and Puffer (2000) employ Hofstede's dimensions. The Russian culture in mid-nineties was moderate in individualism, masculinity, and power distance, and high on paternalism and uncertainty avoidance. Generational differences were evidenced as younger and less experienced exhibited higher levels of masculinity and paternalism. Steenkamp 2001 reviews and discusses the role of national culture in international marketing research. He discusses the national cultural frameworks of Hofstede (1980) and Schwartz (1994), and their interrelations.

The effect of culture on online behavior is discussed by Pavlou and Chai (2002). They apply theory of planned behavior to capture behavioral intentions for online transactions in China and United States. They employ Hofstede's (2001) cultural dimensions to study adoption of e-commerce across the countries. The results of the study emphasize the role of cultural differences on consumer e-commerce adoption. Lam and Lee (2005) examine the effect of culture on brand loyalty. Hofstede's (1980) dimensions of culture have been employed to find if culture influences proneness to brand loyalty. The findings of the study showed that respondents who scored high on individualism and uncertainty avoidance were more prone to be brand loyal. The relationship between masculinity and proneness to brand loyalty though is positive but it is non-significant.

The effect of cross-cultural differences on consumer impatience has been examined by Chen, NG and Rao (2005). Their research regards Hofstede's fifth dimension of "long-term orientation" as the foundation of the study. Dwyer, Mesak and Hsu (2005) investigate the influence of national culture on cross-cultural product diffusion using Hofstede's (1980) cultural dimensions. They found that masculinity and power distance had a positive relationship with cross-national product diffusion. Malhotra et al. (2005) examine service quality dimensions such as reliability, customer understanding, responsiveness, competence, courtesy, communication, credibility, security and tangibility on the basis of study in three countries India, Indonesia and United States. Sigala (2006) investigates the effect of cultural dimensions on eCRM implementation using Hofstede's model and finds that e-shoppers have different expectations on eCRM features depending on their cultural profile but some features are expected by all e-shoppers.

CONCLUSIONS

Hofstede's model of cultural dimensions is a pioneer model of operationalizing culture in international business. Since 1980 there is wide application in every sphere of business research, thus proving its robustness and reliability. The researchers should employ this model for further research to further see its validity in different cultural settings.

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MARKET SEGMENTATION IN FMCG: TIME TO DERIVE NEW BASIS FOR MARKET SEGMENTATION

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ABSTRACT

Even though market segmentation is one of the most established concepts in marketing, there are still some shortfalls in the body of research, which create a gap between theory and practice and lead to failure in the implementation of segmentation. This research paper highlights the need of using a new theoretical foundation of market segmentation which will help the FMCG companies to segment the market in competition oriented marketing to gain fruitful results.

KEYWORDS

Market Segmentation, FMCG, Problems in market segmentation, Past Market Segmentation Strategies, Role of Future Marketing Segmentation.

INTRODUCTION

When it comes to marketing strategies, most people spontaneously think about the 4P (Product, Price, Place, Promotion) – maybe extended by three more Ps for marketing services (People, Processes, Physical Evidence).

Market segmentation and the identification of target markets, however, are an important element of each marketing strategy. They are the basis for determining any particular marketing mix. The importance of market segmentation results from the fact that the buyers of a product or a service are no homogenous group.

Actually, every buyer has individual needs, preferences, resources and behaviors. Since it is virtually impossible to cater for every customer's individual characteristics, marketers group customers to market segments by variables they have in common. These common characteristics allow developing a standardized marketing mix for all customers in this segment.

REVIEW OF LITERATURE

William D. Neal; John Wurst, Ph.D. Marketing Research In their article, "Advances in market segmentation"; Spring, 2001, quoted in "Magazine of Management and Applications", "For most business firms, locality and effectively targeting unique market segments is both a reality and a necessity in today's competitive market place. Creative market segmentation strategies usually afford the business organization a strategic advantage over their competition and provide marketing efficiencies that greatly improve customer retention and profitability. If a firm can address its markets by way of a creative new vision of how that market is structured and operates, and can uncover the needs and wants of the segments therein, then it has the opportunity to act on that vision to enhance its own profitability, often at the expense of the competition.

Jerry W. Thomas, President/CEO at Dallas-Fort Worth-based Decision Analyst, quoted that, "The purpose of segmentation is the concentration of marketing energy and force on the subdivision (or the market segment) to gain the competitive advantage within the segment. If a brand pours its entire budget into one media, it can possibly dominate the segment of the market that listens to that radio station or reads that magazine. Markets can be segmented by hobbies, by political affiliation, by religion, by special interest groups, by sports team loyalties, by university attended, and hundreds of other variables. You are only limited by your marketing imagination. Verbatim comments from consumers are used to build batteries of psychographic or lifestyle statements. A good psychographic Segmentation is to first identify the statements that are more important (i.e., the statements that tend to explain or cause specific consumer behaviors). The market should be broadly defined for a segmentation analysis to be most effective. In other words, don't preordain the results by sampling restrictions. Often, hidden in plain view in the plain old cross-tabs, are tremendous findings that could form the basis for new or improved marketing strategies, advertising campaigns, or new products."

Charlie Nelson, in his work on Market Segmentation: the Role of Futures Research stated that "Market segmentation is important because markets are becoming increasingly diverse and it is rare for mass marketing to be a profitable strategy. Market segmentation enables more accurate and effective communication of benefits in relation to needs. It helps to identify growth opportunities."

Michael Richarme, vice president at Dallas-Fort Worth based Decision Analyst Inc in his article, Business Segmentation: Emerging Approaches to More Meaningful Clusters quoted that, "Consumer opinion research has a well-established track record, stretching over the past five or six decades. Conducting opinion research among businesses, however, is much more problematic. This is particularly evident at the simplest level of analysis, customer segmentation. However, segmentation techniques are evolving and techniques that were common practice in the recent past are rapidly being supplanted by newer, more meaningful segmentation techniques. The underlying purpose of segmentation is to divide customers into distinct groups, such that marketing messages can be tailored to their specific needs. There are some general criteria for the establishment of these distinct groups. The groups of customers, or segments, should share more commonalities within each group than there are between groups. The segments should also be large enough for organizations to mount cost-effective campaigns, and should be reachable through most media avenues. The simple demographic-based segmentation approaches gave way to psychographic segmentation, focusing on lifestyle choices.

- The first technique, labeled Business Descriptors, was an even more ambitious attempt to classify businesses by specific descriptors, such as the business revenue, number of employees, number of product lines, and number of key competitors, market share, and similar items.

- The second technique, labeled Type of Business, attempts to divide firms into segments with a standardized classification scheme, such as the Standard Industrial Classification, or SIC code.
- The third technique, labeled Location of Business, examines the physical addresses of businesses and uses geography as the major clustering factor
- The fourth technique, labeled Revenue, simply breaks firms into size categories based on their revenues. This approach recognizes that even though a business might be small in comparison to others, it might also provide the organization with a more substantial revenue stream than that provided by other larger businesses.
- The first new technique, labeled Future Vision addresses the mind-set of the decision-makers within the firm, and can be a valuable data point in developing a firm's positioning strategy.
- The second new technique, labeled Criticality to Business Mission, addresses the relationship between the firm and the products and services an organization provides, and is a critical step toward differentiation.
- The third new technique, labeled Level and Type of Decision-Maker, addresses the communication channels a firm must develop in order to ensure the marketing message is delivered to the appropriate decision nexus within the firm.
- The fourth new technique, labeled Contribution Margin, addresses whether a potential customer's bottom-line profitability truly allows a worthwhile relationship.

PROBLEM OF THE STUDY

Fast Moving Consumer Goods companies matured in the 1960s and the massive competition that followed forced the companies to consolidate and find new ways of making money. They did this by learning to segment markets into groups of customers with common needs and buying motives, and then developing solutions that appealed particularly strongly to those segments.

This was hard work but it paid off; smaller sub-markets (segments) were penetrated more deeply and at premium prices. Marketers had made a major discovery – how to grow revenues from saturated markets.

Today, the situation is somewhat different. If the supermarkets were segmenting effectively, their urgent moves into new areas of sales growth would not be necessary.

WHY FUTURE ATTENTION IS NEEDED ON MARKET SEGMENTATION OF FMCG

The FMCG companies are faced with basically four problems. They are:

➔ FIRST: All for one – or one for all

Ask any marketer to name a company that is good at segmentation and you're likely to get answers like Unilever and Procter and Gamble. FMCG companies tend to be seen as industry leaders in the complex field of segmentation. They claim that they segment effectively – and it must be working for them, because they do not give away their secrets readily. As part of perhaps the most competitive industry in the world, FMCG companies have had to segment or they would not have survived.

But time is running out for these industries. In the post mass-market age, they will reach their true maturity stage sooner or later. Competition is going to increase exponentially as a surfeit of companies, used to annual sales growth without really trying, suddenly finding them fighting over a static market. Consolidation is likely to occur.

When a market moves from growth to maturity, these companies are faced with a problem. They can learn to work differently, diversify into a different area that is still growing,

➔ SECOND: The price isn't right

The most of the companies fall in the price trap as they feel it is the easiest method of segmentation. But there's no need to fall into the price/diversification trap if you really don't want to. Any company, no matter how small and no matter which field it is in, can choose to focus customer needs in a chosen market and segment it. It's hard to get this right. It takes a lot of work – and usually investment. And critically, it requires companies to buy in to the 'new' way of doing things. But as we get further into the twenty-first century, the survivors will be those companies that will:

- Compete on price
- Diversify into growth areas
- Segment- Differentiate the offer, its communication and delivery

Many successful companies compete on price because that's the easiest option – or at least, the one that takes the least thinking. There is an increasing trend for companies to develop the big-box experience that's cheap in price, low on service and low on differentiation.

But how many products can be named where the cheapest example is the market leader? Rather than going down that path, it's time companies acknowledged that competing on price alone is no longer viable.

➔ THIRD: Dependability on loyalty cards

Loyalty cards are used to catch data, schemes that divide our consumer data into millions of different combinations. Campaigns that encourage us to make repeat purchases, or buy things that other people have bought.

In fact, having loyalty cards and data mining programmes does not automatically mean that you have good segmentation. Consumer companies have a surfeit of data, but they don't always know what to do with it. As a consequence, some companies are reaching a state of data paralysis. They know what people buy. The problem is that they don't know why people buy – so are still not ahead of the game.

This internally focused data can only lead to inadequate, inward-looking segmentation techniques that fail to bring new customers to products or fail to develop new products for existing (bored) customers. They operate by saying things like 'other people like you bought this, so you'll like it too.'

➔ FOURTH: The hard end of marketing

Demographics have their place, but having a good data-mining system does not mean your segmentation is as competitive as it could be. Data can give you clues about how people might

For the most ambitious companies, let's do away with idea of trying to calculate 'what the customer wants' altogether. Instead, let's consider the situation, or 'context', that customers might find them in. We know that it's the situation that drives the purchase rather than the individual. So a better segmentation should help the company to market to the context, rather than the individual.

'Context marketing' is not a new idea – but apart from a few trials, it has not been picked up in the way it could be. 'Context marketing' shifts the focus from the customer and onto the market. It dismisses the idea of a mass market and brings difficult questions into play,

- How do we develop strategies to market mass-produced goods and services to a market which is rapidly fragmenting?
- How do we segment our markets and target economically viable groups of consumers who are apparently behaving unpredictably?
- Even if we can understand the market behaviour of these consumers, how do we locate them?

THE CHANGING SCENARIO

For most business firms, locating and effectively targeting unique market segments is both a reality and a necessity in today's competitive market place. Creative market segmentation strategies usually afford the business organization a strategic advantage over their competition and provide marketing efficiencies that greatly improve customer retention and profitability. If a firm can address its markets by way of a creative new vision of how that market is structured and operates, and can uncover the needs and wants of the segments therein, then it has the opportunity to act on that vision to enhance its own profitability, often at the expense of the competition.

From a marketing perspective, the acid test for successful market segmentation is to demonstrate that the derived segments respond differently to variations in the marketing mix. Unfortunately, many market segmentation schemes fail this key test.

Since the 1950's we have typically used cluster analysis and search procedures (AID, CHAID, and CART) to develop market segments from customer/survey data. Since about 1995, there have been some interesting new developments in and approaches to market segmentation research. These newer concepts and techniques speculate a bit on the future of market segmentation.

These newer concepts and techniques include:

1. Multidimensional Segmentation
2. Artificial Neural Networks
3. Latent Class Models
4. Fuzzy and Overlapping Clustering
5. Occasion-based Segmentation

1) Multidimensional Segmentation

In segmenting markets, most researchers use a single set of basis variables, be they demographics, psychographics, product category-related attitudes, product usage-related behaviors, derived importance from conjoint exercises, latent structures or whatever. However, there is no reason to limit the basis for segmentation to only one type of variable when many criteria actually determine buyers' response to offerings in the category. These criteria are multidimensional, encompassing attitudes, needs, values, benefits, means, occasions, and prior experiences, depending on the product or service category and the buyer.

A segmentation scheme based on only one set of basis variables may limit the utility of the information to the firm because various users of segmentation schemes have different needs. For example, product development managers may want the market segmented on perceived values and benefits sought; marketing communications managers may want the market segmented into groups of buyers with similar needs, desires, or psychographic profiles; and sales managers may want the market segmented on sales potential or profitability.

A segmentation scheme based on multiple dimensions, using separate segmentation schemes for each one, is often more useful and more flexible for planning marketing strategy and executing marketing tactics. Thus, one may consider different segmentations on a sample of buyers using different bases, say, performance needs, means (the ability to pay), and desires concerning product-user identity.

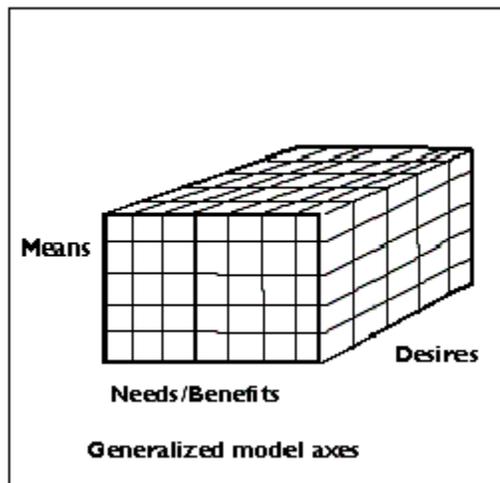


Figure 1 the multi-dimensional segmentation model

In the past such segmentation schemes were deemed as too confusing and produced too many segments for marketing managers to address effectively. Yet, in this era of flexible manufacturing, micro-niche targeting, and multi-channel direct marketing, many market planners now consider and use market segmentation schemes that support much finer targeting efforts.

Each surveyed customer, now a member of one segment in each of the three segmentation schemes, was assigned to a single cell in the segmentation matrix. Thus respondents in each cell were very similar on all three dimensions and different from respondents in other cells on at least one set of basis variables.

This approach provided a much cleaner and more understandable segmentation scheme than had we tried to dump all three sets of measures into a single clustering effort.

Alone, this segmentation approach provides considerable insight into the marketplace structure. However, each cell of the segmentation scheme, along with means and distributions of all descriptor variables, can be put into a database and manipulated to provide a more dynamic understanding of the market structure and allow the user to re-form the cells into new segmentation schemes. With a well-designed segment manager program, the user can aggregate cells into specific market segments based on the varying needs of different internal functional and departmental users, while using a common base of homogeneous cells for all of the segmentation schemes in the company. Thus, any specific tactical segmentation scheme can be directly linked to the strategic segments or to any other tactical segmentation scheme.

2) Artificial Neural Networks

Starting in the early 1990's, artificial neural networks (ANN) have been developed to address a host of analytical problems. Both the appeal and the bane of ANN's is that they do not require any particular underlying model formulation and they do not require any particular data structure, as do, say, regression analysis or factor analysis.

Generally, ANN's are given a set of input variables and a set of known outcomes, and the algorithm is asked to find the best relationship between the inputs and the outputs. It does this by initially forming a trial relationship on a subset of the data, called the learning set or calibration set. The algorithm then backs up through one or more "hidden layers" of input junctures, or neurons, and adjusts the weight of each input to that neuron to maximize its contribution to accurately predicting the outcome. This learning procedure is repeated over and over for each neuron until the process is halted by user specifications, or there is 100% accuracy in the prediction of a separate test sample. Results are tested and validated with other samples.

There are some specialized neural networks that are designed to cluster cases of data. These fall in the class of unsupervised neural networks, meaning that the outcomes are not pre-specified. Typically, these algorithms attempt to form clusters based on minimizing variance around a specified set of "seeds" or based on optimizing a transform function. Currently, one of the best known of these clustering ANN's is the Kohonen Self-Organizing Map. All ANN's of this type require a large number of cases because they need a large learning sample, a large test sample, and a large validation sample.

Results have been mixed - some extremely well, others not so good. The usefulness of the clustering solution seems very dependent on the initial selection of seeds or the shape of the transform function. Many alternative runs may be necessary to find an acceptable solution.

One positive aspect of using ANN's to form clusters is that they tend to handle messy data well, that is missing variable data, variables with non-standard distributions, and variables using different scales.

Unlike cluster analysis, ANN's internally decide the relative impact, or weight, of an input variable on the results. Thus, it is difficult to externally weight any of the variables so that they have a higher influence on the clustering outcome.

3) Latent Class Models (Mixture Models)

Unlike other segmentation approaches, latent class is based upon statistical modeling, often involving dependent variable relationships characterized by regression and logit specifications. It assumes that data are generated by a mixture of distributions, and the analysis involves simultaneously estimating segment level models and determining segment identities. After the estimation process, individual respondents can be assigned into segments based upon their posterior probability of membership. For example, using only product selection choice data where respondents are never directly asked about brand, price, and features, a latent class analysis can reveal segments that are brand loyal, price sensitive, feature sensitive, etc. through an examination of the resulting coefficient estimates. In practice, the use of latent class analysis in conjoint and discrete choice applications has received much attention, and user-friendly software is now readily available. Cohen and Ramaswamy (1998) cite two studies concluding that latent class conjoint was superior to several different segmentation applications to conjoint data in terms of fit, descriptive validity, and predictive validity. However, other investigations comparing latent class results with procedures that first cluster based on individual level response data, and as a second step develop models within the segments found little difference in the resultant size and membership of the two clustering solutions. However, the overall explained variance in the dependent variable, thus its predictive power, was greater with the LCM approach.

While latent class analysis offers some advantages over more conventional procedures, it requires assumptions and specifications that are not needed in traditional approaches. When dependence relationships are involved, the importance of that relationship in forming segments may not be sufficient for strategic and many tactical market segmentation efforts. This is true of any segmentation procedure utilizing dependent relationships such as CHAID and CART. However, the methods can be very useful for better understanding market structures.

4) Fuzzy and Overlapping Clustering

Most clustering algorithms are programmed so that all cases are assigned to one and only one cluster. That is, the algorithms require that the results be mutually exclusive and exhaustive.

The basic idea in fuzzy (or overlapping) clustering is to allow a single case to be assigned to more than one cluster, or alternatively to assign a portion of a case to more than one cluster. Currently, there is no widely available software to handle this procedure, and there may be little need for it.

Most clustering routines assume cases are grouped into hyper-spheroids in multidimensional space. Cases are assigned to a cluster based on their multivariate distance from the center of the spheroids or based on their probability of belonging to each spheroid. In the situation where a particular case is nearly equal distant, or has nearly equal probability of belonging to more than one spheroid, the standard clustering program will assign the case to the closest one, even if it takes five decimal points to do it. Many statisticians and research methodologists believe that there should be an alternative for the clustering algorithm to assign the case to each of the clusters.

In theory, that sounds fine. Practice is a different story. The effect of such a procedure would be to increase the variance within each cluster, thus reducing the variance explained by clustering. Cluster homogeneity would suffer, cluster overlap would increase, and the resulting clusters would be much harder to explain because they would be less differentiated. It would seem better practice to throw these ambivalent cases out of the analysis.

Throwing out cases that do not fit well is very controversial. However, I believe our objective in market segmentation, and the underlying clustering of cases, is to identify unique and differentiated markets, recognizing that some cases may be "fence sitters" between segments. Cases that depreciate the differentiation should be held out of the analysis. Thus, I see little need to further develop the concept of fuzzy or over-lapping clustering routines.

By way of an example, think about the situation where you may ask respondents to complete a conjoint trade-off task about their drink selection preferences in different situations, say, at a business social function and at a bar with a group of friends. The conjoint attributes and levels are identical, but respondents' resulting profile preference ratings may be different, based on the situation. If you independently derive importance's for each attribute for each of those two occasions, you will get two sets of derived importances for each respondent. There is no reason whatsoever that you cannot subject both sets of derived importances for these respondents to a standard clustering routine. The same respondent may then show up in two different clusters, depending on the results from their situational preferences.

5) Occasion-Based Segmentation

A particular challenge in market segmentation analysis is how to form segments when circumstances or occasions drive product preference and selection. For example, it is well known that beer brand preference and brand selection is often driven by the situational circumstances of the purchaser at the time of consumption. Restaurant selection is also well known to be dependent on occasion and circumstance.

Mechanically, this is not very difficult. All as it takes is a different way of looking at the data input file to standard clustering routines. A case becomes an occasion with individual respondent information appended to each occasion-case.

Here is an example. Let's say we are measuring the relative influence on brand choice of a set of brands, product attributes, and price variations for carbonated soft drinks (CSD's) for immediate consumption in a variety of store-type settings - grocery, convenience, mass merchandise, deli, and drug. Each respondent is asked to execute a point allocation of importance of each of the attributes, plus price and brand name, on influencing their selection for each store setting that they have experienced in the last 10 days. In addition, we ask demographic and consumption volume profile information to better describes the respondent.

We need to construct the data file as shown below, showing the first two respondents.

Occasion 1 measures	Respondent 1 profile data
Occasion 2 measures	Respondent 1 profile data (duplicated)
Occasion 3 measures	Respondent 1 profile data (duplicated)
Occasion 1 measures	Respondent 2 profile data
Occasion 3 measures	Respondent 2 profile data (duplicated)
Occasion 5 measures	Respondent 2 profile data (duplicated)

Table 1 Occasion Based Segmentation

Here, each set of point allocation data for each store setting becomes a case. The respondents' profiling data is appended to each set of occasion ratings.

At this point we have two choices. We could execute a clustering of the point allocation data for each type of shopping trip, thus deriving segments based on importance drivers within store type, separately. Alternatively, we could submit all of the point allocation data to a clustering algorithm and find clusters or segments where the importance drivers are similar within each cluster and different between clusters, regardless of the occasion. The resulting clusters may or may not differentiate between store types. Either way, we have executed an occasion-based segmentation.

CONCLUSION

We can say future Market Segmentation will depend upon 5 golden rules:

1. **There are "No Rules":** Getting it right isn't simple at all. But never copy. Each successful segmentation process is different, unique, and unrepeatable. The "me too" attitude leads to failure. Originality could possibly break a market open.
2. **"Reducing" a market?** Sometimes it's about expanding it. Some of the most successful marketing plans have chosen a larger market by "expanding" their segmentation, not only reducing it.
3. **The "Value" of the segment:** The best segments must have Potential, Lifespan, Accessibility, and Profitability. The key is identifying which segments provide value in terms of potential, lifespan, accessibility and profitability; because a sales strategy's effectiveness increases according to our capacity to size segments, identify them, and dissect them.
4. **It must be "Different":** Each company requires a different Market Segmentation. Being original and efficient with segmentation is the key to the amount of success achieved. We create new and personalized ways of segmenting, creating Hybrid models that are easy to interpret and explain (causes, value, behavioral, psychographic, demographic, and attitudinal) in order to obtain the most useful Results from each sectorial situation and each company.
5. **Choosing "The Axes" properly:** Time segmentation and spending causes, demographic but with attitudinal axes, and Psychographic but with a behavioral aspect? Surely there is an answer, but to find it we must investigate, test, and challenge the market.

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EMPOWERMENT OF WOMEN THROUGH MICRO FINANCE: A BOON FOR DEVELOPMENT OF ECONOMY

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ABSTRACT

There is growing interest in microfinance as one of the avenues to enable low income population to access financial services. India with a population of around 300 million poor people has emerged as a large potential opportunity for the microfinance sector. With only 48% of the population accessing financial services, expanding the microfinance sector is also important from the perspective of financial inclusion (World Bank, 2008). Since 2004, the Reserve Bank of India (RBI) has emphasised financial inclusion as an important goal.

Microfinance is emerging as a powerful instrument for poverty alleviation in the new economy. In India, Microfinance scene is dominated by Self Help Group (SHGs)-Bank Linkage Programme as a cost effective mechanism for providing financial services to the "Unreached Poor" which has been successful not only in meeting financial needs of the rural poor women but also strengthen collective self help capacities of the poor ,leading to their empowerment. Rapid progress in SHG formation has now turned into an empowerment movement among women across the country.

Empowerment is the state of feelings of self-empowered to take control of one's own destiny. Empowering women puts the spotlight on education and employment which are an essential element to sustainable development.

The paper looks at the impact of Micro finance with respect to poverty alleviation and socioeconomic empowerment of rural women. An effort is also made to suggest the ways to increase women empowerment.

KEYWORDS

women empowerment, poverty, rural women, microfinance.

INTRODUCTION

Micro-finance refers to small savings, credit and insurance services extended to socially and economically disadvantaged segments of society. In the Indian context terms like "small and marginal farmers", " rural artisans" and "economically weaker sections" have been used to broadly define micro-finance customers. The recent Task Force on Micro Finance has defined it as "provision of thrift, credit and other financial services and products of very small amounts to the poor in rural, semi urban or urban areas, for enabling them to raise their income levels and improve living standards". At present, a large part of micro finance activity is confined to credit only. Women constitute a vast majority of users of micro-credit and savings services.

In the NSSO survey it has also been estimated that a large percentage of rural women in the age group of 15 years and above, who are usually engaged in household work, are willing to accept work at household premises (29.3 percent), in activities such as dairy (9.5 percent), poultry (3 percent), cattle rearing, spinning and weaving (3.4 percent), tailoring (6.1 percent) and manufacturing of wood and cane products etc. Amongst the women surveyed, 27.5 percent rural women were seeking regular full-time work, and 65.3 percent were seeking part-time work. To start or to carry on such work, 53.6 percent women wanted initial finance on easy terms, and 22.2 percent wanted working capital facilities, as can be seen from the table below:

Assistance Required (by women marginal workers seeking or available for work at their household premises).	Percent of Women Seeking Assistance
No assistance	2.1

Initial finance on easy terms	53.6
Working capital facilities	22.2
Raw materials availability	4.6
Marketing	1.7
Training	10.5
Accommodation	0.4
Other assistance	4.9
Total	100

MICRO FINANCE INSTRUMENT FOR WOMEN'S EMPOWERMENT

Micro Finance for the poor and women has received extensive recognition as a strategy for poverty reduction and for economic empowerment. Increasingly in the last five years, there is questioning of whether micro credit is most effective approach to economic empowerment of poorest and, among them, women in particular. Development practitioners in India and developing countries often argue that the exaggerated focus on micro finance as a solution for the poor has led to neglect by the state and public institutions in addressing employment and livelihood needs of the poor.

Credit for empowerment is about organizing people, particularly around credit and building capacities to manage money. The focus is on getting the poor to mobilize their own funds, building their capacities and empowering them to leverage external credit. Perception women is that learning to manage money and rotate funds builds women's capacities and confidence to intervene in local governance beyond the limited goals of ensuring access to credit. Further, it combines the goals of financial sustainability with that of creating community owned institutions. Before 1990's, credit schemes for rural women were almost negligible. The concept of women's credit was born on the insistence by women oriented studies that highlighted the discrimination and struggle of women in having the access of credit. However, there is a perceptible gap in financing genuine credit needs of the poor especially women in the rural sector.

There are certain misconception about the poor people that they need loan at subsidized rate of interest on soft terms, they lack education, skill, capacity to save, credit worthiness and therefore are not bankable. Nevertheless, the experience of several SHGs reveal that rural poor are actually efficient managers of credit and finance. Availability of timely and adequate credit is essential for them to undertake any economic activity rather than credit subsidy.

The Government measures have attempted to help the poor by implementing different poverty alleviation programmes but with little success. Since most of them are target based involving lengthy procedures for loan disbursement, high transaction costs, and lack of supervision and monitoring. Since the credit requirements of the rural poor cannot be adopted on project lending approach as it is in the case of organized sector, there emerged the need for an informal credit supply through SHGs. The rural poor with the assistance from NGOs have demonstrated their potential for self help to secure economic and financial strength. Various case studies show that there is a positive correlation between credit availability and women's empowerment.

LITERATURE REVIEW

Microfinance has enjoyed a wealth of literature in the past, and is quite often seen as one of the most significant tools developed (in recent history) to combat poverty at the grassroots level. This proposal focuses on five selected studies in order to survey a representative sample of literature addressing issues faced by the formal microfinance sector. Today concerns are abound regarding the sustainability of the microfinance enterprises, specifically because of the nature of the lending itself. Loans are constantly being made to high-risk low income individuals, with unique and innovative methods being utilized to create re-payment incentives. Thus, the most significant concern at the moment is whether the formal microfinance institutions are actually impacting poverty in a significant manner. It is with this idea in mind that the literature was selected.

METHODOLOGY

The paper takes a close look into the life experiences of a few women to explore the pressing question of, what makes 'poor' women entrepreneurs? Is it support from their husbands; their parents and siblings or extended kin; their education; their work experience; their health; natural and other infrastructural resource availability and access; what combination of these factors work as motivating factors? What pushes her to participate in income generation; to withstand shocks in it and to continue with it or what factors lead to failure?

The diversity in the combination of factors that contribute to women's experiences in income generation is high and beyond the scope of this paper or any research for that matter. Nevertheless, this paper based on the secondary data.

OBJECTIVE

- To know the Sources of Credit for Rural Households.
- To Analyze the women seeking financial assistance.
- To Analyze the impact of Micro finance with respect to poverty alleviation and socioeconomic empowerment of rural women.
- To study the problems & challenges faced by rural women.
- To suggest the ways to increase women empowerment.

SUPPLY OF MICRO-FINANCE SERVICES

RBI data shows that informal sources provide a significant part of the total credit needs of the rural population. The magnitude of the dependence of the rural poor on informal sources of credit can be observed from the findings of the All India Debt and Investment Survey, 1992, which shows that the share of the non-institutional agencies (informal sector) in the outstanding cash dues of the rural households was 36 percent. However, the dependence of rural households on such informal sources had reduced of their total outstanding dues steadily from 83.7 percent in 2005 to 36 percent in 2008.

This is shown in the table below.

Outstandings from Informal Sources as a Percentage of Total Dues, for Various Occupational Categories of Rural Households

Year	Cultivators	Non-Cultivators	All
2005	81.6	89.5	83.7
2006	60.3	89.2	70.8
2007	36.8	63.3	38.8
2008	33.7	44.7	36.0

WOMEN'S EMPOWERMENT AND MICRO FINANCE: DIFFERENT PARADIGMS

In India organizations like Self- Employed Women's Association (SEWA) among others with origins and affiliations in the Indian labour and women's movements identified credit as a major constraint in their work with informal sector women workers. The problem of women's access to credit was given particular emphasis at the first International Women's Conference in Mexico in 1975 as part of the emerging awareness of the importance of women's productive role both for national economies, and for women's rights. This led to the setting up of the Women's World Banking network and production of manuals for women's credit provision. Other women's organizations world-wide set up credit and savings components both as a way of increasing women's incomes and bringing women together to address wider gender issues. From the mid-1980s there was a mushrooming of donor, government and NGO-sponsored credit programmes in the wake of the 1985 Nairobi women's conference (Mayoux, 1995a).

The 1980s and 1990s also saw development and rapid expansion of large minimalist poverty-targeted micro-finance institutions and networks like Grameen Bank, ACCION and Finca among others. In these organizations and others evidence of significantly higher female repayment rates led to increasing emphasis on targeting women as an efficiency strategy to increase credit recovery. A number of donors also saw female-targeted financially-sustainable micro-finance as a means of marrying internal demands for increased efficiency because of declining budgets with demands of the increasingly vocal gender lobbies.

The trend was further reinforced by the Micro Credit Summit Campaign starting in 1997 which had 'reaching and empowering women' as its second key goal after poverty reduction (RESULTS 1997). Micro-finance for women has recently been seen as a key strategy in meeting not only Millennium Goal 3 on gender equality, but also poverty Reduction, Health, HIV/AIDS and other goals.

FEMINIST EMPOWERMENT PARADIGM

This paradigm did not originate as a Northern imposition, but is firmly rooted in the development of some of the earliest micro-finance programmes in the South, including SEWA in India. It currently underlies the gender policies of many NGOs and the perspectives of some of the consultants and researchers looking at gender impact of micro-finance programmes (e.g. Chen 1996, Johnson, 1997).

Here the underlying concerns are gender equality and women's human rights. Women's empowerment is seen as an integral and inseparable part of a wider process of social transformation. The main target group is poor women and women capable of providing alternative female role models for change. Increasing attention has also been paid to men's role in challenging gender inequality.

Micro-finance is promoted as an entry point in the context of a wider strategy for women's economic and socio-political empowerment which focuses on gender awareness and feminist organization. As developed by Chen in her proposals for a sub sector approach to micro credit, based partly on SEWA's strategy and promoted by UNIFEM, microfinance must be:

Economic empowerment is however defined in more than individualist terms to include issues such as property rights, changes intra-household relations and transformation of the macro-economic context. Many organisations go further than interventions at the industry level to include gender-specific strategies for social and political empowerment. Some programmes have developed very effective means for integrating gender awareness into programmes and for organizing women and men to challenge and change gender discrimination. Some also have legal rights support for women and engage in gender advocacy. These interventions to increase social and political empowerment are seen as essential prerequisites for economic empowerment.

POVERTY REDUCTION PARADIGM

This underlies many NGO integrated poverty-targeted community development programmes. Poverty alleviation here is defined in broader terms than market incomes to encompass increasing capacities and choices and decreasing the vulnerability of poor people.

The main focus of programmes as a whole is on developing sustainable livelihoods, community development and social service provision like literacy, healthcare and infrastructure development. There is not only a concern with reaching the poor, but also the poorest.

Policy debates have focused particularly on the importance of small savings and loan provision for consumption as well as production, group formation and the possible justification for some level of subsidy for programmes working with particular client groups or in particular context.

Some programmes have developed effective methodologies for poverty targeting and/or operating in remote areas. Such strategies have recently become a focus of interest from some donors and also the Microcredit Summit Campaign.

Here, gender lobbies have argued for targeting women because of higher levels of female poverty and women's responsibility for household well-being. However although gender inequality is recognised as an issue, the focus is on assistance to households and there is a tendency to see gender issues as cultural and hence not subject to outside intervention.

FINANCIAL SUSTAINABILITY PARADIGM

The financial self-sustainability paradigm (also referred to as the financial systems approach or sustainability approach) underlies the models of microfinance promoted since the mid-1990s by most donor agencies and the Best Practice guidelines promoted in publications by USAID, World Bank, UNDP and CGAP.

The ultimate aim is large programmes which are profitable and fully self-supporting in competition with other private sector banking institutions and able to raise funds from international financial markets rather than relying on funds from development agencies. The main target group, despite claims to reach the poorest, is the 'bankable poor': small entrepreneurs and farmers. This emphasis on financial sustainability is seen as necessary to create institutions which reach significant numbers of poor people in the context of declining aid budgets and opposition to welfare and redistribution in macro-economic policy.

Within this paradigm gender lobbies have been able to argue for targeting women on the grounds of high female repayment rates and the need to stimulate women's economic activity as a hitherto underutilized resource for economic growth. They have had some success in ensuring that considerations of female targeting are integrated into conditions of micro-finance delivery and programme evaluation.

Definitions of empowerment are in individualist terms with the ultimate aim being the expansion of individual choice or capacity for Self-reliance. It is assumed that increasing women's access to micro-finance services will in itself lead to individual economic empowerment through enabling women's decisions about savings and credit use, enabling women to set up micro-enterprise, increasing incomes under their control. It is then assumed that this increased economic empowerment will lead to increased well-being of women and also to social and political empowerment.

PROBLEM AND CHALLENGES

These elements are:

- Inadequate book-keeping.
- Employment of too many relatives which increases social pressure to share benefits.
- Lack of capital.
- High interest rates.
- Lack of knowledge of the market and potential profitability, thus making the choice of business difficult.
- Inventory and inflation accounting is never undertaken.
- Credit policies that can gradually ruin their business (many customers cannot pay cash; on the other hand, suppliers are very harsh towards women).

CONCLUSIONS AND SUGGESTIONS

Viability of micro finance needs to be understood from a dimension that is far broader- in looking at its long-term aspects too, very little attention has been given to empowerment questions or ways in which both empowerment and sustainability aims may be accommodated. Failure to take into account impact on income also has potentially adverse implications for both repayment and outreach, and hence also for financial sustainability. An effort is made here to present some of these aspects to complete the picture.

A conclusion that emerges from this account is that micro finance can contribute to solving the problems of inadequate housing and urban services as an integral part of poverty alleviation programmes. The challenge lies in finding the level of flexibility in the credit instrument that could make it match the multiple credit requirements of the low income borrower without imposing unbearably high cost of monitoring its end use upon the lenders.

The organizations involved in micro credit initiatives should take account of the fact that:

- Credit is important for development but cannot by itself enable very poor women to overcome their poverty.
- Making credit available to women does not automatically mean they have control over its use and over any income they might generate from micro enterprises.
- In situations of chronic poverty it is more important to provide saving services than to offer credit.
- A useful indicator of the tangible impact of micro credit schemes is the number of additional proposals and demands presented by local villagers to public authorities.
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Nevertheless ensuring that the micro-finance sector continues to move forward in relation to gender equality and women's empowerment will require a long-term strategic process of the same order as the one in relation to poverty if gender is not to continue to 'evaporate' in a combination of complacency and resistance within donor agencies and the micro-finance sector. This will involve:

- Ongoing exchange of experience and innovation between practitioners
- Constant awareness and questioning of 'bad practice'
- lobbying donors for sufficient funding for empowerment strategies
- bringing together the different players in the sector to develop coherent policies and for gender advocacy.

India is the country where a collaborative model between banks, NGOs, MFIs and Women's organizations is furthest advanced. It therefore serves as a good starting point to look at what we know so far about 'Best Practice' in relation to micro-finance for women's empowerment and how different institutions can work together.

It is clear that gender strategies in micro finance need to look beyond just increasing women's access to savings and credit and organizing self help groups to look strategically at how programmes can actively promote gender equality and women's empowerment. Moreover the focus should be on developing a diversified micro finance sector where different type of organizations, NGO, MFIs and formal sector banks all should have gender policies adapted to the needs of their particular target groups/institutional roles and capacities and collaborate and work together to make a significant contribution to gender equality and pro-poor development.

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