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Books

•   Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill

•   Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio," Ohio State University.

Contributions to books

•   Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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•   Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

•   Kiran Ravi, Kaur Manpreet (2008), Global Competitiveness and Total Factor Productivity in Indian Manufacturing, International Journal of Indian Culture and Business Management, Vol. 1, No.4 pp. 434-449.

Conference papers

•   Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

Unpublished dissertations and theses

•   Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University.

Online resources

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•   Kelkar V. (2009): Towards a New Natutal Gas Policy, Economic and Political Weekly, Viewed on 11 September 2009 http://epw.in/epw/user/viewabstract.jsp

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PRODUCTIVITY AND THE EFFECT OF TAXATION ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

This paper sets out to examine the productivity and effect of taxation on economic growth of Nigeria. The question of whether tax policy regime efforts have improved the flexibility of the tax system and how far taxation has led to economic growth of Nigeria is the central focus of the paper. To achieve our objectives, log-transformation models of tax revenues and their bases were used to estimate the buoyancy of taxation while formulating a discretionary multiplier to isolate the effect of discretionary changes in tax policy on tax revenue in order to calculate the elasticity of taxes. To assess the impact of taxation on economic growth, we employed the two-stage least squares method on a set of simultaneous equations which was found to be over identified under both the order and rank conditions for identification. Our empirical analysis reveals that though the company income tax and excise tax seem promising, the general tax system is inflexible and may not produce the desired objective, if it should be used for correction of fiscal imbalances. It is also found that higher taxes discourage the growth in capital stock which by itself is a positive function of economic growth. Taxes attenuate labor supply growth which exerts a positive and significant impact on economic growth. The author therefore recommends that to achieve a flexible tax policy, the government should ensure that every individual tax is designed, so that its yield is responsive to national income (or its base) changes. Also government should refrain from the use of higher taxes especially where they affect labor and capital.

INTRODUCTION

In the words Ebajemito, Bamidele, Enendu and Abdulahi (2004), "economic growth indicates the ability of an economy to increase production of goods and services with the stock of capital and other factors of production within the economy".

Myles (2000) has it that "economic growth is the basis of increased prosperity" and maintained that the implementation of new production techniques which leads to introduction of new products, are the fundamentals of the growth process.

Taxation and its reforms are sometimes touted by some economists as having strong macroeconomic growth effects while others have questioned whether tax reform would have such beneficial effects on economic growth and contend that if tax cuts fail to produce the projected boost in economic growth, tax revenues could decline, putting upward pressure on the deficit, worsening levels of national saving and leading to laggard economic growth in the future (Engen and Skinner, 1996).

Interest in the topic is fueled further when firms complain about the business climate in general or about taxation in particular. Wasylenko (2004) maintained that in such situations, state or local policy makers would have the inevitable task of deciphering firms' complaints and deciding whether additional tax incentives and lower taxes represent economic rents or constitute a timely and necessary response. He further argued that the assertion that tax policy influences economic behavior has become a basic tenet for economic policy makers. According to him, periodically, the World Bank relates economic performance in developing countries to the level of taxation and finds that countries with lower marginal tax rates have higher economic growth.

Bartik (1994) has suggested that the interregional elasticity of economic activity with respect to taxes is between -0.1 and -0.6, or that 10 percent lower tax will raise employment, investment, or firm births between 1 and 6 percent. Wasylenko (2004) argues further, that policy makers' interest in the elasticity of economic activity with respect to taxes suggests that states and regions are indeed interested in manipulating their tax system in an attempt to attract business or to foster growth.

In this paper, we shall examine the productivity of the Nigerian tax system and also investigate the effect of taxation on economic growth, in the light of the accumulated economic evidence from the Nigerian data and make recommendations based on our findings. This study is needful to an economy such as Nigeria's, where fiscal and monetary policies are jointly used for correction of economic imbalances. Taxation as a variant of fiscal policy must be flexible, buoyant and hence productive if it must achieve the growth objective. The investigation of the efficiency and productivity of the Nigerian tax system and the recommendation thereof will not only inform the tax authorities but also the government at large on the position of the Nigerian tax system and how to gear towards perfection.

AN OVERVIEW OF THE NIGERIAN TAX SYSTEM

Taxation in Nigeria has been in existence even before the amalgamation of Nigeria as a political entity in 1914.It existed in the form of direct taxes and was introduced as a community tax into the Northern part of Nigeria in 1904 by Lord Lugard. With the amalgamation of the North and the south in 1914, direct taxation was introduced into the western territory in 1917 and extended to the East in 1928. The three regions, as Nigeria was previously constituted had various legislations for direct and indirect income taxes prior to independence in 1960. The enabling laws and regulations were fashioned based on 1948 British tax laws. The need to tax personal incomes of the entire Nigerians necessitated a uniform income Tax Law, known as the Income Tax Management Act (ITMA) of 1961 that came into force for the whole federation.

Today in Nigeria, the public sector is stratified into three levels of government, federal, state and local government, each having a different set of expenditure responsibility and taxing power. To avoid conflict among the three levels, the 1999 constitution classified governmental responsibilities and powers into exclusive, concurrent and residual categories or lists. The National Assembly is empowered to issue legislation on the taxation of incomes, profits and capital gains. It is also authorized to legislate on matters classified in the concurrent lists, particularly those related to the 'division of public revenue' – tax collection. The State Houses of Assembly, on the other hand, may prescribe the collection of any tax, fee or rate, or the administration of a law to provide for such collection by a local government council (1999 FRN: A1060-63). This constitutional provision enables the state government to impose, collect and spend any tax, fee or rate which is not expressly stipulated as being within the authority of the federal government. Consequently, the sate government is empowered to impose tax on all items in the

concurrent list as well as residual matters. However, according to the 1999 constitution, such laws are void if inconsistent with those of the National Assembly (Odusola 2006).

The Nigerian tax system is lopsided as it is dominated by tax revenue from oil. The federal government has jurisdiction over the most revenue yielding tax sources while the lower tiers are responsible for the less buoyant ones. For instance, in 1995, the break down of total tax and levy collection of the three tiers of government was 96.4 percent for the federal government, 3.2 percent for the state and 0.4 percent for the local government (Philips 1997:40). The federal government has jurisdiction over the petroleum profit tax, company income tax, custom and exercise duties, value added tax, personal income tax of armed forces, police, staff of the ministry of external affairs and federal capital residents, custom levies and education taxes. Taxes to be collected by the state government include personal income tax, withholding tax on turnover of individuals, stamp duties, road taxes, pools betting, lotteries gaming and casino taxes. The list of taxes and levies to be collected by the local government is very lengthy such taxes and levies include shop and kiosk rates, tenement rates, market taxes and levies excluding any market where state finance is involved, motor park levies, merriment and road closure levy to mention a few. Nevertheless, some of the tax revenue sources assigned to the local government are more expensive and hence unviable to pursue.

However, the mono-cultural (oil dominated) nature of the Nigerian economy seems to have placed the role of taxation in the country's management of fiscal policy to a dormant role or at most to a less active position. As Odusola (2006) noted, over the past four decades, the country's revenues were largely derived from primary products. Between 1960 and the early 1970s, revenue from agricultural products dominated, while revenue from other sources was considered as residual. Since the oil boom of 1973/4 to date, however, oil has dominated Nigeria's revenue structure, and its share in federally collected revenue rose from 26.3 per cent in 1970 to 81.8, 72.6 and 76.3 in 1979, 1989 and 1999, respectively. Over the past two decades oil has accounted for at least 70 per cent of the revenue, thus indicating that traditional tax revenue has never assumed a strong role in the country's management of fiscal policy. Instead of transforming or diversifying the existing revenue base, fiscal management has merely transited from one primary product-based revenue to another, making the economy susceptible to fluctuations of the international oil market.

The need to address this problem has led to several tax- policy reforms. Personal income tax for instance which is based on a 'pay as you earn' (PAYE) system have undergone several amendments to the 1961 ITMA Act. Also in 1985 PIT was increased from N600 or 10 percent of earned income to N2,000 plus 12.5 per cent of income exceeding N6,000. In 1989, a 15 per cent withholding tax was applied to savings deposits valued at N50,000 or more while tax on rental income was extended to cover chartered vessels, ships or aircraft. In addition, tax on the fees of directors was fixed at 15 per cent. These policies were geared to achieving effective protection for local industries, greater use of local raw materials and generating increased government revenue among others.

Since the implementation of the structural adjustment programme (SAP), however, taxes have been used to enhance the productivity and competitiveness of business enterprises. Consequently, attention has been focused on promoting exports of manufactures and reducing the tax burden of individual and companies. In line with this change in policy focus, many measures were undertaken. These involved, among others, reviewing custom and excise duties, continuing with the reduction of company and income taxes, expanding the range of tax exemptions and rebates, introducing capital allowance, expanding the duty drawback scheme and manufacturing-in-bond scheme, abolishing excise duty, implementing VAT, monetizing fringe benefits and increasing tax relief to low-income earners.(http;//www.buzzle.com 2006).

There were significant downward revisions in tax rates and import tariffs, as well the corporate tax rate was reduced from 45% to 40% in 1987 in order to encourage reinvestment activities by existing organizations and to encourage new investments. Similarly, import duties on certain categories of imports were reviewed. Among these was the elimination of duties on trucks and commercial vehicles to ease transportation problem in the country. Also, duty exemptions were granted on items required on some public sector projects. Generous tariff concessions were also allowed on machinery and raw materials that could not be sourced locally, at least not in the short run (Ariyo; 1997).

In 1990 further amendments were made to PIT, apart from providing additional individual tax allowances, minimum taxation was reduced from 1 percent to 0.5 percent, so that individuals with incomes of N3,000 or less were exempt from submitting tax returns. Non-residents were exempt from withholding tax on interest accruing in deposit accounts. Personal allowances were further extended in 1992 to reduce the tax burden of individuals while the monetization and taxation of fringe benefits were introduced.

The application of ITMA varied across regions/states, causing the burden of multiple taxes on individuals. As a result two study groups were subsequently set up in 1991to review the situation and improve tax collection. The 1961 ITMA was effectively repealed and replaced by the personal in come tax, decree, generally referred to as decree No. 104 of 1993 which was applicable with nation wide coverage and regulates income taxation in Nigeria (Aguolu 1997). However, there have been some amendments since its implementation. For instance in 1994, to achieve progressive taxation, the withholding tax was increased from 5 to 10 per cent. Directors' fees payable by property and investment companies were raised from N3,000 to N10,000 when a 30 per cent ceiling was set for PIT. Child allowance was first increased to N1,000 and then, in 1996, to N1,500 per child payable up to four children. In 1998 this became N2,500, and individual marginal taxes were decreased from 30 per cent in 1995 to 25 per cent in 1996.

A recurring problem with PIT is the non-compliance of employers to register their employees and to remit such taxes to relevant authorities. To address this, in 2002 the government amended the 1993 PIT Act to make non-compliant employers liable to penalties up to N25,000, as well as liable for the payment of all tax arrears. Employers failing to keep proper records would also face a penalty of N5,000. Company income tax (CIT) which was introduced in 1961 has been amended many times and is currently codified as the company income tax act 1990 (CITA). The Federal Board of Inland Revenue, whose operational arm is the Federal Inland Revenue Services (FIRS), is empowered to administer the tax. CITA policy regimes can be divided into two phases, namely, pre 1992 and post – 1992. The CIT policies in the pre-1992 era were narrowly based and characterized with increasing tax rates and overburdening of the taxpayers, which induced negative effects on savings and investment. Since 1992, however, measures have been taken to address these structural problems. For instance, excess profit tax was eliminated in 1991, and the capital transfer tax scrapped in 1996. Tax rates on company profits, payable on trade profits and investment income, fell from 45 per cent during 1970 to 1986 (when SAP was introduced) to 40 per cent between 1987 and 1991, further to 35 per cent for the period 1992-95 and to 30 per cent from 1996 to date. There is, however, a 20 per cent tax concession for certain companies: i.e, those engaged in agricultural production or mining of solid minerals with a maximum turnover of N0.5 million and those in manufacturing or the export promotion sector with a turnover not exceeding N1 million. The rates on capital allowances have been reduced continually to reflect the economic reality of the country (Odusola, 2006)

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In a similar manner, marginal personal income tax rate which was 70% from 1st April 1997 to 31st December 1986 was reduced to 55% between 1st January 1987and December 1991. From 1992 to 1995, it was further reduced to 35 percent while from 1996 to date it went down to 25 percent (see table 1)

These amendments however, are said to have created no much impact. One is therefore not in the know of the productivity and the effect of tax system on the growth of the Nigerian economy. In the light of this, the following policy questions are posed; what has been the place of tax in the growth of the Nigerian economy? Has the Nigerian tax policy regime efforts enhanced the flexibility (buoyancy and elasticity) of tax system? If the flexibility is enhanced, which components of the tax structure have been most responsive? If not which amongst them have been rigid?

MODEL SPECIFICATION

The growth theory of the 1950s and 1960s, typified by Solow (1956) and Swan (1956) was based on production function that had capital and labor (with labor measured in man-hours) as the inputs into production. In the approach, the output Y of an economy typically measured by GDP is determined by its economic resources, labor and capital. In stating this model, we shall adopt the Cobb-Douglas production function which resulted from the statistical investigations conducted jointly by C.W Cobb (a mathematician) and his friend P.H. Douglas (a congregational economist) in the field of industrial manufacturing in USA. This production function is given as

$$Y = Q = f(L,K) = AL^{\alpha}K^{\beta} \tag{1}$$

Where $Y, (Q)$ = output,

       L = labor
       K = capital
       A = a scale efficiency parameter
       $\propto$ = the output elasticity of labor
       β = the marginal productivity of capital

The Cobb-Douglas production function is intrinsically linear in the log of the variables. Thus,

$$\log Y = \log A + \alpha \log L + \beta \log K + Ut_1 \tag{1b}$$

Where

Ut_1 is the usual error term.

But higher taxes can discourage the net growth in the capital stock (k), that is the rate of investment. When there are high statutory tax rates on corporate and individual income, high effective capital gains tax rates and low depreciation allowances, the net growth in the capital stock will invariably decreases. Thus,

$$K = f(CIT, CED)$$

Explicitly,

$$K = b_0 + b_1 CIT + b_2 CED + Ut_2 \tag{2}$$

Where CIT is company income tax, CED is custom and excise duty and Ut_2 is the error term.. The b_{is} are the parameters to be estimated.

Also, taxes may attenuate labor supply growth L by discouraging labor force participation or by discouraging occupational choice like acquisition of education or certain skills and training. Also heavy taxation on labor supply can distort the efficient use of human capital by discouraging workers from employment in sectors with high social productivity but a heavy tax burden.

In the light of the above argument, we state the labor-tax relationship as follows

$$L = f(\text{tax rate})$$

or

$$L = \lambda_0 + \lambda_1 TR + e_t \tag{3}$$

Where TR is the tax rate and e_t is the stochastic term while λ_i are the parameters to be estimated.

The complete macro-economic simultaneous equations for the explanation of tax impact on economic growth are therefore given by

$$Y = AL^{\alpha} K^{\beta} \tag{1}$$
$$K = b_0 + b_i CIT + b_2 CED + U_t \tag{2}$$
$$L = \lambda_0 + \lambda TR + e_t \tag{3}$$

Having established the system of equations, we examine the identification condition of the equation as follows.

IDENTIFICATION CONDITION OF THE SYSTEM

A system of equation is identified if the equation is exactly identified or over identified. The order condition for identification states that for an equation to be identified, the total number of variables excluded from it but included in other equations must be at least as great as the number of equations of the system less one (Koutsoyiannis 1976:352). Symbolically it is expressed as.

$$K - M \geq G - 1$$

Where

    K =   total number of variables (endogenous and predetermined in the
Model).
    M =   number of variables, endogenous and exogenous included in a
particular equation.
    G = total number of endogenous variables
Applying this to our complete system of equations, we get
1.   6-3 > 3-1 $\Rightarrow$ 3 > 2 over identified
2.   6-3 > 3-1 $\Rightarrow$ 3 > 2 over identified
3.   6-2 > 3-1 $\Rightarrow$ 4 > 2 over identified.

However, the order condition for identification is necessary for a relation to be identified, but it is not sufficient, that is, it may be fulfilled in any particular equation and yet the relation may not be identified (Koutsoyiannis 1976:353).

In the light of this, we carry out a confirmatory test using the rank condition for identification.

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RANK CONDITION FOR IDENTIFICATION

This condition states that in a system of G equations, any particular equation is identified if and only if it is possible to construct at least one non zero determinant of order (G − 1) from the coefficients of the variables excluded from that particular equation but contained in other equations of the model. In consideration of this, we restate our models in the tabular form as follows.

Table of Structural Parameters

Equations	Variables					
	Y	L	K	CIT	CED	TR

All the equations are identified using the rank condition for identification. For instance the first equation (and others) have non zero determinants. The table of parameters of excluded variables of the first equation and the determinants are shown as follows.

Table of Parameters of Excluded Variables

CIT	CED	TR
1	1	0

$$\Delta_1 = \begin{vmatrix} 1 & 1 \\ & \end{vmatrix} = 0, \quad \Delta_2 = \begin{vmatrix} 1 & 0 \\ & \end{vmatrix} \neq 0, \quad \Delta_3 = \begin{vmatrix} 1 & 0 \\ & \end{vmatrix} \neq 0$$

Note that Δ_i stands for determinant

The productivity of the tax system will be measured using the income elasticity and buoyancy of tax revenue. While elasticity measures the change in tax revenue due to change in income, buoyancy measures the change in tax revenue due to change in income as well as other discretionary changes in tax policy. Following Rao (1979) Osoro (1991) and Murithi and Moyi (2003), buoyancy can be measures by the following equation.

$$T = a_0 Y^{a_1} e_t$$

Where

T = tax revenue,

Y = gross domestic product and

et = usual error term

a_1 = the estimate of tax buoyancy.

Thus, buoyancy of taxes is derived from the logarithmic regressions of unadjusted tax revenue data on their bases (or GDP). This is presented in logarithmic transformation as:

$$\log_e T_t = \log_e a_0 + a_1 \log_e Y_t + e_t$$

The equations on tax revenues and their bases are stated as follows.

$$\log_e CIT = C_0 + \log_e NOGDP + e_{t1}$$
$$\log_e PPT = d_o + d_1 \log TOR + e_{t2}$$
$$\log_e CED = f_o + f_1 \log NOGDP + e_{t3}$$
$$\log_e PIT = g_o + g_1 \log_e GDP$$
$$\log_e VAT = k_o + k_0 \log_e NOGDP$$

where

CIT	=	Company income tax
NOGDP	=	Non oil GDP
PPT	=	Petroleum profit tax
TOR	=	Total oil revenue
CED	=	Custom and excise duties
GDP	=	Gross domestic product
PIT	=	Personal income tax (Federally collected)
VAT	=	Value added tax
et_i	=	the usual error term

To measure the elasticity, it is necessary to get the adjusted tax revenue. This is done by isolating the effect of discretionary changes in tax policy on tax revenue. Various methods have been used in deriving this isolation effect. Mansfield (1972), Muriithi and Moyi (2003) and

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other authors have used the proportional adjustment (PA) method to eliminate or isolate the discretionary effect from the revenue series. This method is described as follows, firstly compute

$$T_{tt} = T_t - D$$

Where

T_t =   the actual tax yield in the tth year

D_t =   the budget estimate of the discretionary change(s) in the tth year

T_{tt} =   the tth years actual tax collection adjusted to the tax structure that existed that year. Secondly, obtain the adjusted series for the tth year, T_{tt} is then multiplied by the previous years ratio of the adjusted tax revenue with reference to the base year $(T^*)_{t-1}$ over the actual tax revenue T_{t-1}. This could be illustrated as follows

$$T_1^* = T_{1,1}$$
$$T_2^* = (T_1^*/T_1)\ T_{2,2}$$
$$T_t^* = (T_{t-1}^*/T_{t-1})\ T_{t,t}$$

Ariyo (1997) identified three problems associated with this approach first, there will be no data on revenue receipts directly and strictly attributable to discretionary changes in tax policy. Second, the approach assumes that the discretionary changes are as progressive as the underlying tax structure, an assumption that is not likely to hold. Thirdly, the approach is highly aggregative. Traditionally, elasticity is given by change in tax revenue over change in its base times the ratio of the value of the base to the tax yield at any point in time that is

$$\frac{dT}{dB} \quad \frac{B}{T}$$

Singer (1986) used the dummy variable technique, assigning dummy variable for each year in which there was an exogenous tax policy change. The resulting model is

$$Log\ T_g = a_0 + a_1;pgY + \Sigma_i D_i + e_r$$

Ariyo (1979) used the slope dummy variable equation resulting to the model

$$logGTR = a_o + a_1 logGDP + a_2 D_1 + a_3 D_2$$

where

$$D_2 = D_1 \times GDP$$

His function was applied to SAP and oil boom variables for all the equations.

In this study, we take cognizance of the fact that discretionary tax policy is not every year affair. For instance, the years when tax policy led to changes in tax rates (CIT, PIT) and others in Nigeria are 1970 − 1986, 1987 − 1991, 1992 − 1995 and 1996 − 2006 even if it is our contention still holds. In this regard, we introduce what, henceforth, will be referred to as 'discretionary multiplier' (r_d) which adjusts tax revenue to isolate the effect of discretionary changes in tax policy. The non discretionary tax revenue for each year is given by

$$TRa = (1 - r_d)\ TR = TR - \left[\frac{r_1 - r_2}{r_1}(TR) \right]$$

Where

$$r_d = \frac{r_1 - r_2}{r_1}$$

TRa =   adjusted total tax revenue

rd =   discretionary multiplier

r_1 =   tax rate prior to preceding change in tax rate

r_2 =   tax rate succeeding the former tax rate

Using the discretionary multiplier, we shall evaluate the elasticity of the personal income tax (PIT) (federally collected, that is proxied by the federal government independent revenues) and the company income tax (CIT).

METHOD OF DATA ANALYSIS

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Having determined that the model is over identified, the appropriate econometric technique to be used in the estimation of the model is the two-stage least squares (2SLS) method. Simple regression will be used on the tax revenues and their bases to determine their buoyancy and elasticity.

MODEL ESTIMATION AND EVALUATION

The results of the estimated equations for capital and labor in the simultaneous equation model are summarized as follows.

1. K_t = 26088.96 - 2.107CIT + 2.935CED

    SE (17035.66) (0.481) (0.372)

    t (1.531) (-4.383) (7.892)

    R^2 = 79.8%, F(2,24) = 47.32, DW= 2.2

2. Lt = 59.774 - 0.344Taxrate

    SE (2.635) (0.056)

    t (22.68) (-6.201)

    R^2 = 60.6%, f(1,25) = 38.45, DW = 2.013

The figures in parentheses are the standard errors (SE) and the t statistics (t) respectively.

The above result shows that (equation 1) the company income tax exerts a negative and significant influence on the capital outlay while the capital stock is a positive and significant function of custom and exercise duties. The dependent and explanatory variables are highly correlated, highly fitted and the overall regression is significant. There is also no presence of autocorrelation.

Equation 2 shows that tax rate exerts a negative and significant influence on the labor force. The higher the tax rate, the lower the labor forces. The two variables are highly correlated, highly fitted and have no autocorrelation. The overall regression is also significant.

The result of the reduced form equation of the GDP in the simultaneous in term of labor and capital is given as follows

$$LnGDP = -31.092 + 10.574LnLf + 0.386LnKt$$

$$SE = (4.123) \quad (1.605) \quad (0.255)$$

$$t = (-7.541) \quad (6.589) \quad (1.516)$$

$$R^2 = 88\%, \ f(2, 24) = 90.316, \ DW = 1.17$$

The above equation shows that both labor force and capital have a positive influence on the GDP. However, while the labor force impacts significantly on the GDP, the rate at which capital impacts on GDP is insignificant. The above three regression equations' results look fabulous; the R^2 are extremely high, the t values are generally significant, the parameter estimates mostly meet the a priori expectations and the overall regressions are statistically significant. The only fly in the ointment is that the Durbin-Watson statistic in the third equation is low. However, since the R^2 ‹ DW in all the equations, there is no need suspecting that the estimated regressions suffer from supuriosity (See Gujarati, 2006: 493, Granger and Newbold, 1974).

In summary company income tax negatively and significantly influences capital stock which by itself exerts a positive but insignificant impact on the gross domestic product. In other words, higher taxes discourage the net growth in the capital stock. Perhaps, the negative impact of taxes on capital reduces its efficacy in exerting influence on the GDP and hence, hinders the growth of the economy. Increase in tax rate also reduces labor force which is positive and significant in fostering economic growth. Thus, taxes attenuate labor supply growth by discouraging labor force participation and consequently, the potential productivity growth in Nigeria.

The second part of the data analysis reports the derived productivity indexes for the individual tax revenue sources. In other words, the productivity and buoyancy of the main tax revenue sources of the country (Nigeria) is presented below.

Table 1: Nigeria: Elasticity and Buoyancy of main taxes in Nigeria

	Elasticity	Buoyancy	Difference
Personal income tax (FC)	0.0012	0.001	-
Company income tax	1.201	0.981	0.22
Petroleum profit tax	0.885	0.751	0.195
Value added tax	0.943	0.782	0.161

A tax structure is said to be buoyant if the buoyancy index is greater than unity implying that as national income or the proxy base changes, tax revenue changes by a larger proportion as a result of built-in elasticity and discretionary changes. Discretionary changes may take the form of changes in the tax rates, widening the tax base, legislative enactment and improvement in collection technique. While tax elasticity is concerned with the responsiveness of revenue yields to movements in (the base) economic activity alone.

A comparison of the tax handles (in our result) reveals that personal income tax (federally collected), petroleum profit tax and value added tax have the lowest tax to income elasticity coefficient, indicating inflexibility and inefficiency in the petroleum profit tax, VAT and the Nigerian personal income tax structure. Company income tax and custom and excise tax are approximately, of unitary elasticity with no record of buoyancy.

In the light of the above attributes the present tax system in Nigeria may not be effectives in correcting fiscal imbalances.

SUMMARY AND CONCLUSION

The Nigerian public sector is stratified into three levels of government federal, state and local government, each having a different set of expenditure responsibility and taxing powers. The country is however governed by a federal system. The federal government has jurisdiction over the most revenue yielding sources while the lower tiers are responsible for the less buoyant ones.

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Prior to the Mid 1980's, tax policies in Nigeria were geared towards achieving such specific objectives as protection of local industries and local raw materials, promoting greater geographical dispersion of domestic manufacturing activities and generating increased government revenue. With the introduction of structural adjustment program in 1986, emphasis was shifted to enhancing the productivity and competitiveness of business enterprises. This objective led to promoting exports of manufactures and reducing the tax burden of individuals and companies. For instance marginal tax rate on personal income tax was reduced from 70 percent in 1977 – 1986 to 55 percent in 1987 – 1991, 35 percent in 1992 – 1995 and to 25 percent from 1996 to date. While tax rates on company profits payable on trade profits and investment income fell from 45 percent during 1970 to 1986 to 40 percent between 1987 and 1991, further to 35 percent for the period 1992 to 1995 and to 30 percent from 1996 to date. Within this period, other tax reforms such as amendment of the custom and excise tariffs to accommodate certain goods, introduction of tax rebate on interest changes paid on loans for financing owner-occupier homes, increasing tax allowances to individuals, extending tax exemption status to companies in rural areas, widening VAT base, reducing custom duties on raw materials for certain manufacturing etc were made. The extent of this tax reformation to the productivity and growth of the economy is our analytical concern.

Our empirical analysis on the productivity of taxation reveals that though, the company income tax and the custom and excise tax are promising, The Nigerian present tax system is inflexible and may not produce the desired objective, if it should be used for correction of fiscal imbalances. To achieve a flexible tax policy, the government cum the taxing authority should ensure that every individual tax is designed so that its yield is responsive to national income changes. Especially, the predominant tax revenue source must have a highly elastic yield with respect to national income or their proxy bases.

Our analysis also reveals that higher taxes discourage the net growth in capital stock which by itself is a positive function of economic growth. Taxes attenuate labor supply growth which exerts a positive and significant influence on economic growth. Thus, the use of higher taxes where it affects capital and labor is destabilizing rather than stabilizing and should be avoided by the government.

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APPENDIX: DATA ON THE ALREADY DEFINED VARIABLES

YEAR	GDPCBP	Lt	Kt	CIT	CED	Taxrate	PPT	PITFC
1980	42300	40.1	10841.2	579.2	1813.5	70	8564.3	487.5
1981	47619.7	36.24	12215	403	2325.8	70	6325.8	1997.3
1982	49069.3	30	10922	550	2336	70	4846.4	732.8

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1983	53107.4	33.1	8135	561.5	1984.1	70	3746.9	710.1
1984	59622.5	35.62	5417	787.2	1616	70	4761.4	580.9
1985	67908.6	36.56	5573	1004.3	2183.5	70	6711	938.9
1986	69147	37.56	7323	1102.5	1728.2	70	4811	433.7
1987	105222.9	38.59	10661.1	1235.2	3540.8	55	12504	407.6
1988	139085.3	39.65	12383.7	1550.8	5672	55	6814.4	540.5
1989	216797.5	40.74	18414.1	1914.3	5815.5	55	10598.1	938
1990	26755	41.85	30626.8	2997.3	8640.9	55	26909	1724
1991	312139.8	43.06	35423.9	3827.9	11456.9	55	38615.9	3040.4
1992	532613.8	44.31	58640.3	5417.2	16054.8	35	51476.7	4903.1
1993	683869.8	45.6	80948.1	9554.1	15486.4	35	59207.6	5626.5
1994	899863.2	50.2	85021.9	12274.8	18294.6	35	42802.7	3888.2
1995	1933212	63.1	114476.3	21878.3	37364	30	42857.9	20436.4
1996	2702719	44.68	172105.7	22000	55000	25	76667	3407
1997	2801973	33.6	205553.2	26000	63000	25	68574.1	8339.9
1998	2708431	57.53	192984.4	33315.3	57683	25	67986.6	1140
1999	3194024	47	175735.8	46212.2	87906.9	25	164273.4	2010
2000	4537640	50	268894.5	51147.4	101523.6	25	525072.9	3810
2001	4685912	51	371897.9	68660	170557.1	25	639234	4440
2002	5403007	51.23	438114.9	89100	181400	25	392200	6810
2003	6947820	53	429230	114800	195500	25	683500	5420
2004	11411067	54	456970	130100	217200	25	1183500	5890
2005	14610882	54	92273.43	162200	232800	25	1904900	21210
2006	18564595	57.21	93247.3	244900	177700	25	2038300	3330

YEAR	NOGDP	TOR	VAT	LnCIT	LnNOGDP	LnPPT	LnTOR	LnCED
1980		12353.3		_	6.36		9.06	9.42	7.5
1981	37399.9	8564.4		_	6	10.53	8.75	9.06	7.75
1982	40556.3	7814.9		_	6.31	10.61	8.49	8.96	7.76
1983	45718.7	7253		_	6.33	10.73	8.23	8.89	7.59

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1984	50585.1	8269.2	_	6.67	10.83	8.47	9.02	7.39
1985	56533.4	10923.7	_	6.91	10.94	8.81	9.29	7.69
1986	59588.1	8107.3	_	7	11	8.48	9	7.46
1987	78500	19027	_	7.12	11.27	9.43	9.85	8.17
1988	109226.1	19831.7	_	7.35	11.6	8.83	9.9	8.64
1989	140267.2	39130.5	_	7.56	11.85	9.27	10.58	8.67
1990	167326.6	71887.1	_	8	12.03	10.2	11.18	9.06
1991	195614	82666.4	_	8.25	12.18	10.56	11.32	9.35
1992	285785.9	164078.1	_	8.6	12.56	10.85	12.01	9.68
1993	441760.1	162102.4	_	9.16	13	10.99	11.99	9.65
1994	680754	160192.4	7260.8	9.42	13.43	10.66	11.98	9.81
1995	1166693.6	324547.6	20761	9.99	13.97	10.67	12.69	10.53
1996	1544807.8	408783	31000	10	14.25	11.25	12.92	10.92
1997	1732994.1	416811.1	34000	10.17	14.37	11.14	12.94	11.05
1998	1971635.6	324300	36900	10.41	14.49	11.13	12.69	10.96
1999	2169559.3	724400	47100	10.74	14.59	12.01	13.49	11.38
2000	2350957.5	1591700	58500	10.84	14.67	13.17	14.28	11.53
2001	3016911.1	1707500	91800	11.14	17.22	13.37	14.35	12.05
2002	3604183.3	1230900	108600	11.4	15.1	12.88	14.02	12.11
2003	4206266.1	2074300	136400	11.65	15.25	13.44	14.55	12.18
2004	7163350.9	3354800	159500	11.78	15.78	13.99	15.03	12.29
2005	8945998.3	4762400	178100	12	16	14.46	15.38	12.36
2006	11581659.3	5287600	221600	12.41	16.26	14.53	15.48	12.09

YEAR	LnPITFC	LnGDP	LnNDPIT	LnNDCIT	LnVAT
1980	6.19	10.65	4.65	4.16	-
1981	7.6	10.77	6.06	3.8	-
1982	6.6	1080	5.06	4.11	-
1983	6.57	10.88	5.02	4.13	-
1984	6.37	10.99	4.82	4.47	-

1985	6.85	11.13	5.3	4.71	-
1986	6.07	11.14	4.53	4.81	-
1987	6.01	11.56	4.47	4.92	-
1988	6.29	11.84	4.75	5.15	-
1989	6.84	12.29	5.3	5.36	-
1990	7.45	10.19	5.91	5.81	-
1991	8.02	12.65	6.48	6.05	-
1992	8.5	13.19	7.48	7.59	-
1993	8.64	13.44	7.62	8.15	-
1994	8.27	13.71	7.25	8.4	8.89
1995	9.93	14.47	8.91	8.98	9.94
1996	8.13	14.81	6.88	9.08	10.34
1997	9.03	14.85	7.78	9.25	10.43
1998	7.04	14.81	5.79	9.5	10.52
1999	9.61	14.98	6.35	9.82	10.76
2000	8.25	15.33	6.99	9.93	10.98
2001	8.4	15.36	7.15	10.22	11.43
2002	8.83	15.5	7.57	10.48	11.6
2003	8.6	15.75	7.35	7.93	11.82
2004	8.68	16.25	7.43	10.86	11.98
2005	9.96	16.5	8.71	11.02	12.09
2006	8.1	16.74	6.86	11.49	12.31

Sources:

1.National Planning Commission, Abuja Nigeria, April/July 2006.

2. National Bureau of Statistics – Nigeria

3. Federal Ministry of Employment and Productivity Lagos –Nigeria

4. CIA World Fact Book(http:www.indexmundi.com)

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Note: The logarithmic calculation was done by the author.

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APPRAISAL OF ENTREPRENEURSHIP DEVELOPMENT PROGRAMMES IN NORTH EAST INDIA WITH PARTICULAR REFERENCE TO TRIPURA

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ABSTRACT

Entrepreneurship works as a double edged weapon for socio-economic development. In one hand, it is the key for economic growth of any region and on the other hand, it not only generates opportunity for self employment but also spawns job opportunity for others. The significance of entrepreneurship is more keenly felt in the era of globalization due to encroachment of hi-tech hi-touch technologies over human jobs through automation as a result of booming in the Information Technology sector. Reduction of job opportunity in government sector as well as in the corporate sector and global population explosion virtually compels the governments to give more emphasis on entrepreneurship development. Considering the importance of private enterprise in accelerating the pace of economic growth, the Government of India has already started encouraging the development of entrepreneurial activities by conducting Entrepreneurship Development Programmes (EDPs) through various government and non-government promotional agencies. The major thrust of this wide net work of initiative is to bring and infuse the drive and motivational input in the young minds to embrace the entrepreneurship as career by choice. According to the 2002 Global Entrepreneurship Monitor Report, India ranked 2nd out of 37 participating nations on the level of entrepreneurial propensity with a Total Entrepreneurial Activity index of 17.9%. However, for the overall development of any country, the regionally balanced economic growth is inevitable. But the per capita income of northeast India is much less than the national average which signifies that the NE region is still backward than other parts of the country although numerous EDPs are conducting in this region since long. Against this back drop, an attempt has been made through this paper to highlight entrepreneurship development efforts in northeast India and to appraise the various EDPs organized and conducted in the region with particular reference to Tripura.

KEYWORDS
Entrepreneurship, Entrepreneurial problem, Impact of EDPs.

INTRODUCTION
It is the responsibility of every government to provide a quality life to its people. As such, the economic condition of the country required to be healthy. Every country wants to increase its productivity so as to provide maximum welfare to its citizens. Towards this end, numerous organizations are engaged in the production of goods and services. Here, special mention may be made of business enterprises that hold the key of rapid economic development. Of late, there has been a growing realization about potential contribution of small enterprises. Healthy small businesses sector is rightly considered to be the backbone of every economy. The pattern of economic development of advanced industrial society is also suggests that the small enterprises play a dominant role in the national fiscal growth, e.g. successful small businesses are critical in maintaining a robust U.S. economy. The statistical figures almost speak for themselves *(Barreto: 2002):*

- 99% of all American businesses are small;
- Small businesses provide approximately 75% of the net new jobs added to the U.S economy every year;
- Small businesses represent 99.7% of all employers;
- Small businesses employ 50.1% of the private workforce;
- Small businesses provide 40.9% of private sales in the country.

This is the reason why entrepreneurial training is encouraged throughout the world and thereby promotes local entrepreneurship. India is also not an exception in this regard.

The role of entrepreneurship in economic growth has consistently been emphasized in the literature on economic development. It is even more relevant for developing countries like India where poverty and unemployment continue to persist despite planned efforts to mitigate them. In fact, entrepreneur is considered as a catalyst of economic development. North-East India, being more backward and underdeveloped as compared to other parts of the country, requires a special effort for encouraging and promoting entrepreneurship culture in the region so that the status of development is enhanced with significant contribution of entrepreneurs.

With this background, the Central government, state governments, non-government organizations (NGOs) and other agencies started thinking in terms of fastening entrepreneurship through conducting Entrepreneurship Development Programmes (EDPs). Towards this, several organizations are now engaged in providing much needed training to the prospective entrepreneurs. Against this backdrop, an attempt has been made through this paper to highlight entrepreneurship development efforts in North East India and to appraise the various EDPs organized and conducted in the region with special reference to Tripura.

ENTREPRENEURSHIP DEVELOPMENT EFFORTS
Considering the importance of entrepreneurship in hastening the fiscal growth of a country, government of India sponsored, launched and implemented a number of programmes and schemes like Margin Money Scheme, Prime Minister's Rozgar Yojana, Swarna Jayanti Gram

Swarozgar Yojana, etc. for entrepreneurship development and established several institutions at the national, regional, state and even at the district level to discharge the task; viz:

- Micro, Small, and Medium Enterprise Development Institute (MSME-DI) *[Formerly, Small Industries Service Institute (SISI)],*
- Entrepreneurship Development Institute (EDI),
- National Institute of Small Industry Extension Training (NISIET),
- Laghu Udyog Bharti (LUB),
- Federation of Association of Small Industries of India (FASII),
- Self-Employed Women's Association (SEWA),
- Federation of Indian Women Entrepreneurs (FIWE),
- National Science & Technology Entrepreneurship Development Board (NSTEDB),
- Indian Institute of Entrepreneurship (IIE),
- North Eastern Industrial Consultants Limited (NECON),
- N. B. Institute for Rural Technology (NBIRT),
- Swavalamban Training Institute (STI), etc.

In North-East India, Assam is the pioneer to initiate Entrepreneurship Development Programmes. In 1973, the Government of Assam started a novel experiment to promote entrepreneurial motivation training centre (EMTC), a district level agency, to identify, select and train prospective entrepreneurs and to provide them all support services to start and run their own enterprises. In recent past EMTC has merged with the district industries centers. The government of Assam has also set up a state level "Institute for Development of Entrepreneurs in Assam" (IDEA) during the year 2005 for promotion of self-employment in the state. Similar efforts have also been taken in the other north-eastern states. For example, in Nagaland, several programmes have been conducted to create entrepreneurship awareness and to encourage development of local enterprises. Towards this, Indian Institute of Entrepreneurship and Department of Industries and Commerce, Government of Nagaland planned to train 100 local youth every year to take up self-employment activities through Turnkey Entrepreneurship Development Programme (TEDP). Under this module 100 youth were brought to IIE, Guwahati in groups for one month exposure to various aspects of motivational, technical and commercial inputs required for establishing small enterprises. Subsequently the youth were provided escort services by way of preparation of business plan, liaison with banks through Resource Centre of IIE at Dimapur in Nagaland. During the year 2002-03, 100 youth were trained and 31 of them, including 7 lady entrepreneurs, have started their own enterprises in various parts of Nagaland. 28 of them started with financial assistance from banks and rest 3 with their own. The investment in projects ranges from Rs.50, 000/- to Rs.3.80 lakhs. The various projects selected by the entrepreneurs are - Cyber Café, Mushroom Processing, Steel Fabrication, Boutique Shop, Dhaba, Dry Cleaning and Xerox etc. Indian Institute of Entrepreneurship conducted a series of programmes under Turnkey Entrepreneurship Development Programme for the State of Nagaland. Some of the trained entrepreneurs have already started their own enterprises.

The entrepreneurship development activities in Tripura started in seventies of the last century. Initially, the activities were looked after by organizations like NECON, IIE *(Entrepreneurship Development Institute, started as a branch of NISIET, Hyderabad)* having their head office at Guwahati. Presently NECON has its Head Office at Agartala; IIE is still organizing some programmes in the state having its establishment at Guwahati. MSME-DI is organizing few programmes every year. Along with Entrepreneurship Development Programmes, they are organizing Skill and Management Development Programmes also. In the recent years, EDII (Entrepreneurship Development Institute of India) conducted few programmes in the state but they involved local Institutes for conducting the programmes and provide the post-training supports. NSIC (National Small Industries Corporation Limited, an organization of Govt. of India, having a small office at Agartala) is also contributing in Entrepreneurship Development activities in the state. Along with their main support in marketing and procurement of machines, they are also supporting Entrepreneurship Development Programmes by involving local Entrepreneurship Development Institutes. Besides these, under the initiatives of the state Government, two institutes have been established in Agartala. One is "Swavalamban Training Institute", A. D. Nagar, Agartala and "Entrepreneurship Development Institute of Tripura", Indranagar, Agartala. Training Infrastructures have been created for undertaking Entrepreneurship Development Activities in large number. Along with the initiatives of the Government, there are few initiatives from different non-Government organizations also. Good efforts are being taken by "N. B. Institute for Rural Technology" having its base at "Arkaneer", Sekerkote, West Tripura which has already taken the shape of an Institute. Along with other developmental activities they are organizing both Entrepreneurship and Skill Development Programme extending post training support in using their infrastructure for production and also in marketing. Most of the rest organizations are arranging sponsored programmes from time to time.

Now, there are several organizations in North East India. Which are directly or indirectly engaged in the promotion of entrepreneurship in the region. Among these, the most important regional level organization is IIE Guwahati, NEITCO, NECON, NSIC, MSME-DI, NEC, etc. Besides, there are other voluntary and non government organizations in the respective states involved in encouraging and promoting local entrepreneurs. These organizations initially used to organize three groups of training programmes for existing entrepreneurs and awareness creation programmes. Even programmes are conducted for personnel from support organizations, and for educate children of artisans, entrepreneurs and businessmen also.

Of late, several innovative programmes have been designed and experimented to promote new entrepreneurs, and for creating awareness of entrepreneurial and self- employment opportunities among the youth, e.g., entrepreneurial awareness camps for school, college and university students, faculty development programme on entrepreneurship for college and university teachers and turnkey EDP for new entrepreneurs. Efforts are also put to make the programmes effective and useful.

The North Eastern Council (NEC), as an important regional organization, does recognize the growing importance of entrepreneurship development for fostering Economic and industrial growth. Far back in 1985, it drew up an ambitious plan to train and develop 5000 prospective entrepreneurs during the sixth plan (1985-90). This initiative still continues. However, its emphasis is now on sector-specific programme. In its efforts, IDBI, IFCI, ICICI and SIDBI also participated. The Khadi and Village Industries Commission (KVIC) also started to participate in rural entrepreneurship programme.

Earlier, the entrepreneurship development programmes (EDPs) were location specific. Now, in addition to location specific approach, area approach has been adopted by starting Rural Industries Programme (RIP). SIDBI and NABARD have been supporting RIP. During the financial year 2006-07, SIDBI sanctioned 3 (three) Rural Industries Programmes (RIP) viz. one in Jorhat district in Assam, another in Ribhai district in Meghalaya and the third one in Kolasib district in Mizoram. Under the RIP, a Professional Organization is assigned a particular district having

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potential for village and rural industries for a period of five years to implement the programme as the Implementing Agency (IA) for identification of prospective entrepreneurs for selection of projects, preparation of project reports, establishing credit linkage for setting up of units in the district, marketing linkage etc.

PERFORMANCE OF EDPS

The performance of EDPs is may be evaluated in terms of start-up rates. The number of entrepreneurs trained by IIE, Guwahati and the number of units set up by them, constitute the base for evaluation of the programmes. The Table – 1 given below gives an account of the state wise entrepreneurs trained by IIE and units set-up for NEC, IDBI, and SIDBI sponsored programmes.

Table – 1
Showing State-wise Entrepreneurs trained by IIE and Units set-up for NEC, IDBI and SIDBI Sponsored Programmes   (April 1994-March 2004)

State	Number of entrepreneurs Trained	Applied for Bank Finance		Units set up			Units set up with Bank Finance	
		No.	% of (3) to (2)	No.	% of (5) to (2)	% of (5) to (3)	No.	% of (8) to (3)
1	2	3	4	5	6	7	8	9
A. Pradesh	172	91	92.90	82	47.67	90.11	41	45.05
Assam	632	297	47.67	213	34.19	71.72	76	25.59
Manipur	354	153	43.22	125	35.31	81.70	46	30.07
Meghalaya	323	161	49.85	100	30.96	62.11	38	23.60
Mizoram	100	65	65.00	24	24.00	36.92	14	21.50
Nagaland	158	95	60.13	57	36.08	60.00	31	32.63
Sikkim	34	15	44.12	5	14.71	33.33	2	13.33
Tripura	235	120	51.06	55	23.40	45.83	27	22.50
Total	1999	997	49.87	661	33.07	66.29	275	27.58

Source: *Basic Statistics of NER 2006*

The appraisal study on the effectiveness of EDPs in the region revealed that the overall rate of success of EDPs organized during April 1994 to March 2004 was 33.07 percent. The total number entrepreneurs trained during the period were 1999, of which only 661 trained entrepreneurs could set up their units. The highest start-up rate of 47.67 percent was recorded in Arunachal Pradesh followed by Nagaland with 36.08 percent and Manipur with 35.31 percent. The lowest rate of success of EDPS expressed in terms of start -up rate was reported at 14.71 percent from Sikkim. In case of Tripura, it is 23.4 percent.

In another recent study, it is observed that in Tripura only 18.89% participants of Entrepreneurship Development Programmes are succeeding in establishing their own enterprise. In case of Male candidates this success rate is 21.67% and in case of Female candidates this success rate is only 13.33%. The study was conducted on randomly selected 360 participants of EDPs considering 60 candidates *(40 Males & 20 Females)* from each institution that are operating in Tripura and conducting EDPs on regular basis namely, Swavalamban Training Institute *(STI),* Entrepreneurship Development Institute of Tripura *(EDIT),* Indian Institute of Entrepreneurship *(IIE),* Micro, Small and Medium Enterprises Development Institute (MSME-DI) *[formerly, Small Industries Service Institute (SISI)],* North Eastern Industrial Consultants Limited *(NECON),* N. B. Institute for Rural Technology *(NBIRT).* For the purpose of framing sample, the present study covers 5 (five) years; especially, financial year 2001-02 to 2005-06. Institution-wise and gender-wise performance of EDPs in developing successful entrepreneurs in Tripura is shown below in Table – 2.

Table - 2
Institution-wise and Gender-wise performance of EDPs in Developing Successful Entrepreneurs in Tripura

Sl. No.	Name of the Institution	Male			Female			Total		
		Successful	Unsuccessful	Total	Successful	Unsuccessful	Total	Successful	Unsuccessful	Total
1	2	3	4	5	6	7	8	3 + 6	4 + 7	5 + 8
1.	STI	09 (22.50)	31 (77.50)	40 (100)	03 (15.00)	17 (85.00)	20 (100)	12 (20.00)	48 (80.00)	60 (100)
2.	EDIT	07 (17.50)	33 (82.50)	40 (100)	02 (10.00)	18 (90.00)	20 (100)	09 (15.00)	51 (85.00)	60 (100)
3.	MSME-DI	12 (30.00)	28 (70.00)	40 (100)	03 (15.00)	17 (85.00)	20 (100)	15 (25.00)	45 (75.00)	60 (100)
4.	IIE	08 (20.00)	32 (80.00)	40 (100)	02 (10.00)	18 (90.00)	20 (100)	10 (16.67)	50 (83.33)	60 (100)
5.	NECON	10 (25.00)	30 (75.00)	40 (100)	04 (20.00)	16 (80.00)	20 (100)	14 (23.33)	46 (76.67)	60 (100)
6.	NBIRT	06 (15.00)	34 (85.00)	40 (100)	02 (10.00)	18 (90.00)	20 (100)	08 (13.33)	52 (86.67)	60 (100)
Total		52 (21.67)	188 (78.33)	240 (100)	16 (13.33)	104 (86.67)	120 (100)	68 (18.89)	292 (81.11)	360 (100)

Source: Debnath, S. (2009): "Study of the Motivational Efficiency of Entrepreneurship Development Programmes in Tripura," Thesis, Tripura University
N.B: *Figures in parentheses denote percentages to the total*

Finance is the life blood of a business. The training alone cannot make the EDPs successful. The success of EDPs is measured by start-up rate. The setting up of units requires adequate finance. It is revealed from the Table – 1 that out 1999 trained potential entrepreneurs only 661 candidates started their own enterprise. Among the 661 candidates, only 275 trainees got financial assistance from the banks although 997 candidates applied for bank assistance. Being demoralized for not getting loans from banks some started their business with the financial assistance of NEDFI or Micro Financing Agencies or with their own resource but remaining dropped the idea of entrepreneurship.

IMPACT OF EDPs
The impact of EDPs may be noticed on (1) the trainees; (2) the society at large consisting of family members, peer groups and community (broader reference groups) of the trainees; and (3) the planners, policy makers, grass root level officials of the support system, e.g., banks, DICs, etc. The success of EDPs generally has positive impact on the above segments. Here an attempt is made to assess the impact of EDPs.

I.   IMPACT ON TRAINEES
The study of the effectiveness of EDPs in North East India can be best assessed by the impact on the trainees. As already stated, over the years several EDPs have been conducted in the NE region and their results can be assessed basically by the impact on the trainees as they mostly comes under first generation entrepreneurs of the region particularly in Tripura. In an effort to assess the impact on the trainees, the interview of few successful entrepreneurs of Tripura was considered in the study of Debnath (2009). The degree of the impact of EDPs on them has been found very encouraging. In case of existing entrepreneurs, the per capita output and income from their enterprises have increased significantly and that alone justifies the positive impact of EDPs at micro level. While the new starters agreed the upbeat impact of EDPs on them and even non-starters also expressed their keen interest in the need for entrepreneurship development in Tripura. As such, the programmes are undoubtedly creating awareness among the trainees to thrive for enterprise development.

II.   SOCIAL IMPACT
The social impact of EDPs is difficult to assess owing to difficulties in segmenting the society on which the impact is felt either directly or indirectly. However, an attempt is made to assess the impact on the society by segmenting it into three broad groups viz. the immediate family of the trainees, their peer group, and the community they come in contact with. The success stories of selected entrepreneurs do have positive impact on the society. Through observation and informal talk with the specified segments of the society, it is noticed that a positive shift seems to have taken place across the social groups related to the starters. A positive shift is also noticed in thinking at home in particular and in the society in general. People now have realized the shrinking opportunities of government jobs. The family members are found involved actively in the business of the starters. Overall it appears that EDPs have been successful in creating social awareness.

III.   IMPACT ON THE POLICY MAKERS AND THE GOVERNMENT
The Union Government and the respective state Governments have recognized the growing importance of EDPs. EDPs not only generate self employment opportunities but also create job opportunities for others and generate an environment as well in which entrepreneurship thrives. This contention is substantiated by the latest North East Industrial and Investment Promotion Policy, (NEIIPP), 2007. Policy makers' opinion to this effect is reflected in the new industrial policy of North East India. In an effort to promote and encourage in the region, the New Policy Statement specifies the following:

(i)   Under NEIIPP, 2007, all new units as well as existing units which go in for substantial expansion, unless otherwise specified and which commence commercial production within the 10 year period from the date of notification of NEIIPP, 2007 will be eligible for incentives for a period of 10 years from the date of commencement of production.

(ii)   The incentives under the NEIIPP, 2007 will be available to all industrial units, new as well as existing units on their substantial expansion, located anywhere in the North Eastern Region. Consequently, the distinction between 'thrust' and 'non thrust' industries made in NEIP, 97 will be discontinued from the date of notification of NEIIPP, 2007.

(iii)   Under NEIIPP, 2007 incentives on substantial expansion will be given to units affecting 'an increase by not less than 25% in the value of fixed capital investment in plant and machinery for the purpose of expansion of capacity/ modernization and diversification' as against an increase by 33⅓% prescribed as earlier.

(iv)   Under NEIIPP, 2007, 100% excise duty exemption will be continued as earlier on finished products made in the North Eastern Region. However, in cases, where the CENVAT paid on the raw materials and intermediate products going into the production of finished products (other than the products which are otherwise exempt or subject to nil rate of duty) is higher than the excise duties payable on the finished products, ways and means to refund such overflow of CENVAT credit will be separately notified by the M/O Finance.

(v)   100% income tax exemption will continue under NEIIPP, 2007 as earlier.

(vi)   Capital investment subsidy has been enhanced from 15% of the investment in plant and machinery to 30% and the limit for automatic approval of subsidy at this rate will be Rs. 1.5 crore per unit as against Rs. 30 lakhs as earlier. Such subsidy will be applicable to units in the private sector, joint sector, cooperative sector as well as the units set up by the State Governments of the North Eastern Region. For grant of capital investment subsidy higher than Rs. 1.5 crore but up to a maximum of Rs.30 crore, there will be an Empowered Committee.

(vii)   Interest subsidy will be made available @ 3% on working capital loan under NEIIPP, 2007 as earlier.

(viii)   Under NEIIPP, 2007, new industrial units as well as the existing units on their substantial expansion will be eligible for reimbursement of 100% insurance premium under the Comprehensive Insurance Scheme.

(ix)   To include tobacco and tobacco products, pan masala, plastics carry bags and goods produced by refineries, in a host of industries which would not be eligible for incentives under NEIIPP, 2007.

(x)   To provide incentives to service sector, bio-technology and power generating industries are included.

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(xi)   North Eastern Development Finance Corporation Ltd. (NEDFI) empowered to continue as the nodal agency for disbursement of subsidies under NEIIPP, 2007.

The provisions of the NEIIPP, 2007 would provide the requisite incentives as well as an enabling environment to speed up the industrialization of the North Eastern Region which is otherwise less than 4% p.a. against a national average of 8%.

Although the impact of former industrial policy did not have much significant impact in promoting entrepreneurship in Tripura, it is a matter of time to realize how far the New Industrial Policy will be effective. But lot will depend upon the State Government of Tripura as implementing new NEIPP is its responsibility.

PROBLEMS AND CONSTRAINTS OF EDP

The possible bottlenecks in developing entrepreneurship in the north eastern region particularly in the state of Tripura that hinders the entrepreneurs to become successful are illustrated below.

1. Lack of Working Capital: The financial problem (both term loan and working capital) is the main problem faced by the entrepreneurs of Tripura. Although commercial banks are canvassing their loan policy vigorously, in reality entrepreneurs have to face lot of problems to get their loan sanctioned. Especially, bank authorities are very rigid in their security point of view. The details of security required for getting loan are as below:

Table - 3
Type of Guarantee/ Security Required for Sanction of Loans

Loan limit	Form of Guarantee / Security
Upto Rs. 1.00 Lakh	Employee guarantor of at least Class III/ Class IV ranks 7 (seven) years' service remaining and drawing adequate Salary.
Above Rs.1.00 lakh to upto Rs.2.5 lakhs	2 (two) employee guarantors of at least Class III ranks 7 (seven) years' service remaining and drawing adequate Salary.
Above Rs.2.50 lakhs to upto Rs.5.00 lakhs	Employee guarantor for first Rs. 2.50 lakhs and land & other securities e.g. LIC Policy, KVP, NSC, FDR etc. for the rest Rs. 2.50 lakhs.
Above Rs. 5.00 Lakhs	Land

Source: State Bank of India, Regional Office, Agartala

2. Transportation Problem: The geographical location of north eastern region including Tripura is the main reason behind the transportation problem. Even after the completion of fifty years of independence; south Tripura is till out of Railways map of India. Materials are to be carried by road which is very costly in comparison to Railway transport. This transportation cost virtually increases the cost of the finished product of entrepreneurs and that creates the problem for survival of the product in today's competitive global market.

3. Marketing Problem: It is another big problem faced by the entrepreneurs of Tripura. There is no marketing organization which can ensure quick and prompt marketing of goods produced by the small entrepreneurs while marketing is the backbone of small business units. The small entrepreneurs are not in a position to popularize their brand names and advertise, since they are not capable of meeting the expenses and afford the luxury of expensive advertisement.

4. Shortage of Electricity: Most of the industrial activities directly or indirectly depend on electricity. Tripura has a peak demand of 180 MW but its own generation is around 80 MW only against installation capacity of 130 MW. About 50 MW is imported during peak load period from North Eastern Grid. There remains a shortfall of about 50 MW. The remaining gap between the demand and supply is managed by the Tripura State Electricity Corporation Limited (formerly, Power Department of Tripura) through load shedding under compulsion. Interruption in power supply seriously hampers the activities of industrial units.

5. Lack of Enthusiasm: To establish a new enterprise, one of the most important prerequisite is enthusiasm among the entrepreneurs; what in the word of McClelland (1966) is Achievement Motivation or Need for Achievement (N_{ACH}). By and large, this N_{ACH} is less among the youths of NE region including Tripura.

6. Lack of Entrepreneurial Tradition: In India especially in the North-Eastern region do not have any entrepreneurial tradition. The prospective entrepreneurs of this region have hardly experienced that there elders have taken up any major entrepreneurial activity. As a result, the young boys and girls of this region are little apprehensive and perhaps unsure of themselves to undertake any major entrepreneurial risk, despite the existence of numerous facilities that are presently prevailing in the region including Tripura.

7. Family Problem: In Tripura generally women are not getting moral support from their family for any kind of entrepreneurial activity. Here most of the female members are forced to become a traditional house-wife only or hardly allowed to join in government job.

8. Management Problem: The cause of sickness in small units is due to lack of managerial skills and capabilities. Most of the entrepreneurs are not professionals and do not have any sort of training for acquiring managerial skills.

9. Procedural Bottlenecks: To get the recognition of standards from various governmental agencies for the products that entrepreneurs produce, such as ISI-symbol, FPO (Food Product Order), AGMARK, etc., entrepreneurs of the state has to face a long governmental procedure as the authorized offices are not located within the state of Tripura. Such kinds of certificates are very crucial to attract the customers and to increase their confidence on the products.

10. Socio-environment Problem: Finally, the prevailing insurgency problem in the state, numerous bandhs and blockades called by various organizations on the National Highway hampers the efforts of the entrepreneurs in procuring enough raw materials from outside the state. Consequently, the functions of Small Scale Industrial units are badly hampered due to non availability of imported raw materials.

CONCLUSION

To make EDPs more successful in the north eastern region, there is a need for development of knowledge, skill and motivation of the individuals to take up entrepreneurial career by choice. Though positive family and social environment along with required infrastructure facilities and support organization are the pre-requisite for the entrepreneurs to grow, if the northeast India has to progress, it has to promote entrepreneurship culture. In fact, it is the work culture and strong conviction on the part of individual to be an entrepreneur in the true sense of the term. EDPs are to be designed to inculcate these into the mind of the prospective entrepreneurs. There should be efforts to incorporate

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measures for stimulating, supporting and sustaining entrepreneurship through out the region in general and particularly in Tripura. In the absence of any large and medium size enterprises in Tripura, the EDPs require multi-dimensional approach for the growth of entrepreneurs and thereby small scale industries. This includes identifying potential entrepreneur, train them, need based follow-up action and identifying opportunities that have growth prospects based on local resources.

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ATTITUDINAL AND BIOGRAPHICAL FACTORS RESPONSIBLE FOR LAPSES OCCURING IN THE LIFE INSURANCE SECTOR: A CASE STUDY OF NORTH WEST HARYANA

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ABSTRACT

*Customer satisfaction, Customer loyalty and influential marketing campaign have been treated as important parameters for a company's continued survival and to strong future growth. In earlier nineties data mining through its predictive modeling techniques bring revolutionary grow in the banking sector. But, after reviewing many research papers, researcher feels that there is very less work done on Insurance sector, especially on life insurance sector in context of India. So this paper is an attempt to study this virgin sector. This paper is researched by keeping in view the two aspects. One aspect is concerned with the life insurance customers and other one is life insurance service provider. Now- a –days it is happening that due to attractive advertisement strategies, more returns and better services; a new or an existing life insurance product is getting tremendous popularity in the customer market. This insists a customer to switch from one life insurance service provider to another. Similarly there are certainly many other reasons due to which a customer surrenders his life insurance policies. The other aspect aims to Life insurance service providers who generally forfeits the life insurance policy; when a customer make any concealment of facts or feels difficulty in paying the premium amount or one or the other reason. The practical dataset, which undertakes 63 attitudinal & 8 demographic factors are analyzed by Factor Analysis, multiple regression & Anova to examine the interdependent relationships. The main findings of this study show that **purchase indecisiveness, information dilemma, client servicing through company and Superfluous benefits** are the major factors for switching/ forfeiture and surrender of Life insurance policies in India.*

KEYWORDS
ANOVA, Customer Loyalty, Forfeiture, Factor Analysis, Multiple Regression.

INTRODUCTION
Customer loyalty has been treated as an important source of sustained competitive edge in terms of customer retention, repurchase, and long-term customer relationships. Customer loyalty's link to profitability has also been well established in the management and marketing literature. Numerous studies have given considerable attention to customer satisfaction with a company's products or services as an important determinant of customer loyalty. The core proposition is if customers are experiencing a higher level of satisfaction, then they are likely to remain with their existing providers, in turn leading to greater customer loyalty. Otherwise customer will like to switch to the other service provider. Life insurance or "life assurance" is a contract between the policy owner and the insurer, where the insurer agrees to pay a sum of money upon the occurrence of the insured individual or individuals' death or other event, such as terminal illness or critical illness. In return, the policy owner (or policy payer) agrees to pay a stipulated amount called a premium at regular intervals or in lump sums. There may be different designs in some countries where bills and death expenses plus catering for after funeral expenses should be included in Policy Premium. A customer when takes a life insurance policy, they consider it to be just a tax saving device. A Policyholder is expected to pay periodic premiums, which can be either paid monthly, quarterly, half-yearly or annually. But the customers in India take it so casually that they either forget to pay their premiums or feels that the policy doesn't quite fit into their scheme of things or they face any problem in maintaining the policy. If this premium is not paid within one month of the due date, then the policy is considered to be lapsed and the policy holder is supposed to surrender the policy. After studying the market scenario, the researcher came across many individuals who either have not been able to pay the high premiums on their unit linked insurance plans (ULIPs) or they do not wish to pay the premiums on their low yielding traditional insurance policies. Sometimes the individual buys the policies by concealing certain facts which are necessarily to be known by the life insurance service provider. In such a scenario, the policy is considered to have lapsed and all the premiums paid are forfeited. More importantly, the insurer doesn't entertain any claims once the policy lapses. However, it should be understood that the policy is not necessarily

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forfeited i.e. the policy's value doesn't become nil. The Insurance Act does not allow for forfeiture as every policy acquires a reserve based on the premiums already paid. Therefore, this study's objective is to examine the causes of switching/ surrender and forfeiture of life insurance policies. The life insurance sector of India is our empirical study subject, because this service industry meets with the properties of professional services, experience and belief, and needs high contact with customers to develop intimate customer relationships and maintain relationship quality. Moreover, the life insurance industry is a typical professional financial service and the outcomes of this research should not be ignored.

LITERATURE REVIEW

Many companies focus on building loyalty and profitability into their customer relationships. Despite this effort, customers in today's competitive environment are becoming less and less loyal, and the number of people who switch from one service provider to another is increasing. The empirical framework for this study is the insurance industry, and our particular choice is life insurance sector in context to India. More precisely, after the depth learning of the idea the researcher examined that a little work has been done in the risk assessment, claim settlement and fraud detection and the idea of this research remains untouched. **Williams et al.** (1996) analyzed that Insurance is a business of risks. Identifying and understanding areas of risk is an important task performed by an insurer. An assessment of risk is used to set the appropriate premium for insurance policies. For the purpose the author particularly focuses on two data mining techniques i.e. decision tree and rule induction to evaluate risk in terms of claim frequency and claim costs. Abbott et al. identified that data mining tools and are compared on a fraud detection application on insurance sector analyzed their distinctive strengths and weaknesses, and learned lessons for the process of evaluating the products. **Daniels, et al.** (2002) proposed an approach which is the combination of expert knowledge & neural networks. This approach is applicable to a wide variety of risk management problems with reference to a case study on fraud detection in an insurance company. **Dimitri Vittas (2003)** researched that there are some important gaps in corporate governance, internal controls, and risk management in life insurance sector. In addition, solvency ratios are below international standards and do not include modern risk-based capital requirements. **Narsimha Rao (2007)** concluded that there is a need to liberalize the insurance industry in India and facilitate the insurer to provide insurance products to people at low cost and less effort. **Prashanta Athma** (2007) analyzed the factors which consumers take into consideration before selecting Life Insurance Products and determine the extent to what these factors are taken into consideration for choosing the life insurance products and found that both, product and non-product attributes have been found to be important in selecting a policy but they have been rated differently. **B. S. Bodla, Sushil Verma (2007)** studied the behavior of buyer for the life insurance policies in rural areas of Haryana. They found that respondents belonging to the age group 31-40 years dominate the rural insurance market, further agents are the most important source of information and motivation as they are very much convinced by theor agent suggestion and buys whatever is suggested by the agent. **Mala Srivastava** (2007) accredited in her study that as competition in life insurance sector in India is just entered in 2001; therefore the increase in apparent service quality has more impact in retaining customer. **Sunayna Khurana** (2008) tried to understand consumer behavior in the insurance sector to identify customer preferences regarding plans and company, their purpose of buying insurance policies, their satisfaction level and their future plans for the new insurance policy. **V.N.S.Pillai** (2008) found that a number of disputes arise during the payment of claims of life insurance policies. They may relate to payment of premiums, age of the insured or misrepresentations by the person purchasing the policies. In the light of above the researcher identified 12 factors that caused the customers to start thinking about switching/ surrender and forfeiture of life insurance policies in India. What has, so far, not been researched very much specially in context to India? The method we are using in this study is the Factor Analysis (Principal Component analysis). Our contribution to the research in this field is to identify and deepen the understanding of the role of various causes for customer switching/ surrender and forfeiture of Life insurance policies in India.

AIM OF STUDY

Keeping in view the said fact the aim of this study is to identify and understand the causes that insist a customer to surrender their life insurance policies and circumstances which may cause to the forfeiture of life insurance policies. The causes are explored in the form of attitudinal and biographical factors of policyholders responsible for the surrender of insurance policies from the attributes collected from policyholders of different age group, profession, family background.

RESESARCH METHODOLOGY

The present study is **Explorative** in nature, as it seeks to discover ideas and insight to bring out new relationship. Research design is flexible enough to provide opportunity for considering different aspects of problem under study. Since the major emphasis is on the discovery of ideas and insights which are responsible for lapse of insurance policy. A **Likert scale,** a type of psychometric response scale, is used in questionnaire. While responding to a Likert questionnaire item, respondents specified their level of agreement to a statement in form of strongly disagree, Disagree, Neither agree nor disagree, Agree and strongly agree. A recent empirical study showed that data from 5-level, 7-level and 10-level items showed very similar characteristics in terms of mean, variance, skew ness and kurtosis after a simple transformation was applied. From universe of 2000 of North West Haryana, a sample of 400 respondents was collected using **systematic sample design**. Every 5th person met on date of meeting was considered as respondent of questionnaire. The data of 400 respondents was collected by questionnaire method. After analyzing the questionnaire it was found that 10 questionnaires are incomplete so are of not any use. Remaining 390 questionnaires when again analyzed 9 found to give rating in place of ranking. So at last data of 381 questionnaires has been taken for further study. The data extracted from questionnaires is in the form of attributes and contains demographic and attitudinal details of the respondents. There are 8 demographic attributes represented by bg1 to bg8 and 63 attitudinal attributes represented by m1 to m63 in this study. The research work makes effort to comprise 63 attributes into finite number of factors which contribute towards attitude of respondent to lapse the policy.

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STATISTICAL TOOLS

Factor analysis has been applied to identify the reasons for forfeiture/ surrender/ switchover of life insurance product by the insured in life insurance sector in India. The main purpose of applying factor analysis is to condense the information contained in a number of original variables into a smaller set of new composite dimensions with a minimum loss of information (Joseph, 1995). All the attributes collected by questionnaires may not be reason for making decision about lapse of insurance policy. Therefore it is very important to extract such attributes so that important attributes can be analyzed. For this purpose descriptive of attributes has been checked using SPSS software. The cutoff point selected is 3.25 on basis of past experience of researchers. The attributes having mean less than 3.25 are considered as unimportant for further study and this has been extracted. Out of 63 attitudinal attributes 32 attributes are found with descriptive mean less than 3.25. So these 32 attributes has been rejected for further study and remaining 31 attributes will be used to make factors collectively. Similarly descriptive for demographic variables has been checked and only two variables named bg2 and bg7 are found with mean greater than 3.25 so are selected for further study. Now to comprise same type of the attributes in one factor, **factor analysis** has been used. It has been observed that Bartlett test of sphericity is significant and Kaiser – Meyer – Olkin measure of sampling adequacy is less than .6 so insignificant. It shows that still there are some attributes which are not important for making decision of insured. Moreover in anti- image correlation matrix all measures of sampling adequacy are below than acceptable level 0.5. Therefore attributes having measure less than .5 in anti- image correlation matrix should be rejected. So attributes named m2, m9, m10, m17, m25, m35, m39, m42, m45, m46, m52, m54, m55, m61 has been extracted and factor analysis is again applied on remaining 17 attributes. From table 4, it is observed that Bartlett test of sphericity is significant and Kaiser – Meyer – Olkin measure of sampling adequacy is greater than .608 i.e. grater than .6 so significant. But anti- image correlation matrix reveals that the two attributes named m33 and m34 have measure less than .5 so needed to be extracted. Therefore these two attributes are extracted and factor analysis has been applied again. Now it has been observed that Bartlett test of sphericity is significant and Kaiser – Meyer – Olkin measure of sampling adequacy is .665 greater than .6 so is significant. Now in anti- image correlation matrix (table 1) all the attributes are well above the acceptable level of .5. Therefore these are the attributes which are responsible for lapsing of policy.

	Anti-image correlation			Table – 1											
m1	.628(a)	0.227	-0.343	-0.021	0.355	-0.234	0.063	0.125	0.195	-0.221	-0.102	-0.251	0.097	-0.221	-0.133
m13	0.227	.557(a)	-0.038	0.3	0.3	-0.38	-0.128	-0.035	-0.244	0.01	-0.03	-0.083	-0.217	-0.081	-0.097
m18	-0.343	-0.038	.702(a)	0.089	-0.158	-0.109	-0.138	-0.011	0.139	0.066	0.045	-0.126	-0.245	0.214	0.352
m20	-0.021	0.3	0.089	.670(a)	-0.184	-0.232	0.328	0.026	-0.055	0.073	-0.549	-0.181	-0.429	0.165	0.081
m21	0.355	0.3	-0.158	-0.184	.600(a)	-0.444	-0.422	-0.538	0.239	-0.185	0.313	0.178	0.121	-0.469	0.067
m22	-0.234	-0.38	-0.109	-0.232	-0.444	.685(a)	0.27	0.045	0.218	-0.205	0.149	-0.011	0.147	0.481	-0.138
m23	0.063	-0.128	-0.138	0.328	-0.422	0.27	.624(a)	0.206	0.093	-0.31	-0.21	-0.159	0.225	-0.013	-0.11
m32	0.125	-0.035	-0.011	0.026	-0.538	0.045	0.206	.790(a)	-0.004	0.092	-0.238	-0.049	-0.24	0.393	-0.054
m41	0.195	-0.244	0.139	-0.055	0.239	0.218	0.093	-0.004	.642(a)	-0.415	0.189	-0.216	0.047	0.278	0.242
m43	-0.221	0.01	0.066	0.073	-0.185	-0.205	-0.31	0.092	-0.415	.649(a)	-0.08	0.109	-0.146	0.019	0.484
m47	-0.102	-0.03	0.045	-0.549	0.313	0.149	-0.21	-0.238	0.189	-0.08	.547(a)	0.041	0.252	-0.109	-0.073
m56	-0.251	-0.083	-0.126	-0.181	0.178	-0.011	-0.159	-0.049	-0.216	0.109	0.041	.807(a)	0.231	-0.231	-0.007
m58	0.097	-0.217	-0.245	-0.429	0.121	0.147	0.225	-0.24	0.047	-0.146	0.252	0.231	.684(a)	-0.273	0.041
m59	-0.221	-0.081	0.214	0.165	-0.469	0.481	-0.013	0.393	0.278	0.019	-0.109	-0.231	-0.273	.584(a)	0.027
m60	-0.133	-0.097	0.352	0.081	0.067	-0.138	-0.11	-0.054	0.242	0.484	-0.073	-0.007	0.041	0.027	.730(a)

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INTERPRETATION OF FACTORS

Table 2 displays the total variance explained at four stages. At initial stage, it shows the factors and their associated eigen values, the percentage of variance explained and the cumulative percentages. In reference to the eigen values, it is expected that four factors are to be extracted because they have eigen values greater than 1. if these four factors are to be extracted, then 70.926% of the variance would be explained. The scree plot graphically (graph 1) displays the eigen values for each factor.

	Table 2								
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.42	29.47	29.47	4.42	29.47	29.47	3.207	21.38	21.38
2	2.702	18.011	47.481	2.702	18.011	47.481	2.595	17.3	38.68
3	2.109	14.062	61.543	2.109	14.062	61.543	2.439	16.26	54.94
4	1.407	9.383	70.926	1.407	9.383	70.926	2.398	15.987	70.926
5	0.978	6.522	77.448						
6	0.769	5.123	82.571						
7	0.617	4.116	86.688						
8	0.49	3.269	89.957						
9	0.428	2.853	92.81						
10	0.279	1.863	94.673						
11	0.243	1.619	96.292						
12	0.185	1.235	97.527						
13	0.167	1.115	98.642						
14	0.13	0.87	99.512						
15	0.073	0.488	100						

Factor-1

Perusal of rotated component matrix (table 3), it is noticed that attributes m20, m22 and m58 have highest loadings (close to 1) of .838, .603 and .622 respectively on factor 1. This shows that factor 1 is combination of these three original attributes. So factor 1 is interpreted as combination of "availability" (m20), "kind of scheme to be launched" (m22) and "surrender earlier also" (m58). Factor1 is named as **"purchase indecisiveness".** This factor reveals that now -a- days customer generally surrenders their life insurance policies if they feel difficulty in taking decision while purchase of policy. They found difficulty while taking decision and therefore surrenders the policy. So, the policy provider should explain buyer with the proper features so that they can decide properly about purchase of policy.

Table 3				
	Component			
	1	2	3	4
m20	0.838	-0.009	0.324	0.082
m23	-0.817	0.292	0.181	-0.081
m59	-0.715	-0.125	0.322	0.198
m58	0.622	0.219	0.056	-0.248
m22	0.603	0.325	0.263	-0.305
m32	0.594	0.147	0.367	-0.519
m43	-0.07	0.844	-0.197	-0.134
m60	-0.106	-0.82	0.217	0.124
m18	0.217	0.727	0.308	0.032
m41	0.047	0.297	-0.861	0.056
m13	-0.071	0.014	-0.735	-0.077
m21	0.072	0.403	0.628	-0.588
m1	-0.12	0.015	0.148	0.856
m56	-0.31	-0.04	-0.217	0.705
m47	0.187	-0.39	0.256	0.551

Factor-2

Similarly interpreting factor 2 from table 8, it is noticed that attributes m18 and m43 have highest loadings of .727 and .844 on factor2. This shows that factor 2 is combination of these two original variables. So factor 2 is interpreted as combination of "service satisfaction" (m18) and "information through catalogue" (m43). So factor 2 is named as **"information dilemma".** It means the customer is not getting proper information about the policy so face difficulty. Therefore, it is required for policy provider to give proper and true information to the policy holder to decrease the rate of lapse of policy.

Factor-3

Now again interpreting factor3 from same table 2, it is noticed that only attribute m21 has highest loading of .628 on factor3 so it alone represents factor3. The attribute is client handling so factor3 is named as **"client servicing through company".** If the proper service is not given to client, he feels insecurity with his payment so lapse the policy. Therefore, a good service by company to client may be helpful in decreasing the rate of lapse of policy.

Factor-4

Similarly m1 and m56 have highest loadings of .856 and .705 on factor 4. So "objective tax benefit" (m1) and "surrender due to dispute" (m56) collectively make factor 4 as **"Superfluous benefits".** So, a policy provider should give time to time counseling to the policy holder to maintain his interest and to dissolve the conflicts. The main objectives of the policy should be precisely explained to the policy holder. Therefore from research it is found that these are four major factors which are responsible for lapse of insurance policy.
Now it is important to know how demographic variables affect these variables.
As the study is also concerned to know the biographic factors responsible for the lapse of policy so further analysis of these four factors is required.
Is there any impact of sex and occupation on factors contributing to lapse of policy?
To know this impact two – way ANOVA has been applied.

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** Impact of sex and occupation on purchase indecisiveness: The Levene's test revealed that the homogeneity of variance assumption has not been violated. It illustrates that the main effects for sex and occupation are very significant. Therefore, both sex and occupation collectively impacts the purchase indecisiveness of client. Moreover table 20 depicts that there is a significant interaction effect (p<.05) for sex*occupation. That is, the impact of sex on purchase indecisiveness does depends on occupation of the client, F (4,371) = 18.144, p<.05. Graph 2 also shows that **for businessman and professionals, the sex has no impact on purchase indecisiveness.** However for service, sex has a small impact but **for farmers and students, sex has a considerable impact:** *male is dominating in purchase indecisiveness.*
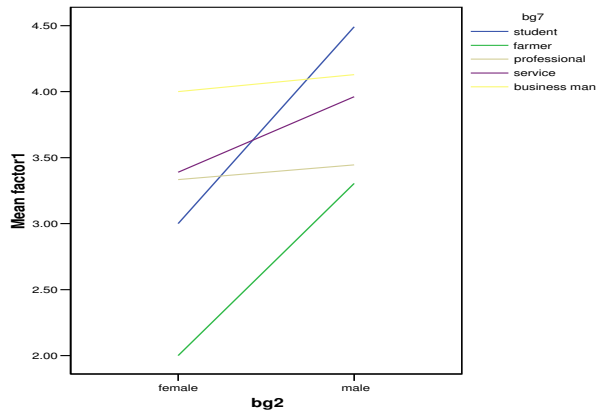
** Impact of sex and occupation on information dilemma: The Levene's test (table 3) reveals that the homogeneity of variance assumption has not been violated. It illustrates that the main effects for sex and occupation are very significant. Therefore, both sex and occupation collectively impacts the information dilemma of client. Moreover table 22 depicts that there is a significant interaction effect (p<.05) for sex*occupation. That is, the impact of sex on purchase indecisiveness does depends on occupation of the client, F (4,371) = 13.608, p<.05.

Table 3								
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Corrected Model	123.049(b)	9	13.672	29.091	.000	.414	261.823	1.000
Intercept	709.743	1	709.743	1510.193	.000	.803	1510.193	1.000
bg2	10.218	1	10.218	21.741	.000	.055	21.741	.996
bg7	29.494	4	7.374	15.690	.000	.145	62.758	1.000
bg2 * bg7	25.581	4	6.395	13.608	.000	.128	54.432	1.000
Error	174.358	371	.470					
Total	6183.250	381						
Corrected Total	297.407	380						

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Graph 3 also shows that **for businessman, serviceman and professionals, the sex has no impact on purchase indecisiveness.** However *for farmers and students, sex has a considerable impact: male is dominating in information dilemma.*
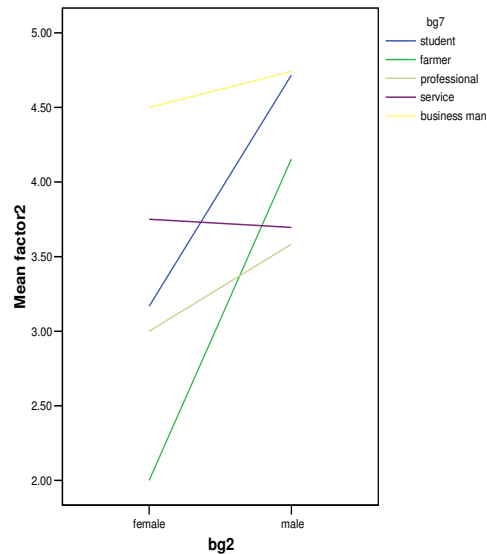
Impact of sex and occupation on client servicing through company: The Levene's test revealed that the homogeneity of variance assumption has not been violated. It illustrates that the main effects for sex and occupation are very significant. Therefore, both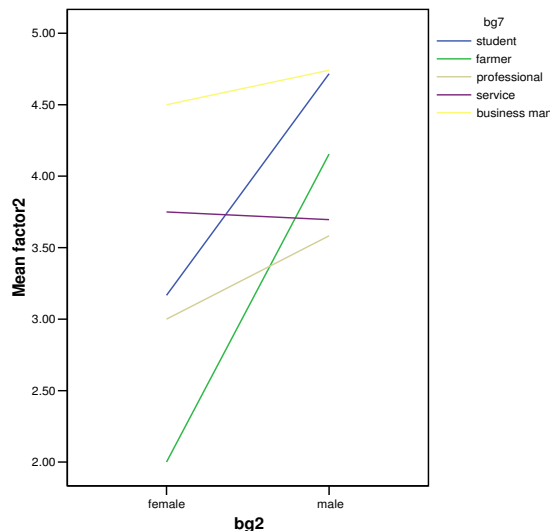 sex and occupation collectively impacts the client servicing of client. Moreover table 24 depicts that there is a significant interaction effect (p<.05) for sex*occupation. That is, the impact of sex on purchase indecisiveness does depends on occupation of the client, $F(4,371) = 9.343$, $p<.05$. Graph 4 also shows that **for student, farmer and serviceman, the sex has very less impact on client servicing.** However **for business man and professional, sex has a considerable impact:** *for businessman male is dominating and for professional female's decision is dominating in client servicing.*

CONCLUSION

After analyzing the fact sheet as per the causes in terms of variable m1 to m34 it is concluded that most popular and major reason for a customer who surrenders the life insurance policy is whenever he/ she takes wrong decision in purchase of policy and male plays dominating role in lapsing policy in case of farmers and students due to indecisiveness in purchasing but in case of serviceman and professionals sex don't play any role. The research explored other reasons for lapse of the policy as information dilemma, client servicing through company and superfluous benefits. Being information dilemma as reason for lapse of policy, male's decision plays dominating role for farmers and students. But if client servicing is factor for lapse then male's decision is important in case of businessman and female's decision is important in case of professional.

FURTHER RESEARCH

Further research could extend these results to other insurance policies. This might involve an examination of the theoretical antecedents, as in the experiment, or the behavioral consequences. More generally, such an analysis would provide an important link among research on customer attitude and demography – variables that have typically been analyzed in separate research streams. Other research could examine the reasons consumer believe that they can or cannot decide the purchase of different insurance policies. Further research could also assess the extent to which differences in perception and behavior vary across customers and are moderately by individual differences, such as involvement and risk aversion.

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ROLE OF SELF HELP GROUPS (SHPS) IN WOMEN EMPOWERMENT - AN EMPIRICAL STUDY

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ABSTRACT

Microfinance programs like the Self Help Bank Linkage Program in India, have been increasingly promoted for their positive economic impact and the belief that they empower women. The present paper is an attempt to analyze the impact of self-help groups on women empowerment in Bangalore Rural District, Karnataka. The study uses various indicators like women's household decision-making power, financial autonomy, freedom of movement, political participation, acceptance of unequal gender role, exposure to media, access to education, and experience of domestic violence. The data required for the study collected through the distribution of structured questionnaire to 300 SHGs women members. The study reveals that women members of SHGs are empowered and but the level of empowerment is less. They have taken control over their loans and there are able to manage them; participated in purchase decisions in the group and pricing of final products in the SHG and also at home; their self-confidence and mobility have improved; understand the importance of nutrition in the household, taking better care of health and hygiene of their family; they feel that their financial problems at home have came down; they are aware of the local government official, a Member of Legislative Assembly, a Member of Parliament, and the Prime Minister; and they are also aware of the legal procedures – like a man beating his wife, a man divorcing or abandoning his wife, unfair wages, unfair prices, high-handedness of police or government officials. The study concludes that SHGs women members in Bangalore Rural District, Karnataka, have empowered.

KEY WORDS
Microfinance, Self-help Groups, Women Empowerment.

BACKDROP
The empowerment of women is one of the central issus in the process of development of economies all over the world. Empowerment of Rural Women is crucial for the development of the Rural Bharat. Bringing women into the mainstream of development is a major concern for the Government of India, which is why 2001 has been declared as the "Year of Women Empowerment". The programmes for Poverty Alleviation have a women's component to ensure flow of adequate funds to this section.
Pioneering microfinance institutions (MFIs) have already recognized that the twin goals of empowering women and developing poor communities are closely connected. The Nobel Prize-winning Grameen Bank, for example, gives around 96 per cent of its micro-loans to women, while the United Nation (UN) estimates that around 76 per cent of all microfinance clients globally are women. There are two different ways to look at this: one is that microfinance is good for women; the other is that women are good for microfinance, says Susy Cheston of Opportunity International, a US-based organization that gives around 86 per cent of its micro-credit loans to women.

REVIEW OF LITERATURE
EDA and APMAS (2006) say that there exists noticeable synergy between SHGs and local politics since SHG membership helps village women gain experience in - regular meetings, taking decisions, allocating money. This further helps women become more 'visible' in the village, which is important for campaigning. Indian society is split by a hierarchical caste system that has traditionally discriminated against those at the bottom – the Scheduled Castes and Scheduled Tribes. The study says that majority of SHGs are single-caste is based, since the groups work on the principle of 'affinity groups' and neighbourhood proximity. At the same time the members it helps distribute the benefits (subsidies) among the single target population. Otherwise, some benefits will go only to some members. Women in SHGs can work together to address issues that affect not only their own members, but others in the larger community. These were all actions by SHG women which represented some degree of *agency* by women, in terms of decision-making and enhancing women's contribution to community in a way that goes beyond traditional gender roles. All members of an SHG save the same amount at each meeting. But all members of an SHG are not economically equal. It means they do not have equal credit absorption and repayment capacity and credit allocation generally takes place according to individual demand and capacity.

Self-help groups is a group wherein people who share common experiences, financial status, problems can offer each other a unique perspective that is not available from those who have not shared these experiences (Matheswaran 2008). SHG concept is needed for special groups like - the Disabled, the Widows, Commercial Sex Workers, Eunuchs, Endangered artisans; Affected Weavers, Youth and HIV affected women, Agricultural and other working women for daily wages.

One of the key benefits of SHGs is women's empowerment and this can be seen with the number of women involved in politics (Reddy CS 2005). SHGs typically consist of Schedule Caste (SC), Scheduled Tribe (ST), Minorities (MN) and Backward Caste (BC). The compositions of SHGs are sometimes exclusively one particular social group or a mix. In the vast majority of SHGs leaders were almost exclusively from the dominant social groups' category. This demonstrates a lack of equality and unity across caste divisions.

From the above literature survey the authors say that SHG is a group where people with common experiences, financial status, problems join together to offer each other a unique perspective that is not available from those who have not shared these experiences; majority of SHGs are single-caste based & special group based; vast majority of SHGs leaders were almost exclusively from the dominant social groups'; women in SHGs work together to address issues that affect not only their own members, but others in the larger community; there exists noticeable synergy between SHGs and local politics; politics helps women become more 'visible' in the village; all members of an SHG save the same

amount at each meeting and SHG members gets credit allocation according to individual demand and capacity. The present study makes an attempt to know whether the above given issues are holds good or not? Therefore, the present study.

The paper is presented in sections (I) Empowerment of women – concept, (II) Indicators of women empowerment in micro-finance, (III) Objectives, (IV) Methodology, (V) Analysis, (VI) Findings and (VII) Conclusion.

EMPOWERMENT OF WOMEN - CONCEPT

Empowerment is a multi-faceted, multi-dimensional and multi-layered concept. Most of us, when asked, have a great deal of difficulty defining *empowerment*. The word does not even translate literally into many languages. Yet most of us know empowerment when we see it. There are several interpretations about empowerment of women. The following are the few important ones:

Krishna (2003) defines empowerment as *"the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process is actions that both build individual and collective assets, and improves the efficiency and fairness of the organizational and institutional context which govern the use of these assets".* It is important to understand empowerment as a process and not an instrumentalist form of advocacy, which requires measurement and quantification of empowerment. Kabeer (2006) emphasizes that the ability to exercise choice incorporates three interrelated dimensions: resources, agency and achievements.

Resources: Resources can be material, social or human. They refer not only to conventional economic resources, such as land, equipment, finance, working capital etc. but also to the various human and social resources, which serve to enhance the ability to exercise choice. Human resources are embodied in the individual and encompass his or her knowledge, skills, creativity, and imagination and so on. Resources are distributed through a variety of different institutions and processes and access to resources will be determined by the rules, norms and practices, which prevail in different institutional domains (eg. Family norms, patron-client relationships, informal wage agreements, formal contractual transactions, and public sector entitlements). These rules, norms and practices give some actors authority over others in determining the principles of distribution and exchange within that sphere. Consequently, the distribution of 'allocative' resources tends to be embedded within the distribution of 'authoritative resources', the ability to define priorities and enforce claims. Heads of households, chiefs of tribes, directors of firms, managers of organisations, elites within a community are all endowed with decision-making authority within particular institutional contexts by virtue of their positioning within those institutions.

The terms on which people gain access to resources are as important as the resources themselves when the issue of empowerment is being considered. Access may be conditional on highly clientilist forms of dependency relationships or extremely exploitative conditions of work or it may be achieved in ways, which offer dignity and a sense of self-worth. Empowerment entails a change in the terms on which resources are acquired as much as an increase in access to resources.

Agency: The second dimension of power relates to *agency*, the ability to define one's goals and act upon them. Agency is about more than observable action; it also encompasses the meaning, motivation and purpose, which individuals bring to their activity, their *sense* of agency, or 'the power within'. While agency often tends to be operationalised as 'individual decision making', particularly in the mainstream economic literature, in reality, it encompasses a much wider range of purposive actions, including bargaining, negotiation, deception, manipulation, subversion, resistance and protest as well as the more intangible, cognitive processes of reflection and analysis. Agency also encompasses collective, as well as individual, reflection and action.

Agency has both positive and negative meanings in relation to power. In the positive sense of the 'power to', it refers to people's capacity to define their own life-choices and to pursue their own goals, even in the face of opposition from others. Agency can also be exercised in the more negative sense of 'power over', in other words, the capacity of an actor or category of actors to over-ride the agency of others, for instance, through the use of violence, coercion and threat. However, power can also operate in the absence of any explicit agency. The norms and rules governing social behaviour tend to ensure that certain outcomes are reproduced without any apparent exercise of agency. Where these outcomes bear on the strategic life choices noted earlier, they testify to the exercise of power as 'non-decision-making' (Lukes). The norms of marriage in South Asia, for instance, invest parents with the authority for choosing their children's partners, but are unlikely to be experienced as a form of power – unless such authority is questioned.

Achievements: Resources and agency together constitute what Sen refers to as capabilities, the potential that people have for living the lives they want, of achieving valued ways of 'being and doing'. Sen uses the idea of 'functioning' to refer to all the possible ways of 'being and doing' which are valued by people in a given context and of 'functioning achievements' to refer to the particular ways of being and doing which are realised by different individuals. These realised *achievements*, or the failure to do so, constitute our third dimension of power. Clearly, where the failure to achieve valued ways of 'being and doing' can be traced to laziness, incompetence or some other reason particular to an individual, then the issue of power is not relevant. When, however, the failure to achieve reflects asymmetries in the underlying distribution of capabilities, it can be taken as a manifestation of disempowerment.

Thus one may conclude that by helping women meet their practical needs and increase their efficacy in their traditional roles, micro finance can help women to gain respect and achieve more in their traditional roles, which in turn can lead to increased esteem and self-confidence. Although increased esteem does not automatically lead to empowerment, it does contribute decisively to women's ability and willingness to challenge the social injustices and discriminatory systems that they face.

From the above we can say women's empowerment is a process in which women gain greater share of control over resources - material, human and intellectual like knowledge, information, ideas and financial resources like money - and access to money and control over decision-making in the home, community, society and nation, and to gain `power'. Put in simple, "*Empowerment means moving from a position of enforced powerlessness to one of power".*

INDICATORS OF WOMEN EMPOWERMENT IN MICRO-FINANCE

Schuler, Hashemi and Riley's (2005) Empowerment Index uses eight indicators, each including a variety of specific actions or items:

1.   *Freedom of Mobility:* Mobility refers to going to the market, a medical facility, and the movies, outside the village.
2.   *Ability to make Small Purchases:* Purchasing small items used daily in food preparation for the family (kerosine oil, cooking oil, and spices), small items for her (hair oil. Soap, Glass bangles), purchasing ice cream or sweets for children. And sometimes decisions were normally made without asking the husband's permission, and if the purchases were made at least in part with money earned by the respondent herself.

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3.   *Ability to make Larger Purchases:* Large purchases like pots and pans, children's clothing, saris for her and buying the family's daily food. And sometimes they purchases were made at least in part with money earned by the respondent herself.

4.   *Involvement in major Household Decisions:* Involvement in decision (individually or jointly with the husband) within the past few years about house repair or renovation, deciding to lease land and buy land, a boat or a bicycle rickshaw.

5.   *Relative freedom from Domination by the Family:* Here freedom to buy land, jewelry or livestock from her own money, or purchases made in the family against her will.

6.   *Political and Legal Awareness:* Knowing the name of a local government official, a Member of Parliament, and the Prime Minister and the significance of registering a marriage and knowing the law governing inheritance like comes under political and legal awareness.

7.   *Involvement in Political Campaigning and Protests:* Just awareness sometimes may not be empowered, but they should involve in campaigning political candidate or had gotten together with others to protest: a man beating his wife, a man divorcing or abandoning his wife, unfair wages, and unfair prices. Misappropriation of relief goods. Or high-handedness of police or government officials.

8.   *Economic Security and Contribution to Family Support:* Economic security have when woman owned her house or homestead land, owning any productive asset, having her own cash savings and savings were ever used for business or money-lending.

OBJECTIVES OF THE STUDY

The prime objective of the study is to know the impact of SHGs on women empowerment with special reference to SHGs operating in Thyamagondlu Village, Bangalore rural District, Karnataka. The secondary objectives of the study are:

1   To trace the evolution of microfinance in India,
2   To understand the concept of women empowerment,
3   Identify the indicators of women empowerment in microfinance,
4   To know the impact of SHGs on women empowerment.

METHODOLOGY OF THE STUDY

The study is descriptive in nature. The population of the study consists of all the members (around 900) of the Self Help Groups operating in Thyamagondlu Village, Bangalore rural District, Karnataka. With the use of convenience sampling technique the researcher has selected 300 SHG women members as sample size for the study. See Table - 1 for detailed sample size from each area.

The data has been collected from primary as well as secondary sources. The primary data has been obtained from respondents through distribution of questionnaire. The secondary data has been collected from Internet, magazine, editorials, government rules and regulations on finance and micro finance.

Table 1
Distribution of Sample Size on the Basis of Area

Self Help Group	Village	Sample Size
Mahimashree Mahila Swasahaya Sangha	Kannuhalli	20
Stree Shakthi Sangha	Manne	20
Imdiragandhi Swa Sahaya Sangha	Thyamagondlu	120
Jannath Muslim Mahila Swa Sahaya Sangha	Thyamagondlu	20
Rani Chennamma Mahila Swa Sahaya Sangha	Thvarekere	20
Sonia Gandhi Mahila Swa Sahaya Sangha	Muddalinganahalli	20
Stree Shakthi Sangha	Ram pur	20
Jai Bharat Stree Shakthi Sangha	Obalapur	20
Sri Ganesh Stree Sangha	Vinayakanagar	20
Stree Shakthi Sangha	Kuntabhommanahalli	20
Total		300

All the Tables presented in the study are constructed based on the primary data.

DEMOGRAPHIC CHARACTERISTICS

Demography refers to the characteristics of the population. Demographics are the vital statistics that describe population. People constitute markets; demographics are of special interest to marketing executives. Demographic characteristics include gender, age, education, occupation, monthly family income, and family size. In the present study gender, age and education has been covered. Table–2 depicts the demographic characteristic of respondents

AGE

Table – 2 indicates that 50 per cent of the respondents are falling in the age group of 36-45. Age of SHG members ranges between 16 years to 65 years. It indicates that age is not the basis for SHG membership; any person who is unemployed can join in the SHG.

Table 2
Demographic Characteristics of Respondents

Characteristics	No. of Respondents	Percentage
Age		
< 15	00	00
16- 25	06	02
26- 35	30	10

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36-45	150	50
46-55	90	30
56- 65	24	8
> 65	00	00
Total	300	100
Education		
< SSLC	240	80
SSLC	36	12
PUC	24	8
> Degree	00	00
Total	300	100

EDUCATION

From the above Table - 2 it is clear that 92 per cent of the respondents are falling in the education category of SSLC and less than SSLC. It shows that members' dot not have jobs due to low education qualification. SHG membership is for unemployed and it is not based on the education qualification.

Table 3
Caste-wise Distributions of Respondents

Caste	No. of Respondents	Percentage
Brahmin	60	20
Vokkaliga	42	14
Lingayat	48	16
SC	36	12
ST	42	14
Others	72	24
Total	**300**	**300**

As said in the above SHG membership is for unemployed and it is not for a specific age group, education level and not on the basis of specific cast (See Table –3).

IMPACT OF SHGS ON WOMEN EMPOWERMENT

Table 4
Control of their Loans and Management

Opinion	No. of Respondents	Percentage
Yes	240	80
No	60	20
Total	**300**	**300**

Above Table – 4 shows that 80 per cent SHGs members (women) have taken control over their loans and there are able to manage them. Another concern is over the feminization of debt, where women are seen as becoming mediators between the male members of their family and the micro finance institutions. We can say that it is an indication of women empowerment.

Table 5
Participation in Purchasing Decisions at Home and in the SHG

Opinion	No. of Respondents	Percentage
Yes	231	77
No	69	23
Total	**300**	**300**

Generally rural women do not participate in purchasing decision. But Women (77 per cent) after joining SHGs they are able to participate in purchase decisions at home. Not only they participate in decision making at home but also participate in purchase of raw materials and pricing of final products in the SHG.

Table 6
Increased Self Confidence and Mobility

Opinion	No. of Respondents	Percentage
Yes	264	88
No	36	12
Total	**300**	**300**

The level of self-confidence and mobility are also important constituents of empowerment. It is very interesting to see that 88 per cent (see Table-6) of the respondents say that their confidence level and mobility has increased after joining the group. This helped members in

expressing their views in meetings. The interaction with officials had greatly increased; this was an indicator of greater mobility, confidence, exposure and better communication skills.

Table 7
Decision-making within the Household

Opinion	No. of Respondents	Percentage
Family Planning	237	79
Children's Marriage	252	84
Buying and Selling Assets	135	45
Sending Daughter to School	225	74

From the above Table – 7 we can say that SHG members (above 75 per cent of women) have involvement in the decision-making in their family in - family planning, children's marriage, buying and selling assets, sending daughter to school. These decisions, which have traditionally been within the male domain, reflect that although the women have been empowered, SHGs have not been able to positively impact their decision-making in buying and selling assets. A slight change, however, has been noticed in the inclusion of women in the decision-making process of sending their daughters to school.

Table 8
Improving Efficiency of Activities that are Culturally considered within the Woman's Domain.

Opinion	No. of Respondents	Percentage
Improved nutrition in the household	207	69
Taking better care of health and hygiene of their children	219	73
Helping in social functions	240	80

Table–8 indicates that SHG members understand the importance of nutrition in the household (69 per cent), taking better care of health and hygiene of their children (73 per cent); and participating in social functions like marriage and even started celebrating children's birth days.

Table 9
Reduction of Tough Times in SHG Members' Families after Joining SHGs

Opinion	No. of Respondents	Percentage
Decreased	195	65
No Impact	105	35
Total	**300**	**300**

Table – 9 shows that 65 per cent of the respondents feel that financial problems at home came down due to joining SHGs and start working in the groups. But there are 35 per cent of the people directly say that there is no impact of SHGs on their families.

Table 10
Political and Legal Awareness among SHG Members

Opinion	No. of Respondents	Percentage
Aware	225	75
Not Aware	75	25
Total	**300**	**300**

Awareness about political and legal procedures has increased among SHG women members (75 per cent). They are aware of the local government official, a Member of Legislative Assembly, a Member of Parliament, and the Prime Minister. They are also aware of the legal procedures that help in complaining about domestic violence, a man divorcing or abandoning his wife, unfair wages, unfair prices, high-handedness of police or government officials.

FINDINGS FROM THE STUDY

From the foregoing analysis the following findings have been extracted:

- Half of the respondents are falling in the age group of 36-45. SHG members' age ranges between 16 years to 65 years. It indicates that age is not the basis for SHG membership; any person who is unemployed can join in the SHG.
- About 92 per cent of the respondents are falling in the education category of SSLC and less than SSLC and they dot not have jobs due to low education qualification. It indicates that SHG membership is for unemployed and it is not based on the education qualification, any body can join in the SHG. At the same time no discrimination among different cast people; SHG membership is opened for all the casts. In other words, it is not for a specific age group, education level and not on the basis of specific cast
- Majority of the SHGs members have taken control over their loans and there are able to manage them. Another concern is over the feminization of debt, where women are seen as becoming mediators between the male members of their family and the micro finance institutions.
- Generally rural women do not participate in purchasing decision. But the present study shows that 77 per cent of the SHG members were able to participate in purchase decisions in the group and pricing of final products in the SHG. Not only have they participated in decision making at home.
- Self-confidence and mobility are also important constituents of empowerment. It is very interesting to see that 88 per cent of the respondents feel that their confidence level and mobility has increased after joining the group. These helped members in expressing their views in meetings, in interaction with officials and were an indicator of greater mobility, confidence, exposure and better communication skills.
- Above 75 per cent of SHG members have involved in decision-making in their family in - family planning, children's marriage, buying and selling assets, sending daughter to school. These decisions, which have traditionally been within the male domain, reflect that although the women have been empowered. But SHGs have not been able to positively impact their decision-making in buying and selling assets. A slight change, however, has been noticed in the inclusion of women in the decision-making process of sending their daughters to school.

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- One very interesting thing to note here is that SHG members were able to understand the importance of nutrition in the household, taking better care of health and hygiene of their family. They also started in helping in the social functions like marriage and even started celebrating children's birthdays.
- Majority of the respondents' feel that financial problems at home have came down due joining SHGs and start working in the groups.
- Awareness about political and legal procedures increased among SHG women members. They are aware of the local government official, a Member of Legislative Assembly, a Member of Parliament, and the Prime Minister. They are also aware of the legal procedures – like a man beating his wife, a man divorcing or abandoning his wife, unfair wages, unfair prices, high-handedness of police or government officials.
- One very interesting to disclose here is that empowerment also led conflicts in some of the SHG members' family. The house owners disclosed this.

CONCLUSION

The empowerment of women is one of the central issues in the process of development of countries all over the world and it is also crucial for the development of the Rural Bharat. Bringing women into the mainstream of development is a major concern for the Government of India. Pioneering microfinance institutions (MFIs) have already recognized that the twin goals of empowering women and developing poor communities are closely connected. The Nobel Prize-winning Grameen Bank, for example, gives around 96 per cent of its micro-loans to women, while the UN estimates that around 76 per cent of all microfinance clients globally are women.

Women empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. As per Schuler, Hashemi and Riley's empowerment index most of the SHGs members in Thyamagondlu Village, Bangalore rural District, Karnataka, were empowered, but the level of empowerment need to be improved. At the same time there is a need to educate empowered women in reducing conflicts at home particularly with head of the house.

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STOCK RETURNS AND MARKET EFFICIENCY: AN EMPIRICAL STUDY ON INDIAN STOCK MARKET

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ABSTRACT

Many research studies have found that corporate events have numerous effects on the stock market. In this regard the aim of this paper is to test the semi-strong form of efficiency in Indian equity market following event study approach. The events considered in this paper are bonus issues and rights issues that have taken place in the market from 1996 to 2009. The two events are also been tested for abnormal returns and liquidity. The data selected is free from the impact of confounding events. Minus 30 to plus 30 days investigation window is taken for all the events to test abnormal returns and to test the change in liquidity. The results suggest that the Indian market is efficient in its semi-strong form with respect to bonus issue announcements only. In case of change in liquidity, bonus issues show a significant change in liquidity from pre to post event period at 5 percent level of significance. But in case of rights issue, there is no change in liquidity in both the periods.

KEY WORDS
Efficient Market, Event Study, Confounding Events, Abnormal Return

INTRODUCTION
This section is logically divided into three parts. First part describes the efficient market hypothesis (EMH) in detail. Second part comprises the basic understanding of the Indian equity market. Whereas, the third part explains the theoretical background of two events (bonus issue and rights issue) considered in the study. The general discussion of abnormal returns, confounding events and liquidity is encompassed in the last part of the section.

EFFICIENT MARKET HYPOTHESIS (EMH)
Efficient Market Hypothesis (EMH) signifies that all appropriate information is quickly and fully assimilated in a security's market price; thereby guessing that an investor will obtain an equilibrium rate of return. In other words, an investor in the market should not anticipate an abnormal return. There has been a large body of academic community, mainly economists and statisticians, who subscribe to the hypothesis of random walks in the stock market prices. Random-walk theorists generally start from the premise that the major security exchanges are good instances of efficient markets. A market where consecutive price changes in individual securities are independent is, by definition, called a random-walk market (Fama, 1965). The random walk theory affirms that all information is replicated in the current stock prices. Therefore any new information would also take little time to be completely incorporated in the prices, and market players, thus, would have little time to exploit this new information to realize above normal profits.

Fama (1970) recognized three forms of market efficiency explicitly; the weak, semi-strong and strong form. Weak form of market efficiency says that current stock prices fully reflect all past information. Hence, any attempt to forecast prices based on historical prices or information is completely futile, as the prices follow random walk process. Semi- strong form expands the idea of efficiency a little further and describes that current stock prices replicate all publicly available information. It also believed that prices adjust to such information very quick, so above normal returns on a consistent basis cannot be earned. The strong form explicates the situation where all pertinent information, whether it is within the public domain or private domain, will be reflected in the stock market price.

In event studies, it is measured how quickly stock prices respond to different pieces of news, such as corporate earnings or dividend announcement, news of a merger and takeover, or macroeconomic news. Normally, the exploration of semi-strong form market efficiency has been limited to the study of well-developed stock markets in the world. The aim of this research is to observe the stock price reaction to information release on bonus issues and rights issues with a view of examining whether the Indian stock market is efficient in its semi-strong form or not. Over the past half century, event studies have been employed in much research studies across the globe and their superiority has been greatly improved by Dolley (1933), Fama et al. (1969) and Brown and Warner (1985). The similar methodology has been used to contribute additional confirmation on the efficiency features of the Indian stock market.

INDIAN EQUITY MARKET
Many stock market studies have been apprehensive with market efficiency. However the majority of the markets under examination have been mature markets such as the New York Stock Exchange and London Stock Exchange (Bris et al. (2004); Schwert (2002)). This present study tries to consider the market efficiency of an emerging stock market like India. The Indian equity market has been portrayed as an emerging market (Raju and Ghosh (2004); Mahfuzul et al. (2004); Yartey (2008)) and in the subsequent pages the author attempts to study whether the Indian market is efficient in its semi-strong form or not through an event study methodology. Indian equity market is mainly executed on the basis of two major stock indices, National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). The benchmark indices in these two exchanges are Sensex (30 stocks) and Nifty (50 stocks) respectively. In both these stock exchanges trading is being carried on in a dematerialized form. However there are about 22 stock exchanges in India which regulate the market trends of different stocks in the economy. Securities and Exchange Board of India (SEBI) is the regulatory authority and it controls the functioning of the all stock markets in India.

With the liberalization of Indian economy in early 1990s, it was inescapable to boost the Indian stock market trading system on parity with the international standards. In the past few years with the help of online stock trading facility, it has been extremely convenient for investors to trade in Indian stock markets. Hence over the years Indian equity market became a lucrative destination for both domestic and foreign investors. Foreign investment in general enjoys a mainstream share in the Indian equity market.

THEORETICAL BACKGROUND OF EVENTS

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The semi-strong form of market efficiency guides the security prices to react instantly to any new information. The researches on event studies are enormous in number, and the literature continues to grow further in recent times. Event studies commonly examine the behavior of firms' stock prices around the corporate announcements.

The first event for the present study is bonus issue; which is basically the distribution of additional stocks to existing shareholders in proportion of their current holding. A company can issue bonus shares by utilizing retained earnings or accumulated capital reserves. Only correction caused by bonus issue is that the numbers of outstanding stocks are adjusted by the bonus issue ratio. Thus the price of the stocks' decline on the basis of the same ratio (number of bonus stocks in the issue/number of existing stocks applicable for the bonus issue) and the value of the stocks held by an individual investor remain unaffected. Miller and Modigliani (1961) explained theoretically that bonus issues, along with other types of dividends declared by companies, do not amend stockholders' wealth. Likewise, Sloan (1987) presented Australian evidence that bonus issues do not influence stockholders' wealth. However, many empirical researchers have revealed that the market normally reacts positively to the company announcement of a bonus issue or stock dividend (see, Fama et al. (1969); Foster & Vickrey (1978); Woolridge (1983); Eades et al. (1984); McNichols & Dravid (1990); Anderson et al (2001); Obaidullah (1992) and Rao (1994)).

The second event undertaken in the study is the rights issue. It is the issue when a listed company proposes to issue new securities only to its existing shareholders at a price. The rights are typically offered in a particular ratio to the number of securities held by the shareholders prior to the issue. As a result each shareholder gets to acquire a certain number of shares, based on his current holding. Rights issues are not free shares of the company, but the shareholders get complete right to own those shares at a price. The amount per right share is generally less than the current stock price. Given this the shareholders will exercise their right and the number of shares will increase thus reducing the earning per share. This route is appropriate for companies who would like to mobilize capital without diluting stake of its existing shareholders.

ABNORMAL RETURNS, CONFOUNDING EVENTS AND LIQUIDITY

Abnormal returns are impartial estimates of changes in the market value of the firm during the event period, which replicate the price reaction to the event. It is the return that an investor gets over and above the normal returns. There are several common alternatives for estimating normal return for instance, market model and mean-adjusted normal return model. In the present study market model is used to estimate normal returns. Normal returns are the returns an investor gains due to his standard course of trading. Means the period during which any event, that can influence his returns has not occurred. Now once some event transpires, it may contaminate the usual course and results an abnormal return. The process of calculating normal and abnormal return is discussed in the subsequent methodology section.

To study the impact of particular event on share prices, the event study methodology followed by researchers isolates events from each other. To execute the procedure appropriately, all confounding events around the event window, a period prior and subsequent to the event date, need to be controlled for. Confounding events comprise movements in the overall market and/or firm- specific events like acquisitions or divestitures or bonus announcement or stock split or rights issue. If the bonus announcement or other major firm- specific events takes place within the event window, the firm is usually removed from the sample. This is because to confirm the abnormal return calculated is due to bonus announcement or any other firm-specific event declared on the same day. However, if all the events are kept, the researcher exercises some other approach to control for the influence of the confounding event on the study's results (see, Lijleblom, 1989). But in the present study the author has removed the firms which witnessed some confounding events.

Market liquidity is a significant factor which affects market efficiency. It is an indicator of market depth and demonstrates the absorption power of risk premium. The market liquidity can be considered as one of the factors influencing the price discovery function. Over the years many researchers demonstrated the relation between corporate events and its impact on liquidity. Miller and Modigliani (1961), in their influential work formally developed the dividend irrelevance hypothesis. They described that in perfect capital markets populated by rational investors; a firm's value is solely a function of its investment opportunities and is independent of the firm's payout policy. On the contrary other existing literature argues that stock market liquidity influences the valuation of firms both in the cross-section and through time (See, for example, Amihud (2002), Brennan and Subrahmanyam (1996), Brennan et al. (1998)). Lakonishok and Lev (1987) studied liquidity hypothesis, which suggests that stock dividend messages are intended to improve liquidity, as the floatation of additional stocks should lead to an improve in trading and greater ownership dispersion in a firm.

LITERATURE REVIEW

Event studies have a long history, comprising the original stock split event study by Fama et al. (1969). Peterson (1971) suggested that an increase in stock price following an event can occur because the announcement of a bonus issue may have beneficial information content. In the similar line Foster and Vickrey (1978) observe the signaling hypothesis using daily return data and information content of 82 stock dividend announcements. They found that there is a considerable positive abnormal return around the announcement dates. Woolridge (1983) found a positive average abnormal ex-date return of 0.98 percent for a sample of 317 stock dividends and propose that the ex-date effect could arise from market flaws such as taxes and odd- lot transaction costs. Grinblatt et al. (1984) considered the 1967 to 1976 ex-dates of stock dividends distributed and found an average abnormal return of 1.1 percent. This finding is also interpreted as a confirmation of signaling hypothesis. Lijleblom (1989) investigated the signaling hypothesis by considering stock market price response to bonus issues for the firms that also concurrently release other contaminating information, for instance release of past earnings. His findings indicate that there is a greater positive stock price reaction for the bonus issue-paying group than for the control group. This finding is interpreted as a support of signaling hypothesis in the existence of other contaminating announcements. McNichols and David (1990) find a positive relationship between the bonus issue announcement and related abnormal return. Their result provides fact, which is consistent with a signaling explanation for stock dividends. A Canadian study by Masse et al. (1997), exploring the impact of stock dividend announcements on the value of the firms listed in Toronto Stock Exchange, establish significant and affirmative abnormal returns around the announcement date.

Managers use financial decisions such as stock split and bonus issues to convey a favourable private information about the current value of the firm as suggested by Ross (1977) and Leland and Pyle (1977). Eades et al. (1984) found that there is a significant positive ex-date return by companies listed on the New York Stock Exchange during the period between 1962 to 1980 for a sample of 2110 stock dividends and stock splits. Their results were accounted not just for the ex-day, but also for the five days either side of it. However it was found that ex-day itself exhibited the largest average abnormal return and indicated that positive abnormal returns were also significant on the day prior to it and on the two days subsequent to it. In the similar line Lakonishok and Vermalen (1986) reported a substantial positive abnormal return for a sample of 2558 stock dividends and stock splits. They considered each of the five days prior to the ex-day, the ex-day itself and the two days subsequent to it and found that the largest abnormal return is explained on the ex-day itself.

Several studies in market efficiency do not distinguish between stock split and stock dividend. But the researchers like Wulff (2002) and Rankine and Stice (1997) found that the announcement effect is more pronounced for stock dividend than for stock split. In the similar line Grinblatt et al. (1984) propose that stock dividend signal has greater future earnings expectations than stock split. Eisemann and Moses (1978) and Baker and Gallagher (1980) surveyed manager's views regarding stock dividends and stock splits respectively. They described that firms' issue stock split with an intention of keeping stock price in an optimal range whereas the stock dividend is related to preserve cash and to convey confidence in the firm and to enlarge the number of shareholders.

Kothare (1997) and Bae and Jo (1999) carried out their study particularly in US market (NASDAQ and NYSE respectively) on rights issues and volatility in the market. Kothare finds that there is no change in volatility in the stock price after rights issue announcement whereas, Bae and Jo find decreasing volatility following rights issues. A probable explanation for the different finding can be that Bae and Jo used shorter pre- and post-issue periods. In the same framework some researchers argue that there is a small increase in the number of shareholders following rights issues for the Norwegian and Finnish stock exchanges (Bohren et al. (1997); Hansson (1999)).

Other studies on rights issues have accounted negative announcement period returns (see Burton et al. (2000); Suzuki (2000) for UK; Singh (1997) for US; Marsden (2000) for New Zealand; Kabir and Roosenboom (2003) for Netherlands). Conversely, positive announcement period abnormal returns immediate to rights issues are reported by Tsangarakis (1996) for Greece market, Bohren et al. (1997) for Norway market and Kang and Stulz (1996) for Japanese market rights issue announcements.

There are few researchers investigated the semi-strong form of market efficiency in India. Ramachandran (1985) studied the impact of bonus issue announcements on Indian equity stock prices. He found a varied evidence of semi-strong form efficiency in the Indian stock market. Obaidullah (1992) accounted a positive stock market reaction to bonus issue announcements and supported the semi-strong form of market efficiency. Rao (1994) suggested that the Indian equity market responds in an expected direction to firm announcements and supported the semi-strong form of efficient market in India. He projected a cumulative abnormal return of 6.3 percent around the three days of bonus issue announcement. Srinivasan (1993) in his study established enormously large positive abnormal returns on ex-bonus and ex-rights dates for Indian stocks. Mishra (2005) found that there is a significant positive abnormal return for a five-day period prior to bonus announcements.

RESEARCH METHODOLOGY AND DATA

From the above literature it is evident that lot of work has been done on event study in the developed and emerging markets (including India) considering a single event. In the present paper the author considered two events (i.e. bonus issues and rights issue) to find the market reaction during the same period. In order to carry out an event study, the author determine the investigation window as t=-30 to t=+30 relative to the event day t=0 (date of announcement of bonus issue /rights issue).

This section is divided into two logical parts. The first part outlines the data source and hypothesis and the methodology followed to proof the hypothesis is enumerated in the second part.

DATA SOURCE AND HYPOTHESIS:

The stock market data for the analysis is taken from Prowess database published by Centre for Monitoring India Economy (CMIE). The stock data includes the stocks which have been listed in National Stock Exchange (NSE) and declared bonus issues and rights issues from April 1996 to March 2009. The daily adjusted share price data of the sample companies has been collected for two events. It is revealed that there are 521and 177 companies went for bonus issues and rights issues respectively during the period April 1996 to March 2009 in Indian market. The sample companies are taken after removing the confounding events of the respective companies.

For the purpose of the study, a null hypothesis is constructed for abnormal returns. The null hypothesis (H_0) is that the Indian market is efficient in its semi-strong form and there is no significant average abnormal return around the event dates for two events (bonus issues and rights issues) and the alternative hypothesis (H_1) being the Indian market is not efficient in semi-strong form and there is a significant average abnormal return around the event dates. The change in liquidity is also tested for all the events considering the same t=-30 to t=+30 days window. Here the null hypothesis (H_0) being there is no significant change in liquidity of stocks for any of the two events (bonus issue and rights issue). Whereas alternative hypothesis (H_1) being there is a significant change in liquidity of stocks for the events considered.

METHODOLOGY ADOPTED:

To devise an event study, the event, event window, estimation window, investigation widow and the estimation model should be determined. An event is what the investigators would like to study, and it conveys the information that potentially influences the stock market prices. An event window is the period in which an event occurs in the market. The event window in this research is combined with the day of announcement of the event and the days preceding and succeeding the announcement day, which are numerically expressed as −1, 0 and +1. The period of data used for estimation of parameters is known as an estimation window. The estimation window in this study is identified from −230 days to −31days before the announcement date i.e. "0" day. The investigation window is an extension of the event windows, from −30 days through +30 days for both the corporate events.

For any Time series data analysis, all data series must be stationary. To study the stationarity of data series the author carried out unit root test, which shows whether the data series is stationary or not. The Stationarity condition has been tested using Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) tests. [Dickey and Fuller (1979), Gujarati (2004), Phillips and Perron (1988)]. Preliminary, Augmented Dickey Fuller (ADF) and Phillips–Perron (PP) tests failed to reject stationarity in case of all the individual stock returns and market return variables.

Brown and Warner (1980) reported that 'a simple methodology based on the market model is well-specified and relatively powerful under a wide variety of conditions. Following Brown and Warner, the market model is employed to compute the abnormal returns that are derived from the following equation:

$R_{jt} = \alpha_j + \beta_j R_{mt} + e_{jt}$

Where, $R_{j,t}$ = the daily return security j at day t

R_{mt} = the daily return on Indian stock market at day t

$\acute{\alpha}_j$ and β_j = OLS intercept and slope coefficient estimators, respectively

e_{jt} = the error term for security j at day t

The NSE market index (Nifty) is taken here the proxy for computing the market return. To compute daily market return logarithm method has been followed.

$R_{mt} = \text{Log} (I_t/I_{t-1})$

The daily return for individual security "j" is:

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$R_{jt} = Log (R_t/R_{t-1})$

$\acute{\alpha}_j$ and β_j are derived from the market model over 200 days prior to the event month and assumed to be constant for the event window considered in the study (t-30 to t+30). The expected returns for security j at day t are defined as,

$ER_{jt} = \acute{\alpha}_j + \beta_j R_{mt}$

Where $\acute{\alpha}_j$, β_j are OLS estimators of $(\acute{\alpha}_j , \beta_j)$.

The daily abnormal return is calculated as $AR_{jt} = R_{jt} - ER_{jt}$. For each event date t, the cross sectional average abnormal returns for all firms are defined as:

$$AAR_t = 1/n \sum_{J=1}^{n} e_{jt}$$

t = -30 to +30

n = 521 for bonus issues and177 for rights issues

To test the statistical significance of results pertaining to abnormal returns obtained, the t-test recommended by Brown and Warner (1985) in the presence of event clustering of cross-sectional correlation is conducted.

In order to see if the events affect liquidity of the security, a simple paired t-test is used in the study. Total volume traded in the market is taken as the proxy for liquidity of the stock. The author has also made an attempt to see whether there is any significant difference in the total traded volume in the pre and post event dates of these two events (bonus issues and rights issues) for the event window t=-30 to t=+30 days.

RESULT ANALYSIS

This result analysis section is presented in two sub-sections. First deals with the results obtained for testing efficiency of the market with respect to two events and the second enumerates the findings of liquidity in pre and post of these events.

MARKET EFFICIENCY

In the study the author considered the event window of 61 days consisting of t_{-30} to t_{+30} relative to event day t_0. Event date is the date of announcement of bonus or rights issue.

The objective of the study being exploring semi-strong form of market efficiency characteristics of the Indian stock market, it is attempted to investigate, whether the Average Daily Abnormal Returns (AAR) are indicating any pattern or not. In addition to this whether any sample company delivers abnormal returns on and around announcement date is also investigated in the research.

The results obtained with respect to bonus issues are presented in Table 1. It is found that on the announcement date, there is a negative average abnormal return of 1.3%. But it is not statistically significant at 5% level. The results concerning rights issues are depicted in Table 2. It is revealed that on announcement date, there is a positive average abnormal return of 1% for rights issues. This return is also statistically significant at 5% level. This shows that, there is a strong impact of rights issues than bonus issues on stock prices in Indian market. Table 3 recapitulates the impact of bonus issues and rights issues on share price performance. It is found that 24% of sample companies have positive returns during the event window in respect of bonus issues whereas that is 60% for rights issues. On announcement date, only 15% of sample companies reported positive return in case of bonus issues compared to 55% for rights issues. Thus it is evident that reaction of market players to rights issue announcements are more pronounced than that to bonus issues. It is also observed from Table 1 that in case of bonus issues, there are only 11 days out of 61 days reported statistically significant return. Where, it is 17 days out of 61days (Table 2) for rights issues reported statistically significant return excluding the event date. During the post 30 days from the event announcement date, there are 14 days reported statistically significant return in respect of rights issue. Which is much higher in compared to bonus issues significant return of 7days. In case of rights issue there are positive average abnormal returns (AAR) repeatedly for six days after the event date. But these returns are not statistically significant. Whereas, the return of one day before the event date i.e. t_{-1} is statistically significant. These results suggest that chances are more to earn abnormal return during the rights issue announcements than bonus issue announcement. This is also been supported by earlier researchers like Hansson (1999), Kothare (1997), Tsangarakis (1996) for Greece market, Bohren et al. (1997) for Norway market and Kang and Stulz (1996) for Japanese market. Majority of these studies concluded that, there is a positive reaction of investors in the market following the rights issue announcements. But findings are contrary to researchers like Wulff (2002), Rankine and Stice (1997) and Grinblatt et al. (1984) who found that the announcement effect is more pronounced for stock dividend than any other types of event. On Indian market, the research studies like Obaidullah (1992), Rao (1994) and Mishra (2005) suggested that the Indian equity market responds in an expected direction to firm announcements and supported the semi-strong form of efficient market. However this present research supports the earlier studies in respect of bonus issues announcements but failed to admit the Indian market efficiency under rights issue announcement.

LIQUIDITY RESULTS

Table 4 shows the results achieved as part of testing the change in liquidity in pre and post events in respect of bonus issues and rights issues. It is found that the null hypothesis of no significant difference in liquidity pre and post event date is rejected at 5% level of confidence for bonus issues. This shows that there is a significant difference in liquidity concerning the bonus issue announcements. The outcomes found with respect to rights issue shows that the "t" statistics is -0.275 and the corresponding probability of around 0.74. Therefore the possibility of committing a type 1 error if the null is rejected is 74%, which is not satisfactory. It is thus no evidence to reject the null hypothesis. As a result it can be concluded that there is no change in liquidity pre and post rights issue in the Indian market.

FINDING AND CONCLUSION

This paper examines the announcement effects of bonus issues and rights issues on the Indian stock market during the period April 1996 to March 2009. An event study is conducted using a 61-day event window. The study rejects the null hypothesis for rights issues but it fails to reject the null hypothesis in case of bonus issues. This study proves that Indian market is efficient in its semi-strong form only for bonus issues but not true in case of rights issue. The study finds a positive AAR of 1% in respect of rights issues on event announcement date. Whereas in respect of bonus issues AAR is -1.3% on the announcement date, which is again not statistically significant. But rights issues returns are statistically significant at 5% level on the announcement date. Moreover it is found that 24% of sample companies have positive returns during the event window in respect of bonus issues whereas that is 60% for rights issues. Thus it is evident that reaction of market players to rights

issue announcements are more pronounced than that to bonus issues. These findings are in line with the earlier studies by Bohren et al. (1997), Hansson (1999), Kothare (1997), Tsangarakis (1996), Bohren et al. (1997) and Kang and Stulz (1996).

In case of liquidity it is found that the null hypothesis of no change in liquidity is rejected in case of bonus issues. One possible reason may be quoted here that the number of shareholdings increases due to bonus issues, which may attracts the investors for more trading. But for rights issues there is no evidence find to reject the null hypothesis of no difference of liquidity in pre and post event. In the overall study it can be concluded that under bonus issue announcements Indian market is efficient but the efficient market hypothesis is failed prove that Indian market is efficient around rights issues announcements where investors still can make abnormal returns.

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TABLES

TABLE 1, EVENT- BONUS ISSUE

Days	Mean Abnormal Return	t-Statistics	Days	Mean Abnormal Return	t-Statistics
-30	-0.0066	-0.5894	1	-0.0047	-0.8733
-29	0.0026	0.7385	2	-0.0047	-0.3909
-28	-0.0036	-1.0737	3	-0.0022	-2.4132*
-27	0.0098	2.2551*	4	0.0008	0.3738
-26	-0.0232	-2.3479*	5	-0.0033	-0.6481
-25	-0.0035	-1.1355	6	-0.0055	-1.6271
-24	-0.0049	-1.2282	7	-0.0005	-0.2494
-23	-0.0017	-0.8367	8	-0.0075	-2.8164*
-22	-0.0025	-2.2812*	9	-0.0019	-0.6380
-21	0.0015	0.6705	10	-0.0006	-2.2540*
-20	-0.0034	-1.1555	11	-0.0019	-0.7897
-19	-0.0013	-0.5604	12	-0.0007	-0.3602
-18	-0.0006	-0.2516	13	-0.0028	-0.8241
-17	0.0042	1.2270	14	-0.0026	-0.9881
-16	-0.0032	-1.4767	15	0.0013	0.3888
-15	-0.0015	-0.2376	16	-0.0012	-2.4919*
-14	-0.0041	-1.4876	17	-0.0072	-1.8462
-13	0.0009	0.3629	18	-0.0024	-1.8291
-12	0.0066	0.6061	19	-0.0065	-0.801
-11	-0.0056	-0.6214	20	0.0028	2.8288*
-10	0.0054	2.1924*	21	-0.0233	-1.7151
-9	0.0048	1.7340	22	-0.0044	-2.0772*
-8	0.0059	2.3994*	23	-0.0046	-2.2117*
-7	-0.0006	-0.2356	24	-0.0029	-1.07
-6	0.0047	1.1100	25	-0.0048	-1.239
-5	0.0027	0.6361	26	-0.0012	-0.4292
-4	0.0039	1.4946	27	-0.0044	-1.8518
-3	0.0054	1.9496	28	0.0028	0.6341
-2	-0.0034	-0.8878	29	-0.0036	-0.7787
-1	-0.0039	-1.3787	30	-0.0019	-0.8864
0	-0.0129	-0.4592			

Note- (*) indicates statistically Significant at 5% level.

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TABLE 2, EVENT- RIGHTS ISSUE

Days	Mean Abnormal Return	t-Statistics		Days	Mean Abnormal Return	t- Statistics
-30	0.0067	1.5080		1	0.0029	0.8108
-29	0.0073	1.3353		2	0.0074	0.8909
-28	0.0036	0.5754		3	0.0060	2.7586*
-27	-0.0038	-0.8431		4	0.0087	0.2019
-26	0.0060	1.0566		5	0.0071	2.7804*
-25	0.0053	1.7496		6	0.0018	0.7972
-24	0.0073	1.2322		7	-0.0131	-3.6352*
-23	-0.0043	-0.7925		8	0.00006	2.0069*
-22	-0.0072	-1.2201		9	0.00002	2.1047*
-21	-0.0060	-0.8915		10	-0.0109	-3.3846*
-20	-0.0054	-0.5692		11	0.00064	0.2706
-19	0.0019	0.3812		12	0.000022	2.0103*
-18	-0.0053	-2.1658*		13	-0.0033	-0.6579
-17	0.0132	2.5069*		14	-0.0024	-2.4986*
-16	-0.0067	-0.9780		15	0.0019	2.5386*
-15	0.0071	0.9101		16	-0.0056	-2.7395*
-14	0.0052	0.8574		17	0.0037	0.2903
-13	-0.0067	-1.7739		18	0.0045	2.6519*
-12	-0.0092	-1.8894		19	-0.0056	-2.4468*
-11	0.0037	0.2773		20	0.0012	2.0763*
-10	-0.0091	-1.2764		21	0.0076	1.7956
-9	0.0082	0.9605		22	0.0079	1.8648
-8	-0.0029	-0.7826		23	-0.0056	-2.8966*
-7	-0.0039	-0.7298		24	-0.0012	-0.3408
-6	0.0174	0.6691		25	-0.0016	-0.2344
-5	0.0081	1.6806		26	0.0086	1.9808
-4	0.0098	0.8819		27	-0.00018	-0.0548
-3	0.0348	1.5569		28	0.0015	0.4374
-2	0.0045	0.9415		29	-0.0074	-1.9749
-1	-0.0022	-2.5950*		30	-0.0092	-1.3536
0	0.0102	3.1083*				

Note- (*) indicates statistically Significant at 5% level.

Table-3 Impact of Event (Bonus Issues and Rights Issues) Announcement on Share Price Performance

Particulars	Bonus Issues		Rights Issues	
	No. of Companies	Percentage	No. of Companies	Percentage
Companies having positive mean return during event window	124	23.8%	107	60%
Companies having negative mean return during event window	397	76.2%	70	40%
Companies having positive return on announcement date	79	15%	98	55%
Companies having negative return on announcement date	442	85%	79	45%
Total	521	100%	177	100%

Table 4- Liquidity Test

Events	t-statistics	Probability
Bonus Issues	3.436*	0.0308
Rights Issues	-0.275	.7487

Note- (*) indicates statistically Significant at 5% level.

A COMPARATIVE STUDY OF ORGANIZATIONAL CHANGE METHODOLOGIES AND APPROACHES

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ABSTRACT

Organizations of the 21st century realize that they should innovate in order to survive. Contemporary organizations well understand the power of change processes, that they have only one option: change to survive. In this paper organizational change revolve around three assumptions and the first assumption is about the environment of the organization: society and its structure, the market, the customer and technology. The second assumption is about the specific mission of the organizations and the third assumption is about the core competencies needed to accomplish the organization's mission. It also has been emphasized in the study that those organizations anticipating changes and responding quickly will win, but those trying to resist change will loose. To successfully adapt to this continuously changing environment, organizations must continuously innovate and take on new business strategies. Every change methodology tries to make sure that the organization intended to change will achieve the best position to be successful. Because information is the driving force of organizations today, knowledge management has become critical process for organizations. Change methodologies use this advantage with their main focus area. TQM, BPR (Business Process Reengineering), Learning Organization, Chaordic Organization, Customer Focused Organization and many others ideas have been summarize. But they provide too little guidance about what the improved organization might look like. Methodologies promise innovation but they lack the details needed to accomplish it. The main emphasize was to give a comparison of these methodologies and approaches used for organizational change and to provide a design process to adopt a suitable organizational change methodology.

KEY WORDS

Organizational change, Organizational competency, TQM, BPR, Organization, Chaordic Organization, and Customer Focused Organization.

INTRODUCTION

Drucker (1995) states that organizations are in a very different environment from before. This era is shaped by fast change, high technology and adaptability of entities. The change process is very fast and includes many opportunities for organizations to maximize their profits yet at the same time includes risks that may drive the organizations out of business. Change is not always at the micro level or as easy as just opening a web page. Companies are changing, public organizations are changing, and even countries are changing. Governments take measures to cope with these changes. State organizations are getting smaller and more effective.

Organizations of the 21st century realize that they should innovate in order to survive, and this innovation process should be continuous (Drucker, 1995). They begin to understand that information is the power to drive their businesses, that "information has strategic value" (Drucker, 1995) as a resource in addition to a classical approach consisting of money, material and people. They also realize that they need to changethemselves based on knowledge, which has caused tremendous changes to thefundamentals of their businesses.

Traditional organizations are not immortal. Contemporary organizations well understand the power of change processes, that they have only one option: change to survive. Executives, who put their organizations in a continuous change process and create an organizational culture that is adapted throughout this process, know very well that action is the only way to shape tomorrow. They will either manage knowledge and change and control our future, or be controlled by it. Especially in developing countries, there are more basic problems than change, like clean water, safety and food. Organizational change in developing countries has more barriers than it does in developed countries. It does not suffice just to duplicate developed countries' approaches, including institutions, which will probably fail due to the environmental differences, the resources and the general conditions of developing countries (Jaeger and Kanungo, 1990).

ORGANIZATIONAL CHANGE

Organizations are established to achieve specific purposes. The literal definition of an organization states that it is (1) a social entity that (2) has a purpose, (3) has a boundary, so that some participants are considered inside while others are considered outside, and (4) patterns the activities of participants into a recognizable structure (Daft 1989).

Peter F. Drucker defines the fundamentals of a business around three points called "the company's theory of business"(Drucker 1995). They are assumptions about the environment, the specific mission of the organization and the core competencies needed to accomplish the organization's mission.

The first point is the assumptions about the environment of the organization: society and its structure, the market, the customer and technology. When the environment changes, organizations should also change to survive. For example before the Second World War, market demand was greater than market supply. That's why suppliers mostly focused on their processes rather than customer preferences. Henry Ford's famous words clearly define this situation "You can have any color of car so long as it is black". But this situation ended some time after the Second World War with people started to dominate production.

In value-oriented time, competition becomes more severe. Organizations must find products and services, which are differentiated not only by purpose and form but also by the 'added-value', which attaches to them. A value added activity is any activity that contributes directly to the performance of a mission, and could not be eliminated without impairing the mission. An activity in a process that adds value to an output product or service, that is, the activity merits the cost of the resources it consumes in production. It contributes to producing a designated product or service that meets customers' requirements and that the customer is willing to pay for. This means identifying potential customer

expectations and then exceeding them. But it is important to understand the activities from the perspective of the customer. Companies focus on what they think their customers want without asking the customers themselves. Carriers may think that the departure time from the airport is important for the customer, although the arrival time to the destination is more important.

As the lifecycle of a product shortens, organizations will be under constant pressure to introduce new product offerings. This implies a continuing struggle for innovation in terms of both products and the services associated with them. Innovation is, however, not only associated with the product itself but also with ways of supplying and marketing it. What may differentiate one product offering from another is not the product itself but the innovative production techniques, quality and relationship marketing – skills, which are difficult for the competition to copy (Senior 1997).

When people started dominating production, organizations changed their way of working. Ford manufactured cars with more than one color. If Ford had insisted on one color, the Ford Company would not exist today. In today's environment, organizations should focus on continuous innovation. This means that knowledge and technology are the main drivers of an organization.

Environmental factors that force organizational change can be grouped under several categories. These are Political, Economic, Technological and Socio-cultural factors, which used to be referred to as PEST (Johnson and Scholes, 1993).

The second point is the assumptions about the specific mission of the organizations. The mission of an organization defines the reason of existence for that organization. When the reason of existence disappears, organization will go out of business, i.e. cease to exist.

The third point is the assumptions about the core competencies needed to accomplish the organization's mission. An organization survives because it has core competencies that differentiate it from the other organizations. When an organization looses its core competencies, organization will go out of business. 10 years ago, a bookstore might have rivals in the same city. That's why bookstore might offer different services than the other city bookstores, like lower prices and recently published books.

But today a bookstore has more rivals than just the ones in the same city. Online bookstores around the world offer to customers the cheapest and the fastest service. Local bookstores started to loose their core competencies and customers. They will have to transform otherwise they will go out of business.

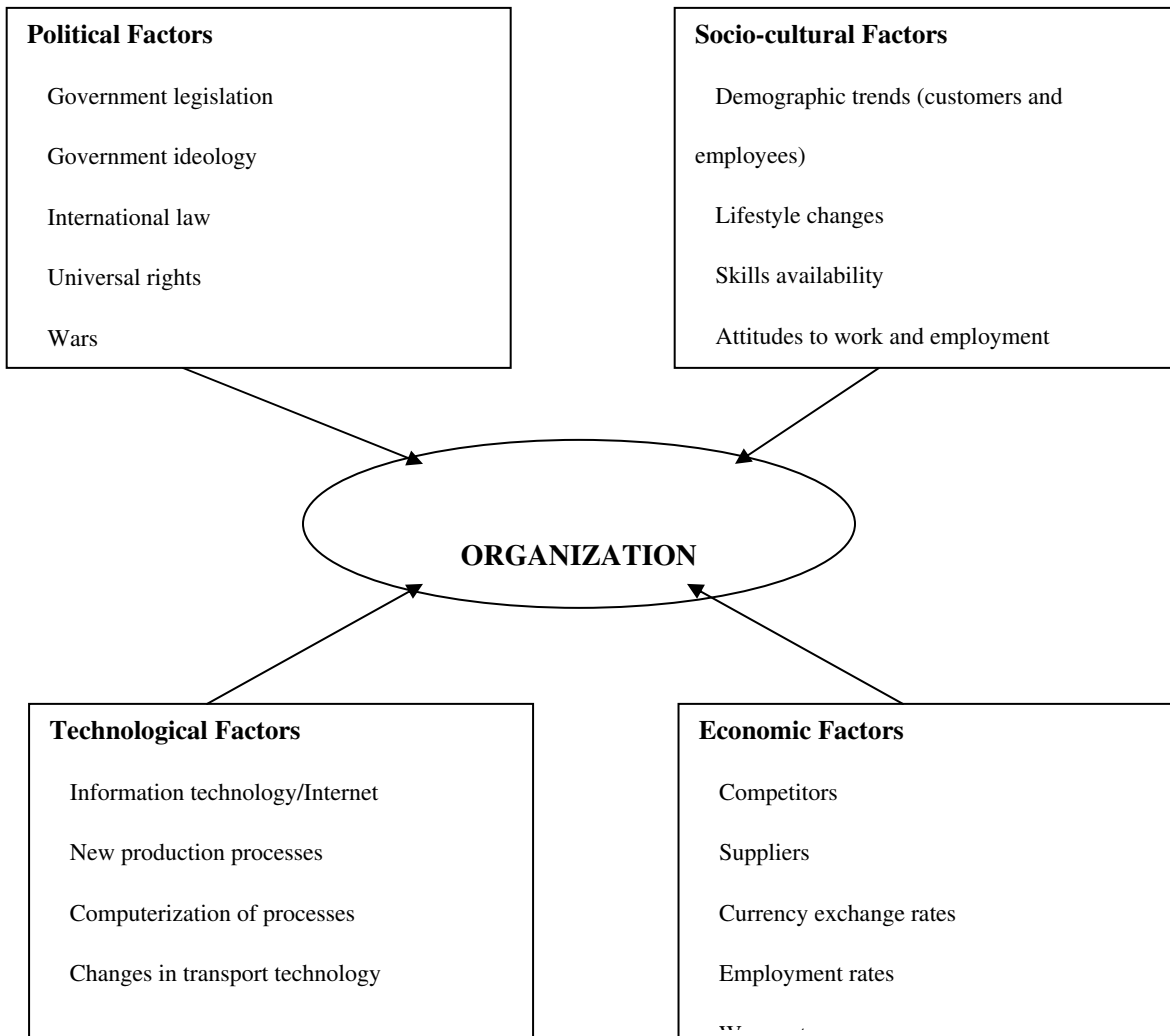**Figure 1 - PETS factors and organizational change (Senior 1997)**

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When the fundamentals of an organization change, the organization itself needs to change to survive. The customer mainly dominates this change process because the profit margin is defined by customers' preferences. If a firm's marginal profit is not greater or at least equal to marginal cost, then this firm will be out of business. Non-profit organizations or government organizations are also like this. Their profit is the expected utility or service for allocated funds from the public budget.

If organizations cannot anticipate the changing environment and its mission, vision and core competencies do not fit each other, then this organization will eventually ease to exit, be it a private company, a public agency or even a government.

The greatest competitive challenge facing organizations forces them to continuous change. Organization theory has identified several organizational characteristics in various dimensions including control, culture and strategies. Organizations are migrating (transforming into) to new forms with changes in their characteristics.

Those organizations anticipating changes and responding quickly will win, but those trying to resist change will loose. To successfully adapt to this continuously changing environment, organizations must continuously innovate and take on new business strategies. Organization is a living organism that has a mission, vision and goals. One constant thing in organizational life is change, because everything changes surrounding the organization.

In organizational change literature, there are some definitions like "Organizational Development", "Organizational Transformation", "Organizational Transition" or "Organizational Improvement". All those definitions are based on change, but they have some critical differences.

The lexical meaning of **development** is "gradual advancement or growth through a series of progressive changes", **transformation** is "a marked change, as in appearance or character, usually for the better", **improvement** is "progress toward what is better; the act of making profitable use or application of anything, or the state of being profitably employed", **transition** is "passage from one state, style, or place to another" and **change** is "to alter; to make different; to cause to pass from one state to another".

Grundy (1993) classified change into three main types (Figure 2). First main type is 'smooth incremental change'. Smooth incremental change is change that evolves slowly in a systematic and predictable way. Second type is 'bumpy incremental change'. The rate of change increases or decreases in some periods in this type of change. The third type of change is 'discontinuous'. Change is marked by rapid shifts in strategy, structure or culture, or in all three.

Rate of change

Time
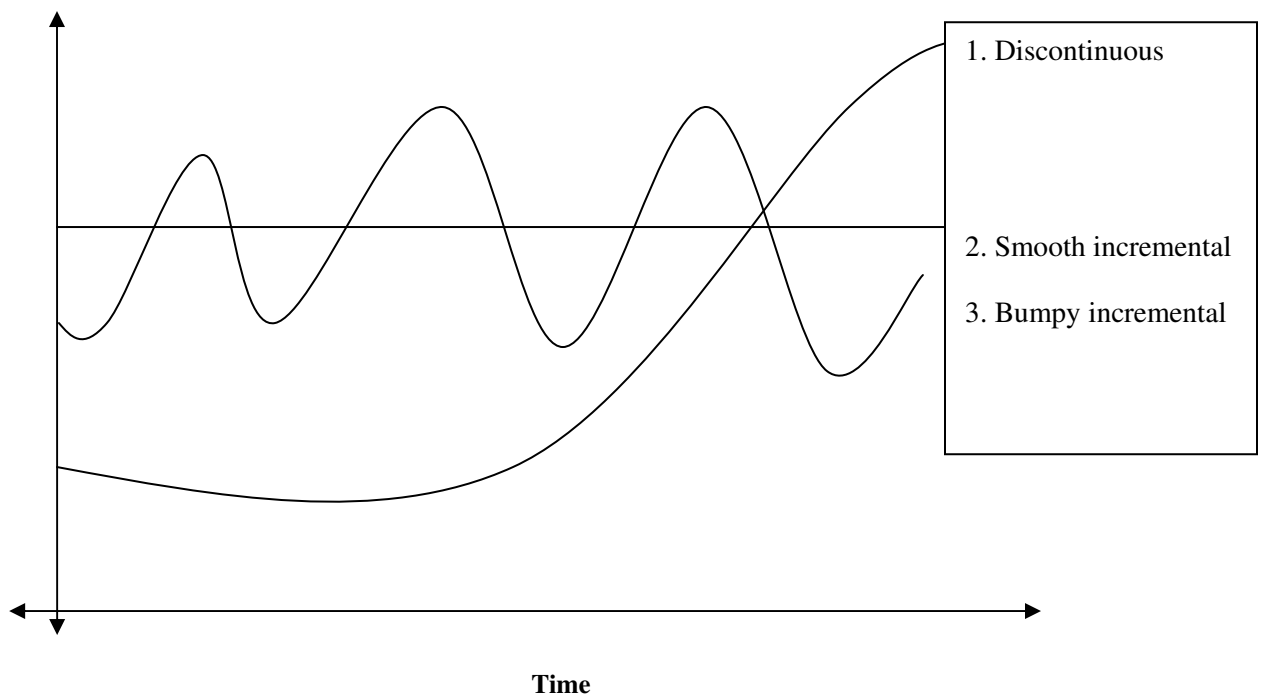
Figure 2 - Types of change (Grundy, 1993))

Margulies and Raia (1978) described the nature and process of planned change:

(1) Planned change involves a deliberate, purposeful, and explicit decision to engage in a program of problem solving and improvement. The critical words in this dimension are "deliberate" and "purposeful". Planned change is change that is intended.

(2) Planned change reflects a process of change that can apply to a variety of human client systems. The notion of planned change can be used to implement change whether the client is an individual, a group, an organization, or a community.

(3) Planned change almost always involves external professional guidance. Planned change generally involves the intervention of someone what has professional skills in the technologies used to implement the change.

(4) Planned change generally involves a strategy of collaboration and power sharing between the change agent(s) and the client system.

(5) Planned change seeks utilization of valid knowledge or data to be used in the implementation of change. Planned change, then, is an extension of the scientific method.

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WHAT THE IMPROVED ORGANIZATION MIGHT LOOK LIKE?

Every change methodology tries to make sure that the organization intended to change will achieve the best position to be successful. Because information is the driver force of organizations today, knowledge management has become critical process for organizations. Change methodologies use this advantage with their main focus area. TQM, BPR (Business Process Reengineering), Learning Organization, Chaordic Organization, Customer Focused Organization and many others' slogans summarize their ideas. But they provide too little guidance about what the improved organization might look like. Methodologies promise innovation but they lack the details needed to accomplish it. Moving beyond the practices of today to invent the best practices of tomorrow is remaining as a problem to be solved for these methodologies (Malone, Crowston, Lee, Pentland, Dellarocas, Wyner, Quimby, Osborn, Bernstein, Herman, Klein, O'Donnell, 1999).

STARTING FROM SCRATCH

Some of evangelists argue that organizational change should start from scratch, 'clean sheet of paper'. But in reality most of organizations have not enough funds (after all, you need a blank check for that) to have a clean sheet of paper approach. Eventually, organizational change aims to become a continuous learning process (Orlikowski & Hofman, 1996).

CRITICAL SUCCESS COMPONENTS

At first, change methodologies had goals like reducing defects, streamlining, cost displacement and cost avoidance, because they were invented in the recession years. So they were focusing on processes without human dimension. In these first attempts,
leadership, culture and rewards were missing items, which they are critical in the human dimension of change.
Shields indicates the critical success components that are available to leaders to achieve their overall strategy and desired results called "The Seven-Lever Model Trademark" (Shield 1999). These organizational change levers include: organization values and culture; core work processes; individual and team competence; leadership; organization, team and job design; reward and recognition programs; and management processes and systems. In brief, a description of each lever and its importance in organizational change follows:
• **Values & Culture:** Reassessing an organization's values and its internal culture is the foundation for building new systems and processes that ultimately create the right set of behaviors that will propel the organization forward.
• **Work Processes & Business Systems:** Improving the sequence of core activities through which resources are transformed to meet customer needs is an important link between the statement of a new direction and its accomplishment.
• **Individual & Team Competence:** Part of any change is to develop the capabilities of people -- the skill sets and behaviors that will support the organization's new mission.
• **Leadership:** Mobilizing the organization around a new direction often requires leaders themselves to change. The leader's ultimate goal: to create a compelling vision and then embody that vision in both word and deed.
• **Organization, Team & Job Design:** Organizing and clarifying accountabilities effectively throughout the organization can "make or break" any major change effort.
• **Rewards & Recognition:** While values and culture set an organization's behavioural norms, reward and recognition programs reinforce those behaviors and the results expected from them.
• **Management Processes & Systems:** To achieve rapid and lasting change, management planning and measurement systems must support new performance targets.

CHANGE STEPS

There are five common steps in change process. Change initiative should be seen as a project and all critical success components should handle carefully.
1. Problem, Mission and Vision Definitions
First of all, every methodology defines the problem (in business terminology), mission and vision of the change process. In this step, direction of the entire changemplementation must be set. Expected (and measurable) results and goals are also set in this step.
Problem: If an organization sees the need to change itself, we can conclude that
there are some (potential) problems with the organization's business.
• The environment of organization may have changed.
• The mission of organization has been changed.
• The core competencies of organization are not seen sufficient to stay in business.
Mission and Vision of change process: There is a need to define what will happen at the change process. Organization may be in a good position in the market and do not want to risk its position by changing, but wants to develop new competencies for future. Alternatively, organization may have lost all its competencies and it is almost out of business and wants a radical movement to stay in business. That's why there is a need for defining principles for change process.

2. Snapshot of the Current Situation
After mission and vision of change implementation are defined, the current situation of the organization must be analyzed. Current situation analysis gives current processes, organizational hierarchy, cultural position, knowledge position, HR, etc.
3. Future Position of Organization
In the light of the vision and goals of the change initiative, and current situation, one has to decide what will happen next. In this phase there are three possibilities:
1- Improving company's current position for better performance: In this case, the company addresses its problems and improves its processes, resources and relations. The company still sells its products and services in the same way.
2- Transformation process may lead to new business initiatives: In this case, the company's core competencies have been lost. Environment has changed. An encyclopedia producer cannot sell any, because there are many digital versions in the market. In this rapidly changing information environment, it does not make sense to many consumers to buy hardcopy of this year's encyclopedia that will probably become obsolete in possibly less than a year. So this is not the way to stay in business under these circumstances. An encyclopedia producer will either go out of

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business or make a radical change like online encyclopedia that has up to date information online. 3- In the third case, we have a hybrid model, in which two business models are carried out in parallel. The publisher is still in business and may be it is the biggest one, but profit is decreasing every day. It needs to compete with its rivals. The company improves its existing process to offer a better service and at the same time an online division is established which will behave like an online bookstore. This is exactly what happened to Encyclopedia Britannica. The decision for a new design of organization and implementation plan depends on different factors:

- Risk: Organization's current position in business is very critical in the decision-making. If organization incrementally looses profit and getting closer to being out of business, the decision will be radical.
- Budget: The larger the budget is, the bigger the change (new design).
- Type of organization: If organization is a government organization, most of the time improvement is preferable.
- Organization's current situation assessment: Top-level management prefers a real change, however staff and technology levels may hinder the change efforts.

4. Implementation Phase

In this phase, transition (up to the goals; it can be transformation) from current position to future position is performed. Depending on the future design, implementation may be radical, improved or a mixture of them. This state is the longest step in change process. All dimensions (Technological, Cultural and Structural) affect and are affected from this phase. Processes, performance and reward systems are changing. Organization culture is also expected to change according to vision.

5. Test The Theory of Business Constantly

During and after the implementation plan, theory of business constantly is tested. Organization should be ready for continuous change. That's why in the first phase; one of the goals of future organization must be a self-learning and changing organization. Global features of some change methodologies are explained below. Because change methodologies themselves are subject to change as well, they are now different than their original application. Every experience forces consultants, academicians or change evangelists to improve their methodologies. That's why, while assessing them, it will not be healthy to just use the advocated evangelists approach. Hence, in the following section we will consider the approaches of the consultants and implementers of these methodologies, in example the real doers.

Challenges and barriers:

1. Change initiative mostly depends on some critical people. If one of them left the organization this can make the next change initiatives harder to carry on.
2. Experience of Learning Group is also having a great impact on organizational change.
3. Most of the personnel resist to continuous learning and Most of the personnel may not be much competitive.
4. In some cases may be most of the personnel just want to deal with current daily tasks and not any new ones.
5. Inconsistency between personnel's expectations and their actions can also be one of the reason that people develop resistance to change. They can also demand an increase in their salary but they did not want to increase their quality. They just want awards but not measurement of their performance.
6. It is also possible that a manager have no idea about fundamentals of management and in some other cases they can have a fear of losing their positions.
7. Most of the time a managers have no decision taking skills or decision takers didn't have enough data, information or knowledge on the event.
8. Working environment also prevents the redesigning or launching new systems in an organization.
9. Restricted communication between managers and staff is the biggest barrier in Organizational change. Due to that most of the time staffs don't take the problems to the executives.
10. Some times staff is ready to be managed, but almost no one is ready to manage him/herself. They probably have a lot of problems with almost no solutions. They may discuss the problems but may be they are not used to / guided for / delegated for thinking about the possible solutions. This customary behaviour in fact is a result of a habitual approach by the managers starting with our kindergarten teacher. If a manager cannot delegate –which necessitates trust in people- they end up doing everything themselves and hence cannot find time for planning and management which they are supposed to be doing.

ORGANIZATIONAL CHANGE METHODOLOGIES AND APPROACHES

Because change is very crucial for organizations, they are ready to pay for the change costs for being competitive until their marginal benefit is equal to marginal cost. However, as there is a huge market for change advocates, there are so many methodologies such as :

1. Planned Change Model and Action Research Model

The Planned Change Model is modified version of the action research model. The action research model was one of the first theoretical frameworks for understanding relationships between diagnosis, feedback and organizational change. This model was initially developed by researchers interested in studying and solving problems in groups and organizations at the close of World War II (Smither, Houston, McIntire, 1997).

There are important differences between action research and experimental research. Experimental research controls the environment and isolates key variables so that cause and effect relationships can be established but action research seeks to find solutions to real problems by collaborating with clients in collecting data, feeding back data and developing action plans for change. Another important difference is action research may not have a clear beginning or end. By constantly feeding back outcome information to organizational members and modifying the intervention, action research rarely provides a clear view of specific cause and effect relationships (Smither, Houston, McIntire, 1997).

Design process :

The planned change model developed by Frohman, Saskin and Kavangh has eight action research phases that apply to the organizational change process .

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1. **Scouting Phase:** Initial description of the organization is developed. General information about organization is collected and organizational change practitioner makes a decision whether or not to enter this initiation. Practitioners should openly discuss their theoretical orientations so that the client has an opportunity to understand the practitioner's values, assumptions and biases.

2. **Entry Phase:** Organization's problems are defined and a clear definition of expectations in the practitioner-client relationship is developed.

3. **Data Collection Phase:** More detailed information is collected with the support of the organizational members. Practitioner and client work together to ensure the necessary information collected to understand the organization.

4. **Data Feedback Phase:** After data collection the outcomes should share with client to begin collaborative problem solving.

5. **Diagnosis Phase:** Practitioner and client work together to interpret the meaning of the data and identify problems and opportunities for improvement.

6. **Action Planning Phase:** Practitioner and client develop specific strategies for change.

7. **Action Implementation Phase:** Collaboratively ensuring that the change strategy is properly implemented. Problem solving and monitoring processes are instituted.

8. **Evaluation Phase:** Practitioner and client evaluate data outcomes of change process and determine the success. This data can guide for next implementation.

2. Process Innovation, BPR, Process Redesign

In literature, Process Innovation, BRP and Process Redesign are used almost synonymously. All of them indicate radical process change initiatives. Davenport defines the difference between process reengineering and process innovation "Reengineering is only part of what is necessary in radical change of processes; it refers specifically to the design of the new process. The term process innovation encompasses the activity, and the implementation of the change in all its complex technological, human and organizational dimensions" (Davenport 1993).

BPR is "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical measures of performance, such as cost, quality, service, and speed" (Hammer, Champy, 1993) while considering complex technological, human and organizational dimensions. Davenport and Short have defined business process as a "set of logically related tasks performed to achieve a defined business outcome" (Davenport, Short, 1990). Hammer defined process of reengineering as "a complete end-to-end set of activities that together create value for a customer"(Hammer, 1996). Reengineering has usually concentrated on competitive, customer facing operations. Most common examples of this type are order-delivery, marketing and sales processes (Kallio, Saarinen, Salo, Tinnila, Vepsalainen, 1999).

Earl's classification summarizes the basic ideas classifying processes by their value chain target and process structure as follows:

- *Core processes* are central to basic business operations and directly related to serving the external customers. They are usually primary activities of the value chain.
- *Support processes* frequently have internal customers and consist of the supporting activities of core processes. Usually they are the administrative, secondary activities of value chain.
- *Business network processes* extend beyond the boundaries of the organization including also suppliers, customers and allies.
- *Management processes* are those by which the company plans, organizes and controls resources. (Earl, 1994)

3. TQM – Total Quality Management

TQM is the integration of all functions and processes within an organization in order to achieve continuous improvement of the quality of goods and services. The goal is customer satisfaction (Ross 1994). TQM is a management philosophy embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organization, are satisfied in the most efficient and cost effective way by maximizing the potential of all employees in a continuing drive for improvement.

Ghobadian and Gallear (2001) reviewed literature of change process phases. In their summary, there are four main implementation phases. They also developed a non prescriptive model of TQM implementation.

Design Process

Pre Implementation Phase – Preparation and Awareness

- Develop detailed knowledge of TQM expectations and implications
- Establish TQM leadership and development team
- Establish priorities
- Identify ownership and responsibilities
- Communicate the intention to introduce TQM to the organization

Phase 1- start up (launch): Primary focus is on Management Process. This phase help to shape the vision of implementation plan.

- Establish organizational direction and provide organizational guidance by improving clarity of organizational objective and establishing mechanisms to keep control over the change process
- Instill a sense of urgency for change
- Develop a detailed knowledge of actions required to develop internal improvement capability

Phase 2- Transition: Primary focus is on People and Communication (maintaining focus on Management Process). Intentions for changing from original state to other states.

- Instill a sense of ownership and shared responsibility
- Increase the degree of delegation and empowerment
- Move members of organization from an individual to a team orientation
- Increase the amount of information sharing

Phase 3- Consolidation: Primary focus is on Communication and Measurement. Necessary or desired actions are taken to start transforming.

- Increase the amount and further increase the ease of information sharing
- Move the organization from perceptive decision making to fact-based decision making
- Ensure the clarity of organizational objectives

Phase 4- Maturity / Refocusing: Primary focus is on processes and customers/markets. Assessment of outcomes of consolidation process and take new actions.

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- Move the organization from a task to a process orientation
- Increase the sense of responsibility for the external customer
- Increase the propensity to look to external sources
- Move the organization from a proven to a pioneer mentality

4. Chaordic Organization

"Terra Civitas" (Citizens of The Earth) is slogan of the Chaordic Organizations. The purpose of Terra Civitas and the Chaordic Commons is to develop, disseminate, and implement new concepts of organization that result in more equitable sharing of power and wealth, improved health, and greater compatibility with the human spirit and biosphere. Chaordic Organization's basic approach is coming from chaos and order. Chaord is first syllable of the two words Chaos and Order.

The dictionary definition probably produced by Chaordic initiative is: "1: any auto catalytic, self-regulating, adaptive, nonlinear, complex organism, organization, or system, whether physical, biological or social, the behavior of which harmoniously exhibits characteristics of both order and chaos.2: an entity whose behavior exhibits patterns and probabilities not governed or explained by the behavior of its parts. 3: the fundamental organizing principle of nature and evolution."
Chaordic Initiative has some principles of practice such as :

1.   Work to ensure that all people, by right of birth, have adequate necessities of life, including clean air, water, food and shelter; an equitable share of wealth and resources; and opportunity to develop their full physical, mental and spiritual potential.
2.   Work to ensure that human capacities, technologies and organizations sustain and support, not systemically alter, degrade or destroy, the Earth, its diversity of life or life support systems.
3.   Work to ensure interdependent health and diversity of individuals, communities, institutions, cultures and other life forms.
4.   Resolve conflict creatively and cooperatively without physical, economic, psychological, social, or ecological violence.
5.   Freely and fully exchange information relevant to the purpose and principles unless doing so violates confidentiality or materially diminishes competitive position.

Design Process
The chaordic design process has six dimensions, beginning with purpose and ending with practice. Each of the six dimensions can be thought of as a lens through which participants examine the circumstances giving rise to the need for a new organization or to reconceived an existing one. Developing a self-organizing, self-governing organization worthy of the trust of all participants usually requires intensive effort. To maximize their chances of success, most groups have taken a year or more on the process. During that time, a representative group of individuals (sometimes called a drafting team) from all parts of the engaged organization or community meet regularly and work through the chaordic design process.

1.   **Develop a Statement of Purpose:** The first step is to define, with absolute clarity and deep conviction, the purpose of the community. An effective statement of purpose will be a clear, commonly understood statement of that which identifies and binds the community together as worthy of pursuit. When properly done, it can usually be expressed in a single sentence.
2.   **Define a Set of Principles:** Once the purpose has been clearly stated, the next step is to define, with the same clarity, conviction and common understanding, the principles by which those involved will be guided in pursuit of that purpose. Principles typically have high ethical and moral content, and developing them requires engaging the whole person, not just the intellect.
3.   **Identify All Participants:** With clarity about purpose and principles, the next step is to identify all relevant and affected parties - the participants whose needs, interests and perspectives must be considered in conceiving (or reconceiving) the organization.
4.   **Create a New Organizational Concept :** When all relevant and affected parties have been identified, drafting team members creatively search for and develop a general concept for the organization. In the light of purpose and principles, they seek innovative organizational structures that can be trusted to be just, equitable and effective with respect to all participants, in relation to all practices in which they may engage.
5.   **Write a Constitution:** Once the organizational concept is clear, the details of organizational structure and functioning are expressed in the form of a written constitution and by-laws. These documents will incorporate, with precision, the substance of the previous steps. They will embody purpose, principles and concept, specify rights, obligations and relationships of all participants, and establish the organization as a legal entity under appropriate jurisdiction.
6.   **Foster Innovative Practices:** With clarity of shared purpose and principles, the right participants, an effective concept and a clear constitution, practices will naturally evolve in highly focused and effective ways. They will harmoniously blend cooperation and competition within a transcendent organization trusted by all.
7.   **Drawing the Pieces into a Whole:** The process is iterative. Each step sheds new light on all of the preceding steps and highlights where modifications or refinements need to be made. In effect, the process continually folds back on itself, more fully clarifying the previous steps even as each new dimension is explored. Over time, the elements become deeply integrated.

5. Learning Organization
A learning organization is a particular vision of an enterprise that has the capacity to continually enhance its capabilities to shape its future. "Organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together" (Senge, 1990)
Learning organizations are those that have in place systems, mechanisms and rocesses, that are used to continually enhance their capabilities and those who work with it or for it, to achieve sustainable objectives - for themselves and the communities in which they participate.
Design Process
Senge, Kleiner, Roberts, Ross and Smith (1994) declared that there is no specific design process. At the end of the design process five disciplines should be reached. But they defined starting point "Guiding ideas for learning organization start with vision, values and purpose: what the organization stands for and what its members seek to create" they also defined some of the entry points: Personal to share vision, systems study, current reality (self-assessment), starting at the top, chronic problems,

infrastructure review, through a total quality effort.

Senge (1990) articulates five prescriptions for his vision of learning organizations:

1. Foster an environment conducive to development of personal visions
2. Foster an environment conducive to development of a shared vision
3. Surface, test and improve casual maps
4. Promote team learning
5. Adopt systems thinkings

6.   Other Methodologies and Approaches

It is not easy to find information for all methodologies but the followings are worth to mention in order to see different or improved approaches.

6. 1. Culture-Building

Culture-building is a set of tools that offers the help managers to build productive work cultures that attract, develop and retain talented people. It is focused on human processes in organization rather than work processes. It does not neglect the importance of work processes but their focus is just human processes.

6. 2. Six Sigma

Six Sigma is the disciplined methodology of defining, measuring, analyzing, improving, and controlling the quality in every one of the Company's products, processes, and transactions with the ultimate goal of virtually eliminating all defects. It is a methodology that is well rooted in mathematics and statistics.

Design Process:

1. Define Phase: the first phase mainly includes making team ready, Identifying customers and high impact characteristics, Developing team charter, and Mapping business processes.
2. Measure Phase: It includes identifying key measures, Planning data collection and executing it, Displaying/Communicating Process Variation, and Calculation of Performance Baseline.
3. Analyze Phase: It includes data and process analysis, Root cause analysis and Quantifying the gap/opportunity.
4. Improve Phase: It includes generate (and test) possible solutions, Select the best solutions, and than Design implementation plan.
5. Control Phase: It includes document and implement monitoring plan, Process standardization, Document procedures, Establish and deploy response plan, Transfer of ownership (project closure) Integrating and Institutionalizing Improvements, and Knowledge and Learning.

6. 3. Business Transformation

Business Transformation is a methodology that is based on BPR and Business Innovation but make differences in its focus. Business transformation is focus on enterprise that enterprise is transformed according to new economy's products and markets.(Hartman, Sifonis, Kador, 2000). It transforms business by envisioning the future, modeling today, gap analysis and migration plan (Tapscott, 1995).

6. 4. CRM – Customer Relationship Management

CRM is a strategy that focuses on customer relationship and learns more about customer's needs and behaviors in order to develop stronger relationship with them. In order to have a stronger relationship, many communication channels open with customer like call center, web page, mail etc. "Customer relationship management (CRM) is a business strategy to select and manage the most valuable customer relationships. CRM requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes. CRM applications can enable effective customer relationship management, provided that an enterprise has the right leadership, strategy, and culture (Thompson, 2001).

Comparison of Methodologies

Methodologies are compared with their properties and their design processes. At first look, BPR, Process Innovation and CRM are more structural initiatives. But this does not mean they neglect the human dimension. They also include the human dimension in their methodologies. All these approaches are well aware the importance of the human. BPR, Process Innovation and CRM's main enabler is IT. Although BRP and Process Innovation have not got any significant program, CRM has its software packet that supports its methodology. TQM, Chaordic Organization and Learning Organization approach are more cultural initiatives. Of course, these methodologies neglect the structural approach. Because TQM is the oldest one, many tools and techniques has been developed for the structural side, similar to BPR. Learning Organization is concentrated on the human. The human will initiate the change process and diffuse it through the organization. Chaordic Organization is candidate for ideal methodology. It has got many experiences from other methodologies and has updated itself based on a high degree of principles, new tools and techniques.

Properties of change methodologies are compared under nine headings :

1.   **Level of Change:** TQM, Chaordic and Learning Organizations have incremental level of change. As mentioned before these are mostly focused on the human, that's why the change process of human culture needs time. BPR/Process Innovation and CRM have radical level of change. Structural change can implement radically in an organization. Their change processes will mostly enabled by IT, high technology should get feedback quickly because the technology looses its actuality rapidly.
2.   **Starting Point**: There is very close relation with the level of change and starting point. Methodologies that have radical level of change start from a clean slate, but others that have incremental level of change start from existing processes.
3.   **Frequency of Change:** Methodologies that have radical level of change, change the organization for once. But others are continuous except TQM. Because TQM is the oldest one also affected by BRP/Process Innovation.
4.   **Time Required:** Except TQM, all methodologies take long time to implement.
5.   **Participation:** All methodologies require the participation of top management. But mostly human focused methodologies also adopt a bottom-up approach.
6.   **Typical Scope:** TQM and Learning Organizations' scope are within functions. BPR/Process Innovation and CRM have cross-functional scope. CRM also has scope of all related organizations like Chaordic Organizations.

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7. **Risk:** TQM, Chaordic and CRM have moderate risks up to the project. BPR/ Process Innovation has high risk. Learning Organization approach has low risk.
8. **Enablers:** Main enablers were considered that's why some enablers are not checked in the comparison for each methodology or approach. This doesn'tmean that those methodologies do not use unchecked enablers. BPR/Process Innovation and CRM use IT as a main enabler. Chaordic Organizations also uses IT as an enabler. TQM and CRM use statistical control as main enablers. Human enablers are used by all methodologies, but of course human focused methodologies mainly use these enablers to the greatest extend. Architectural enablers are mentioned in the BPR/Process Innovation and CRM methodologies. All methodologies certainly use training.
9. **Type of Change:** All enablers create cultural and structural change in an organization. None of them neglect one of these types of change. While BPR/Process Innovation and CRM mostly focus on structural change, others mostly focus on cultural change.

The design processes of these methodologies are very similar. First, every methodology starts with taking the commitment and support of top management. Following steps are:

1. Problem, Mission and Vision Definition: All methodologies define the problem in the first step. After that they define the mission and vision of organization and change initiative.
2. Snapshot of Current Situation: After the mission and vision are defined, it is time to define the current situation of resources and processes. Depending on the methodology, these resources can be trained, upgraded or replaced. In CRM, this phase is defined with "Customer-centric Planning". Although there is not significant declaration, this step should be done in order to pass next step for CRM.
3. Future Position of Organizations: Information about the current situation let the methodologies to design new processes according to mission and vision of the organization. All methodologies define this step.
4. Implementation phase: It is time to start to change the organization.
5. Test: This step is defined for all methodologies except CRM.

Organizational change process is also very similar for all organizations and methodologies. First of all, there is a need for change. This is a business problem. A business problem may be competition, changing business environment, new economy, changing people or many others. When an organization decides to change, it has to supply these inputs to the process: Knowledge, time, material, people and finance. These inputs are necessary for a successful change initiative. In changing process, many of the organizational change process can be used. As mentioned above their steps are very close. If changing process were successful to change the organization, output will be an organization that addressed its problems and changed itself. Outcome of this process will be the promise of the organizational change processes. These may be customer oriented organization, process-oriented organization, learning organization, chaordic organization or many others.

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RELATIONSHIP BETWEEN STOCK PRICE AND EXCHANGE RATE IN INDIA

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==ABSTRACT==

The global meltdown has made a strong pitch for dynamic linkage between exchange rate and stock prices. Because of these crises, the world has noticed that emerging market collapsed due to substantial depreciation of home currency against dollars as well as drastic fall in the stock prices. The study uses daily NIFTY Index and exchange rate (expressed in Indian Rupee per U.S .dollar).The study use daily data for the period from January 2005 to December 2009.The study uses Granger causality test to find the linkage between two variables. The results of Granger causality test, reveals that unidirectional as well bidirectional casual relationship between the two study variables if one goes by individual year.

INTRODUCTION

The relationship between country stock market and its exchange rate market has been a subject of theoretical and empirical investigation in International finance for over three decades. The traditional CAPM says that exchange rate being firm-specific and unsystematic and should be diversifiable and hence would not be considered by markets. However, International CAPM Says that the expected excess returns on risky asset is a linear function of not only their betas, but also exchange rate factor. The extension of traditional CAPM to an international context under the assumption of coupling theory that accounts for exchange rate risks and its covariance with global financial markets.

"Flow-oriented" models (Dornbusch and Fischer 1980) of exchange rate are known as goods market approach. It suggest that change in exchange rate affects the competitiveness of a firm as fluctuations in exchange rates affect the value of the earnings and cost of its fund, as many companies borrow in foreign currencies to fund their operations and hence its stock price. A depreciation of the local currency makes exporting attractive and leads to an increase in foreign demand and hence revenue for the firm and its value would appreciate and hence the stock prices. However, the sensitivity of the value of an importing firm to exchange rate is just opposite to that of an exporting firm. So, on a macro basis, the impact of exchange rate fluctuations on stock market seem to depend on both the importance of country international trade in its economy and the degree of its trade imbalance.

Portfolio balance approaches assumes that, like all commodities exchange rates to determined by market mechanism, i.e., the demand and supply condition. A blooming stock market would attract capital flows from foreign investors, which may cause an increase in the demand for a country's currency. The reverse would happen in case of falling stock prices where the investors would try to sell their stocks to avoid further losses and would convert their money into foreign currency to move out of the country. There would be demand for foreign currency in exchange of local currency and it would lead depreciation of local currency. As a result, rising (declining) stock prices would lead to an appreciation (depreciation) in exchange rates. Moreover, foreign investment in domestic equities could increase over time due to benefits of international diversification that foreign investors would gain. Furthermore, movements in stock prices may influence exchange rates and money demand because investor's wealth and liquidity demand could depend on the performance of the stock market.

LITERATURE REVIEW

Several studies have been conducted to examine the effect of changes in exchange rate on the stock prices. Aggarwal (1981) was the first to conduct a study to examine the relationship between stock prices and the floating values of dollars. He found that the value of the US dollar and US stock prices were positively correlated for the period of 1974-1978. Jorion (1990) has explored the sensitivity of a firm's value to exchange rate exposure of US multinationals. This study observes such relationship as positive and it is largely related to the degree of foreign operations. The study has used the rates of foreign sales to total sales as a proxy for foreign involvement.

Apte (1997) has examined the exchange rate exposure of stock prices by considering monthly share prices of 143 firms from CMIE corporate database during 1990 to 1997. Considering trade weighted indices of NEER and REER, the study estimated the exchange beta and regressed it with firm-specific characteristics like exports ration and import ratio. The results obtained from REER and NEER indicate that 32 firms out of 143 samples are having significant exchange rate exposure out of which eight are negative and rest report a positive exposure. Thus, it reveals that exchange rate risk is behaving as a systematic risk over and above market risk in case of many Indian companies.

Apte (2001) further investigated the relationship between the volatility of the stock market and that of the nominal exchange rate in India using daily closing stock market indices of BSE-30 and NSE-50 and daily closing USD/INR exchange rates using EGARCH specification proposed by Nelson (1991). The study addressed the question whether the innovations in stock returns have any impact on the volatility in foreign exchange markets and vice versa. The results reveal that the hypothesis of returns innovations in one market support not only the conditional variance in the same market but also in the other market.

Yamini and Kawadia (2002) have examined the relationship between sectoral indices and exchange rates by considering sectoral indices like BSE-IT, BSE-CG, BSE-FMCG, BSE-CD and BSE-HC. Their results show that the impact of SENSEX on exchange rate is positive and significant on various indices, viz BSE-CG, BE-CP and BSE-CP and BSE-HC. FMCG and IT sectors do not seem to have any significant exchange exposure.

Nath and Samanta (2003) have tested whether returns in stock market are interrelated with returns in capital market considering a period form March 1993 to December 2002, using daily NSE-50 index price and daily INR/USD value. The Granger-causality tests conducted to find the relationship between exchange rate and stock [prices with a lag of 5-days suggest that these two markets did not have any causal relationship. If one goes into specific years to see whether the liberalizations in both the markets have brought them together or not, then even no significant causal relationship is observable between exchange rates and stock prices except for the years 1993, 2001 and 2002, during which period unidirectional causal influence from stock index returns to returns in forex market is detected (with corresponding F statistics significant at 5 percent level of significance). Very mild causal influence in reverse direction is also found in some years (1997, 2002).

Nath and Samanta (2003) in another paper examined the extent of integration between foreign exchange and stock markets in India during the liberalization era. Considering NIFTY index and exchange rate of Indian Rupee to Dollar for a period of 10 financial years from April 1993 to March 2003, the study tried t employ two methodologies, Granger's causality in Vector Auto Regression (VAR) context and the Geweke's Feed Back measures. The results show contemporaneous relationship between returns in two markets as very strong (statistically significant at 1 percent level) during four financial, 1998-1999, 1999-00, 2001-02 and 2002-03 and in other years, this relationship as statistically insignificant. The hypothesis of no causal influence of exchange rates and stock prices could be accepted in three years, viz., 1994-95 (10 percent), 1995-96 (1 per cent level) and 1998-99 (10 per cent level). The causal impact in reverse direction is found to be significant in the years 1994-95 (1 percent level), 1996-97(5 percent level) and 2001-02 (1 percent level) and 2002-03 (10 percent level). Thus, the tests reveal the sign of mild-to-strong causal relationship (either contemporaneously or lagged) between returns in foreign exchange and capital markets during some years. However, the Gwewke's feedback measures detect strong causal relationship in each financial year.

Seshiah, Ganesh and Vuyyuri (2003) examined the effect of exchange rates and inflation on stock returns. The entire period of study from 1980-81 to 1999-2000 has been sub-divided into two parts, before and after 1991 to find the effect of liberalizations. Using annual changes in BSE Index, Gold and Silver Returns and inflation rates, the study conducted stepwise linear regression equation. It is found that stock returns and exchange rates during pre-liberalization era have no significant relationship. However, during the post-liberalization period, the degree of dependence of stock returns on exchange rate movements is found significant at 5 percent level. This may be due to huge inflow of foreign portfolio investment into Indian capital markets after liberalizations. This means that exchange rate movements and stock returns volatility are closely related to exchange flows affecting stock returns.

Yamini Karmarkar and Kawadia (2002) have explored the interrelationship between capital market, forex market and bullion market in India. Considering the indices of BSE-Sensex, BSE National and Nifty as the representatives of capital market, the Rupee Dollar exchange rate as indicator of movements in forex market, the study has estimated the response functions. It is observed that there is price integration between stock prices, bullion prices and exchange rates. The growth of stock prices was much more than the growth in bullion prices and exchange rates during the period under study. All these markets are found more stable in the era of economic reforms.

STATIONARY TESTS

Time series data, especially data relating to financial variables exhibit a trend pattern. Therefore, it is necessary to detrend the data so as to apply further test on it. A variable that is being de-trended is said to be stationary series. The two test namely Augmented Dickey Fuller (ADF) and Phillips Perron (PP) tests are used. When Augmented Dickey Fuller test is taken into consideration we use lagged values of the variable itself whereas Phillip Perron test uses residuals from Dickey Fuller Regression.

AUGMENTED DICKEY FULLER TEST

Consider a simple process given by:

$$Y_t = \alpha_1 Y_{t-1} + U_t \qquad .....(1)$$

Where α_1 is a parameter and U_t is assumed to be white noise. Y_t is a stationary series if (-) $1 < \alpha_1 < 1$. If Y_t is a non-stationary series, then variance of Y_t increases steadily with time and goes to infinity. If the absolute value α_1 is greater than one, the series is explosive. Therefore, the hypothesis of a stationary series can be evaluated by testing whether the absolute value of α_1 is strictly less than one. Both the ADF and PP tests take the unit root as the null hypothesis. Since explosive series do not make much economic sense, this null hypothesis is tested against the one-sided alternative.

$$H_0 : \alpha_1 = 1$$
$$H_1 : \alpha_1 < 1$$

The tests for stationarity are carried out by estimating equation (1). The distribution theory supporting the ADF test assumes that the errors are statistically independent and have a constant variance. PP test allows the disturbances to be weekly dependent and heterogeneously distributed. PP value has also been checked for confirmation of stationarity.

GRANGER CAUSALITY TEST

The dynamic linkage is examined using the concept of Granger's Causality Test. Testing causal relationship between two stationary series X_t and Y_t, can be based on the following two equations.

$$X_t = \alpha_0 + \sum_{j=1}^{k} \gamma_j x_{t-j} + \sum_{j=1}^{K} \beta_j y_{t-j} + U_{xt}$$

$$Y_t = \alpha_0 + \sum_{j=1}^{k} \gamma_j x_{t-j} + \sum_{j=1}^{K} \beta_j y_{t-j} + U_{yt}$$

Where, k is a suitably chosen positive integer, γ_j and β_j, j = 0, 1, …k are parameters and α's are constants, and U_t's are disturbance terms with zero means and finite variance. The null hypothesis that Y_t does not Granger-cause X_t is not accepted if the β_j's, j>0 in the above first equation are jointly different from zero using a standard joint test. Similarly, X_t Granger causes Y_t, if the γ_j's are j>0, coefficients in the above second equation are jointly different from zero.

CO INTEGRATION TEST

If there exists a relationship between two non-stationary I (1) series, Y and X, such that the residuals of the regression

$$Y_t = \beta_0 + \beta_1 X_t + U_t$$

are stationary, then the variables in question are said to be cointegrated. There is a long run relationship towards which they always come back. In other words, if long run relationship exists then errors should be a stationary series and have a zero mean.

SOURCES OF DATA

The study uses daily NIFITY Index and Rupee Dollar Exchange Rate to examine the casual relationship between them. The study used daily data for the period from January 2005 to December 2009.The daily adjusted closing values of Nifity index are downloaded from website of NSE and daily Rupee Dollar exchange rate are downloaded from oanda.com. Following the earlier literature, all data serious had been transformed into natural logarithms.

DATA ANALYSIS

The empirical relationships in the long-run, short-run and causality between Nifty Index and Rupee Dollar Exchange rate has been analyzed by adopting the Johansen likelihood co integration test ,error correction mechanism and granger causality test respectively.

The granger causality test requires that all data serious should be stationary, otherwise inferences from the results be spurious because the F-value will have nonstandard distributions. We have checked stationarity of data with the presence and absence of trend terms. The study applies ADF and PP test and the results of which is shown in table I and II.The results table I and II indicates that both the variable had unit root at level serious and found stationary only at first difference only. Therefore, we can test for long-run relationship between these two study variable at level serious because it was found non-stationary. The VAR model selects a lag length of two based on AIC .The results of Johansen (1991) maximum likelihood method reported in table III. As it can be observed from the results, there is no cointegration vector between the two study variable. Further it indicates that in long-run both the variables are not cointegrated, and hence a vector error correction model should not be applied to test short-term relationship among study variables.

The results of granger casualty test between studies variables are presented in Table-IV.we have experimented with a lag of one day from the consideration that one day would be adequate enough to observe the impact of one market on another under the assumption of efficiency of market in observing these information.

The reported F-values and P-values for the full sample period, supports that there exit unidirectional casual influences from Nifty Index to exchange rate. Results of individual year report both unidirectional as well as bidirectional relationship. Excepting 2009, all the years reported unidirectional from stock index to exchange Rate. The reported results for 2009 indicates bivariate casualty between Stock Index an exchange rate. On account of Global melt down flow of fund from FIIs to emerging market including India had increased substantially, that may be attributed to have bivariate casualty between two variables in recent years.

CONCLUSION

The inter-relationship among financial markets had received substantial attention in financial literature. This paper explores one such aspect of dynamic relationship between exchange rate and stock market in Indian Context. The relationship between two variables had been empirically tested in terms of long-run by cointegration and casual relationship by Granger causality test in Indian scenario. The overall study period as well as individual year results (excepting the year of 2009) reported unidirectional relationship from stock market to exchange rate. While in recent years viz 2009, there exists bivariate causality between both the markets. This support the persistence of the goods market approach (Dornbusch and Fisher, 1980) and the portfolio approach (Frankel, 1993) in India in recent years.

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TABLES

Table I : Unit Root Test (At level)				
Variables	**ADF**		**PP**	
	Intercept	Trend and intercept	Intercept	Trend and intercept
NF	-1.49(1) 0.13	-1.17 (1) 0.08	-1.43(6) 0.15	-1.62(6) 0.10
EX	-1.27(1) 0.20	-1.43(1) 0.15	-1.26(6) 0.23	-1.41(6) 0.18
NF=Nifty Index and Ex= Rupee Dollar Exchange Rate				

Table II : Unit Root Test (At First Difference)				
Variables	**ADF**		**PP**	
	Intercept	Trend and intercept	Intercept	Trend and intercept
NF	-24.82(1)* 0.000	-24.81(1)* 0.000	-33.0(1)* 0.000	-33.0(1)* 0.000
EX	-24.33(1)* 0.000	-24.32(1) 0.000	-32.78(1) 0.000	-24.32(1) 0.000
Note * denotes 1% significance level				

Table III: Co integration Test between Log(NF) and Log (EX)					
Period	**Eigen value**	**Null Hypothesis**	**Trace Statistic**	**Critical Value**	
				at 5%	at 1%
Jan 2005-Dec 2009	0.002186	r = 0	4.8994	15.41	20.04
	0.001774	r = < 1	2.1942	3.76	6.65

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Table IV: Results of Granger causality Test

Period	Null Hypothesis	F- Values	P- Values
Jan2005 –Dec 2009	Δ log(ER)≠> Δ log(NF)	1.06121	0.30314
	Δ log(NF)≠> Δ log(ER)	198.436	0.00000*
2005	Δ log(ER)≠> Δ log(NF)	2.52957	0.11301
	Δ log(NF)≠> Δ log(ER)	0.00448	0.94666
2006	Δ log(ER)≠> Δ log(NF)	0.43090	0.51217
	Δ log(NF)≠> Δ log(ER)	37.3333	3.9E-09*
2007	Δ log(ER)≠> Δ log(NF)	1.80492	0.18037
	Δ log(NF)≠> Δ log(ER)	31.5374	5.3E-08*
2008	Δ log(ER)≠> Δ log(NF)	0.48747	0.48573
	Δ log(NF)≠> Δ log(ER)	53.2459	4.2E-12*
2009	Δ log(ER)≠> Δ log(NF)	1951.28	0.00000*
	Δ log(NF)≠> Δ log(ER)	660.265	0.00000*

Note: * 1% level of significance.

PORTFOLIO OPTIMIZATION USING DATA ENVELOPMENT ANALYSIS & SHARPE'S METHOD

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ABSTRACT

Due to the advancement of Information Technology it has been easier for investors to invest valuable money in portfolios. There has been availability of tools & data all the time to predict the market in decision-making, for which some models have been developed. With the rigorous research in this attractive topic some mathematical models have been developed & some models from other industries have been considered. Models like Sharpe, Genetic Algorithm, and Monte-Carlo are very helpful in investment decision making. DEA model, originated from production industry, helps in selecting securities for portfolio. In this paper we have exquisitely tried to find out the best method for selection of efficient securities using historical data of BSE-30 industries & compared DEA, Sharpe's model with Market, which gives some exciting results for future investment.

KEYWORDS
Portfolio Allocation, Stocks Market, Data Envelopment Analysis, Sharpe's method.

INTRODUCTION
The portfolio selection problem with one investment period is a particular case of the general problem of choosing between random variables when larger outcomes are preferred. There is, therefore, a need for models that make a choice between random variables (models for preference). Basically, there are three main types of such models: mean-risk models, expected utility maximization, and stochastic dominance models. Mean-risk models are convenient from a computational point of view, but in many cases, depending on the risk measure that is used, they may lack a rational, theoretical basis for making a choice. Thus, the validity of the results provided is often questionable. Expected utility maximization is usually difficult to put into practice since the choice of a suitable utility function is somewhat subjective. Stochastic model is particularly important in investment problems since it describes the preference of rational and risk-averse decision-makers.

The mean-variance portfolio model rely fundamentally on approximate description of the probability distribution function of asset returns in terms of Gaussian functions, which is necessary in order for the two models to exactly match the expected utility approach. The mean-variance description is thus at the basis of Markowitz portfolio theory and of the Capital Asset Pricing Model (CAPM). While the variance (or volatility) of portfolio returns provides the simplest way to quantify its fluctuations, it offers only a limited understanding of incurred risks (in terms of fluctuations), because the empirical distributions of returns have fat tails, and the dependencies between assets are only imperfectly accounted by the covariance matrix. Absolute central moments provide extensions of the variance measure of risks, because they satisfy the basic requirement for consistent measures of risks, including in most combinations. The weights can be interpreted in terms of the portfolio manager's aversion to large fluctuations. This approach provides a natural extension of the multi-moment investment optimization methodology, which is based on a linear expansion of the utility function of the economic agent.

LITERATURE REVIEW
Markowitz (1952) was the first to model the important trade-off between risk and return in portfolio selection as an optimization problem. He suggested choosing an asset mix so that the portfolio variance is minimal for any target level of expected return. 60 years after Markowitz's seminal idea, despite substantial contributions to portfolio risk management theory, important practical issues remain unresolved. Portfolio allocation decisions are frequently made on the basis of solutions of optimization algorithms that treat parameters in the models such as means, variances, and co-variances of returns, as given. These parameters, however, are estimated through error-prone procedures, e.g., statistical modeling or subjective evaluation. Since optimization results are very sensitive to perturbations in parameter values, the computed optimal portfolio strategies are unreliable. In the case of standard mean-variance portfolio optimization, practitioners frequently resolve the issue by sampling the mean returns and the covariance matrix from a confidence interval around a nominal set of parameters, and then aggregating the portfolios obtained by solving a Markowitz problem for each sample. Unfortunately, this technique does not provide any guarantees, and may become quite inefficient as the number of assets grows [3]. It is a well-documented fact in the investment management literature that mean-variance optimizers are very sensitive to small variations in expected returns. Slightly different expected return vectors can lead to drastically different portfolios. The seemingly unexplainable changes in asset weights due to small perturbations in expected returns are not the only pitfall of classical mean-variance optimization. Because of the error-maximization effect, it is typically the case that the expected return is significantly overestimated [6].

Full-scale optimization relies on sophisticated search algorithms to identify the optimal portfolio given any set of return distributions and based on any description of investor preferences. Full-scale optimization yields the truly optimal portfolio in sample, whereas the mean–variance solution is an approximation to the in-sample truth. Both approaches to portfolio formation, suffer from estimation error. Mean–variance analysis requires investors to estimate the means and variances of all assets and the co variances of all asset pairs. To the extent the out-of-sample experience of these parameters departs from the in-sample parameter values, the mean–variance approximation will be even less accurate. Full-scale optimization requires investors to estimate the entire multivariate return distribution. To the extent it varies from the in-sample distribution, full-scale optimization will also yield sub-optimal results out of sample [1].

Timothy Adler & Mark Kritzman [1] employed a bootstrapping procedure to compare the estimation error of full-scale optimization to the combined approximation and estimation error of mean–variance analysis. They found that, to a significant degree, the in-sample superiority of full-scale optimization prevails out of sample. They suggested that if it is optimized among assets those are likely to have persistent non-normal higher moments and it should be cared about thresholds or view gains and losses differently, it should be considered full-scale optimization as an alternative to mean-variance analysis.

The concept of stochastic dominance or stochastic ordering of random variables was inspired by earlier work in the theory of majorization that is, ordering. It has been used since the early 1950's, in fields such as statistics. In economics, stochastic dominance was introduced in the 1960's; Quirk and Saposnik considered the first order stochastic dominance relation and demonstrated the connection to utility functions. Second order stochastic dominance was brought to economics by Hadar and Russel. Diana Roman, Ken Darby-Dowman, Gautam Mitra [2] presented a model for portfolio selection, which provides a meaningful solution, corresponding to observed economic behavior, and at the same time is practical from a computational point of view. The solution is meaningful in the sense that the selected portfolio is non-dominated with respect to second order stochastic dominance (SSD) and therefore optimal for every rational and risk averse investor. In addition, this portfolio has a return distribution close to a user-specified target distribution. Thus, this return distribution can be shaped and crafted to a desirable form, to the extent that is achievable. In the case of mean-risk models consistent with SSD, the only criterion for selecting a specific portfolio is a desired trade-off between mean return & risk.

Capital Asset Pricing Model (CAPM) is a linear general equilibrium model that relates required rate of return with security's beta or systematic risk. It assumes perfect market, expected returns and standard deviation parameters, homogenous expectations, unlimited borrowing and lending at the riskless rate of interest, no transaction cost and taxes. All CAPM equilibrium models use mean-variance analysis including that of Elton and Gruber which indicated that CAPM under conditions of uncertain inflation can be derived by assuming a utility function defined in terms of mean-variance of real returns. Arbitrage Pricing Model is the alternative asset-pricing model introduced by Ross [4]. It is a different approach to asset pricing based considering the law of one price; it states that two assets that are in the same risk class cannot sell at different prices because arbitraging will set in. The strong assumptions made about utility theory for CAPM are not necessary and the description of equilibrium is more general, as influences can be beyond mean-variance. It only assumes perfect competition, Homogenous expectations, and risk averse investors. It assumes that returns on securities are influenced not just by the market index but other macroeconomic factors also [4].

Optimization of long-short portfolios through the use of fast algorithms takes advantage of models of covariance to simplify the equations that determine optimality. Fast algorithms exist for widely applied factor and scenario analysis for long-only portfolios. To allow their use in factor and scenario analysis for long-short portfolios, the concept of "trim-ability" is introduced. The conclusion is that the same fast algorithms that were designed for long-only portfolios can be used, virtually unchanged, for long-short portfolio optimization provided that portfolio is trim-able, which usually holds in practice [5]. Realistic models of long-short portfolio restrictions can be written as systems of linear equality or inequality constraints.

Given today's volatile global investment climate, the increasing number of private investors and managed funds, and the growing financial services industry, investment performance appraisal is of paramount importance. Investors, of course, have always been eager to assess the performance of their managed portfolios. In early days, performance was evaluated by comparing the total return of a managed portfolio with that of a randomly chosen unmanaged portfolio (Modigliani and Modigliani, 1997). Later, the concept of an unmanaged 'market' or a capitalization-weighted portfolio comprising the entire market was introduced so that managed portfolio performance could be evaluated and compared against the market portfolio as a benchmark.

It is well-known that the return earned by a portfolio alone is not an accurate measure of its performance. Further, it is well-established that higher expected returns are associated with higher levels of risk. The downside to this is the possibility of considerable return losses due to market uncertainty. In short, there is a trade-off between risk and return. Investors are generally risk aversive. Therefore, for any risk associated with their investment, investors expect compensation or a risk premium. Consequently, several basic performance appraisal methods emerged in the late 1960s. With the rapid growth and globalization of financial sectors, the financial services industries responded with new relative performance measures that have now become very popular and are widely used by private and institutional investors. However, there is no consensus in the literature as to what a suitable measure of risk is, and consequently, as to what is a suitable measure for evaluating risk-adjusted performance.

According to the mean-variance analysis which is the basic of Modern Portfolio Theory, in order to make a decision, the investor should calculate the estimated return, standard deviations of all stocks and most importantly the covariance between these stocks. In this method, the number of data to be calculated would increase exponentially with the increase in the number of stocks. This would be complicated. Then there several models are improved to answer the question 'is it possible to allocate successful portfolio using with less input and information?'[8]

DATA ENVELOPMENT ANALYSIS

Data envelopment analysis (DEA) is a new technique developed in operations research and management science over the last two decades for measuring productive efficiency. This is a nonparametric technique based only on the observed input output data of firms or decision making units (DMUs) and it does not require any data on the input and output prices. Due to this flexible feature it has been widely applied to the public sector enterprises [9]. Data envelopment analysis is receiving increasing importance as a tool for evaluating and improving the performance of manufacturing and service operations. It has been extensively applied in performance evaluation and benchmarking of schools, hospitals, bank branches, production plants, etc. [10]. DEA is commonly used to evaluate the relative efficiency of a number of producers. A typical statistical approach is characterized as a central tendency approach and it evaluates producers relative to an average producer. In contrast, DEA is an extreme point method and compares each producer with only the "best" producers [8]. The main shortcoming in the common measures of risk-adjusted return is their inability to incorporate the costs incurred in generating the returns. In the late 1990s, several studies attempted to measure managed portfolio performance by considering the return adjusted for both risk and cost, using a non-parametric methodology of production frontier estimation commonly known as data envelopment analysis (DEA) [11].

DEA is a multi-factor productivity analysis model for measuring the relative efficiencies of a homogenous set of decision making units (DMUs). The efficiency score in the presence of multiple input and output factors is defined as:

        Efficiency = (weighted sum of outputs)/ (weighted sum of inputs)

Assuming that there are n DMUs, each with m inputs and s outputs, the relative efficiency score of a test DMU p is obtained by solving the following model.

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$$\max \quad h_k = \frac{\sum_{r=1}^{s} u_r y_{rk}}{\sum_{i=1}^{m} v_i x_{ik}}$$

$$\text{subject to:} \quad \frac{\sum_{r=1}^{s} u_r y_{rj}}{\sum_{i=1}^{m} v_i x_{ij}} \leq 1, \; j = 1, 2, ..., n$$

$$u_r, \, v_i \geq \varepsilon \text{ with } r = 1, 2, ..., s; \; i = 1, 2, ..., m$$

where: k is the DMU under evaluation, y_{rj} is the amount of output r of the DMU_j ; x_{ij} is the amount of input i of the DMU_j ; u and v are the weights assigned respectively to output r and input i; ϵ is an infinitesimal positive number ,imposed to assure that no input or output is being ignored during the optimization.

The fractional program can be converted to a linear program.

$$\max \quad h_k = \sum_{r=1}^{s} u_r y_{rk}$$

$$\text{subject to:} \quad \sum_{i=1}^{m} v_i x_{ik} = 1$$

$$\sum_{r=1}^{s} u_r y_{rj} \leq \sum_{i=1}^{m} v_i x_{ij}, \; j = 1, 2, ..., n$$

$$u_r, \, v_i \geq \varepsilon \text{ with } r = 1, 2, ..., s; \; i = 1, 2, ..., m$$

 The above problem is run n times in identifying the relative efficiency scores of all the DMUs. Each DMU selects input and output weights that maximize its efficiency score. In general, a DMU is considered to be efficient if it obtains a score of a1 and a score of less than 1 implies that it is inefficient [10].

SHARPE'S METHOD

Let us recall first that the purpose of returns-based style analysis is to determine a manager's effective asset mix with respect to a set of asset classes. This means that we are trying to determine the manager's exposure to changes in the values of the asset classes. To this end, a set of style coefficients is calculated, one for each asset class. Each style coefficient represents the exposure of the manager to the respective asset class.

Let M be the manager return series and A1, A2, A3, A4 the return series of the chosen asset classes, i.e., the style indices. Sharpe's method determines the style attribution coefficients c1, c2, c3, c4 in such a way that the variance of the series

M - (c1A1 + c2A2+ c3A3+ c4A4)

becomes minimal. Needless to say, one could use any number of asset classes; the number four is chosen here as an example. Referring to the expression c1A1 + c2A2+c3A3+ c4A4 (i.e., the weighted composite of the asset classes) as the "style benchmark," this can be rephrased as follows:

The style attribution coefficients are determined in such a way that the variance of the excess return of the manager over the style benchmark becomes minimal.

If one translates the above into a mathematical algorithm, then the problem boils down to performing a certain quadratic optimization. It is not necessary go into any of the gory details here; the italicized statement above is a complete and rigorous description of the mathematics of returns-based style analysis.

Sharpe's original paper constrains the analysis by requiring that all coefficients be between 0 and 1, and that the coefficients add up to 1. One may relax some or all of these constraints. The discussion below is not affected by the type of constraints that are used.

There is just one more mathematical aspect that is worth discussing, and that is the question of the uniqueness of the solution. What if there were two entirely different sets of style coefficients, resulting in two entirely different style benchmarks, and the excess return of the manager

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over these two different style benchmarks were the same minimal value? Which one of the two sets of style coefficients would Style advisor choose?

The answer is that such a situation can never occur. It can be proved mathematically that there always exists exactly one set of style coefficients such that the excess return of the manager over the corresponding style benchmark is minimal. This proof is far beyond the scope of this article. The following high-level summary of the proof is for the reader with a graduate level mathematics background: Minimizing the variance of excess return of the manager over the style benchmark amounts to finding the shortest distance between a point and a convex set in a certain Euclidean space; it is true in every Euclidean space that this distance is assumed at exactly one point on the convex set.

RETURNS-BASED STYLE ANALYSIS VS. MULTIVARIATE REGRESSION

William F. Sharpe's method of returns-based style analysis is substantially different from classical multivariate regression analysis. While there is a strong mathematical connection between Sharpe's method and classical multivariate constrained regression, the two are clearly different. Sharpe's method employs quadratic optimization to minimize the variance of the excess return of the manager over a linear combination of the asset classes. Regression analysis, by contrast, seeks to minimize the sum of the squares of the difference between the manager and a linear combination of the asset classes. Moreover, the linear combination of the asset classes used in regression analysis usually includes a constant alpha, which is not present in Sharpe's method.

Classical multivariate regression analysis determines a constant α and coefficients r1, r2, r3, r4 in such a way that the sum of the squares of the series

M - (α + r1A1 + r2A2+ r3A3+ r4A4)

is minimized. If the regression is performed with alpha constrained to 0, then the expression above becomes the same that was used in Sharpe's method, but the quantity that gets minimized is different: in Sharpe's method, it is the variance, while in regression analysis; it is the sum of the squares.

This shows that Sharpe's method and multivariate regression are simply two different methods with different intents. However, there is a mathematical connection between the two. The coefficients that minimize the variance of the expression

M - (c1A1 + c2A2+ c3A3+ c4A4)

Happen to be the same ones that minimize the sum of the squares of the expression

M - (α + r1A1 + r2A2+ r3A3+ r4A4)

Therefore, the following is true:

Performing a returns-based style analysis according to William F. Sharpe's method is equivalent to performing a classical multivariate linear regression with unconstrained alpha and then "dropping the alpha," i.e., considering only the regression coefficients r1, r2, r3, r4. [12].

It should be clear that this connection between Sharpe's method and classical regression analysis is rather accidental. The original intent of the two methods is different: minimizing variance is different from minimizing the sum of the squares. It just so happens that under certain circumstances (unconstrained alpha), the coefficients come out to be the same.

WORK DONE & METHODOLOGIES

Earning Per Share (EPS): Earnings per share (EPS) are the earnings returned on the initial investment amount. The last quarter data has been taken for the quarter for which portfolio is being constructed.

Terminologies

Price to Earnings Ratio (P/E Ratio): The P/E ratio (price-to-earnings ratio) of a stock (also called its "P/E", "PER", "earnings multiple," or simply "multiple") is a measure of the price paid for a share relative to the annual income or profit earned by the firm per share. The last quarter data has been taken for the quarter for which portfolio is being constructed.

Risk (Standard Deviation): Risk is the probability that an investment's actual return will be different than expected. Risk is calculated by taking returns of securities in last 3 years (12quarters).

Beta: Beta coefficient, a parameter in Capital Asset Pricing Model that describes how sensitive the expected return of a stock (or portfolio) is to the market. Data has been collected of last 3 years (12quarters).

This work describes two approaches for efficient measurement of units. These two approaches
In brief are defined below-:

Brief Explanation of the methodology can be defined taking an example of 2nd quarter in 2006

Approach 1: Data Envelope Analysis

1) Earning per Share & Price to Earnings Ratio has been calculated from 1st quarter in 2006.
2) Standard Deviation & Beta has been calculated from 2nd quarter in 2003 to 1st quarter in 2006.
3) Using the Data, find the efficient securities using Efficient Measurement System (EMS).
4) Constructed portfolio by giving equal weights to each security.
5) Compared portfolio's return to market's return.

Step 1: Calculate excess-return to β Ratio (Systematic Risk)

Approach 2: Shapre's Method:

$$\left(R_i - R_f\right)/\beta_i$$

Step 2: Rank them in descending order.

Step 3: Calculate C for each security.

$$C = \sigma_N^2 \; \frac{\sum_{i=1}^{N} \dfrac{\left(R_i - R_f\right)\beta_i}{\sigma_{z_i}^2}}{1 + \sigma_N^2 \sum_{i=1}^{N} \left(\dfrac{\beta_i}{\sigma_{z_i}}\right)^2}$$

Step 4: C will be increasing & then decreasing order so C* will be highest value among Cs.

Step 5: Find the optimum portfolio which is consisting of all securities which have $\left(R_i - R_f\right)/\beta$ > C*

Step 6: Calculate Z_i for each security included in portfolio.

$$Z_i = \frac{\beta_i}{\sigma_{Z_i}^2}\left[\left(\frac{r_i - r_f}{\beta_i}\right) - C^*\right]$$

Step 7: Calculate weight X_i for each security z_i

$$X_i = \frac{Z_i}{\sum Z}$$

Step 8: Multiply weights of each security to corresponding return of that forecasted quarter.
Step 9: Find return of optimal portfolio by adding all the retruns of each security.
Step 10: Compare return of optimal portfolio to market return.

RESULTS

The application of DEA to stock selection resulted in a different number of stocks for each quarter along the 12 quarters *DEA'S RESULTS* analyzed. The average number of stocks in each quarter was seven. Also, it must be remembered that the procedure adopted was that each DEA-efficient stock would make up an equal fraction of the portfolio in one quarter and that it could be a candidate equally qualified to make up the portfolio in the following quarter. Table 1 to table 3 presents the 4 quarterly returns of each year for each of the market return and the result of portfolio made by DEA. One can observe that the return comes from the DEA made portfolio is better than the market return.

Table 1: Quarter-wise comparison of DEA's return & Market return in year 2005

Q1-05	RETURN	Q2-05	RETURN	Q3-05	RETURN	Q4-05	RETURN
HINDALCO	-0.07177	GRASIM	0.247462	GRASIM	0.053179	BHARTI	0.194244
ITC	0.22746	L&T	0.333965	L&T	0.219185	GRASIM	0.479209
INFOSYS	0.046658	AMBUJA	0.300847	ITC	0.038391	HINDALCO	0.272315
BHEL	0.127183	BAJAJ	0.291964	INFOSYS	0.190604	L&T	0.319054
BAJAJ	0.681177	RIL	0.236174	RE	0.037768	ITC	0.372887
HDFC	0.216557	SBI	0.377155	BHEL	0.132465	INFOSYS	-0.00531
DEA RETURN	0.204544		0.297928		0.111932		0.272067
MARKET RETURN	0.10797		0.200259		0.088419		0.20026

Table 2: Quarter-wise comparison of DEA's return & Market return in year 2006

Q1-06	RETURN	Q2-06	RETURN	Q3-06	RETURN	Q4-06	RETURN
GRASIM	-0.05069	ACC	0.267126	GRASIM	0.106939	HINDALCO	-0.0518
ICICI	-0.07285	ITC	0.12963	L&T	0.133459	L&T	0.122111
L&T	-0.0779	M&M	0.0955	HDFC	0.058822	HDFC	-0.0614
ITC	-0.05614	GRASIM	0.303323	RE	0.074863	M&M	-0.13876
INFOSYS	0.03244	RIL	0.160685	SBI	0.211611	INFOSYS	-0.10172
BHEL	-0.03133	CIPLA	0.215246	TCS	0.1928		
				HINDALCO	0.01605		
DEA RETURN	-0.04275		0.195252		0.113506		-0.04631
MARKET RETURN	-0.05946		0.1739		0.106		-0.05185

Table 3: Quarter-wise comparison of DEA's return & Market return in year 2007

Q1-07	RETURN	Q2-07	RETURN	Q3-07	RETURN	Q4-07	RETURN
BHARATI	0.09532	L&T	0.2807	L&T	0.4832	BHARATI	-0.069
L&T	0.35629	ITC	0.2262	RIL	0.2547	L&T	-0.174
RIL	0.24259	RIL	0.3504	GRASIM	0.1392	RIL	-0.21
TCS	-0.06656	HDFC	0.25780	HDFC	0.1365	BHEL	-0.204

RE	0.24023	INFOSYS	-.01682	INFOSYS	-0.067	ACC	-.19366
		TCS	0.24	BHEL	0.2713	AMBUJA	-0.175
				TCS	0.124	HDFC	-0.1703
						SBI	-.22566
DEA RETURN	0.17357		0.22304		0.1917		-0.1777
MARKET RETURN	0.1207		0.18023		0.1732		-0.2288

SHARPE'S METHOD:

The application of Sharpe's to stock selection resulted in a different number of stocks for each quarter along the 12 quarters analyzed. The average number of stocks in each quarter was three. Also, it must be remembered that the procedure adopted was that each Sharpe's efficient stock would make up a fraction calculated according to Sharpe's Method. Table 4 to table 6 presents the 4 quarterly returns of each year for each of the market return and the result of portfolio made by Sharpe's method One can observe the return comes from the Sharpe's made portfolio is not in accordance with the market return.

Table 4: Quarter-wise comparison of Sharpe's return & Market return in year 2005

Q1-05	RETURN	Q2-05	RETURN	Q3-05	RETURN	Q4-05	RETURN
GRASIM INDUSTRY	-5.7785	ITC LTD	0.925374	GRASIM INDUSTRY	-14.9394	L&T	11.8584
ITC LTD	0.29736	GRASIM INDUSTRY	0.045263	L&T	13.2349	BHEL	-3.55229
		L&T	0.029363			GRASIM INDUSTRY	0.958371
SHARPE'S RETURN	-5.00775		20.88137		-1.7045		9.264479
MARKET RETURN	0.10797		0.200259		0.088419		0.20026

Table 5: Quarter-wise comparison of Sharpe's return & Market return in year 2006

Q1-06	RETURN	Q2-06	RETURN	Q3-06	RETURN	Q4-06	RETURN
ICICI BANK	0.029734	L&T	-3.90796	BHEL	-34.9894	HDFC BANK	4.659699
L&T	3.174588	BHEL	-6.54485	RIL	2.002293	BHEL	-1.28275
BHEL	4.260967			L&T	-0.23452	GRASIM INDUSTRY	3.147726
GRASIM INDUSTRY	1.409107					L&T	1.085905
ACC	35.46602						
SHARPE'S RETURN	44.34041		-10.4528		-33.2217		7.610578
MARKET RETURN	-0.05946		0.1739		0.106		-0.05185

Table 6: Quarter-wise comparison of Sharpe's return & Market return in year 2007

Q1-07	RETURN	Q2-07	RETURN	Q3-07	RETURN	Q4-07	RETURN
ICICI BANK	-1.25743	RIL	11.53559	RIL	20.75588	RIL	20.75588
INFOSYS	-3.29691	L&T	10.7925	L&T	8.990838	L&T	8.156595
ITC LTD	-4.27426	HDFC	6.768974	GRASIM INDUSTRY	2.90491		
		GRASIM INDUSTRY	0.515803				
SHARPE'S RETURN	-8.8286		29.61286		32.65162		28.91247
MARKET RETURN	0.1207		0.18023		0.1732		-0.2288

Table 7: *Comparison of DEA, Sharpe's & Market's return*

Sharpe Method	DEA	Market

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Q1	-5.007747128	20.45435	8.841876
Q2	20.88136763	29.7928	20.02586
Q3	-1.704498631	11.19321	10.797
Q4	9.264479045	27.20673	20.02601
Q5	44.34041317	-4.27465	-5.94603
Q6	-10.45280802	19.52516	17.39
Q7	-33.22165555	11.35063	10.6
Q8	7.61057833	-4.63144	-5.1847
Q9	-8.828600991	17.35757	12.07
Q10	29.61286453	22.30468	18.023
Q11	32.65162457	19.17	17.32
Q12	28.91247114	-17.7703	-22.88
AM	09.5049	12.6399	08.4236
GM	07.2446	11.7162	07.5951

After comparing DEA return, Sharpe's Return and Market return graph was drawn

Figure 1: Graph showing return of DEA, Sharpe's & Market's return
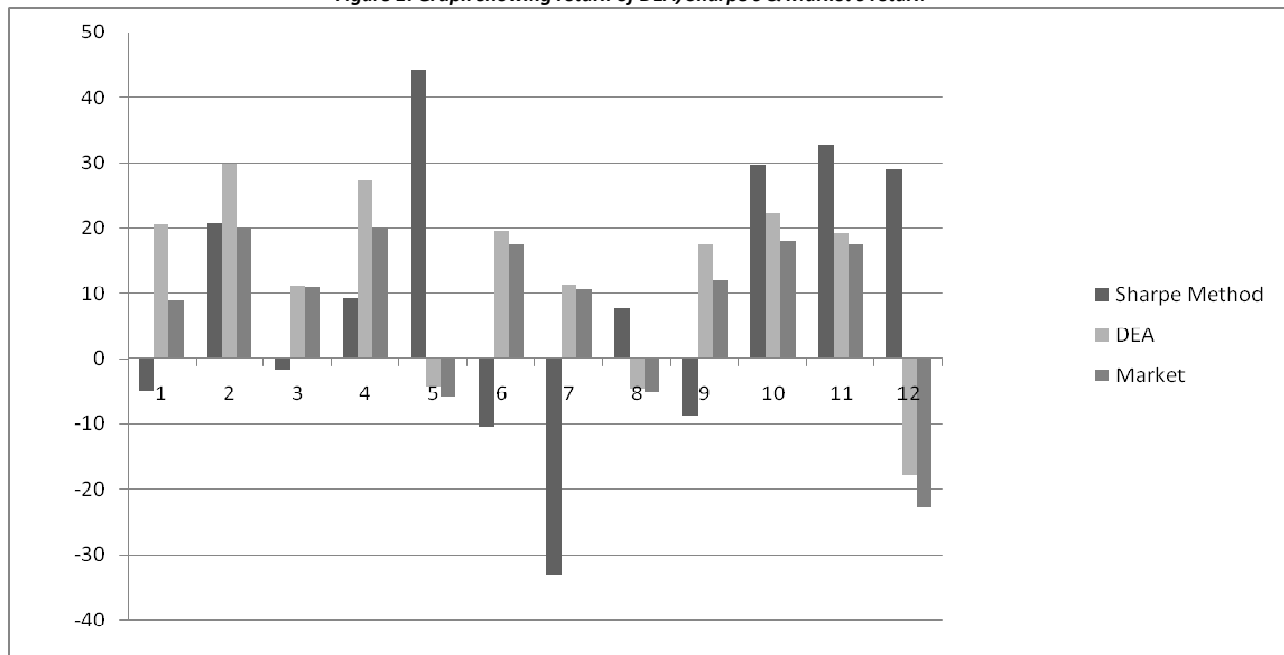
FUTURE WORK

There is a lot of scope of future work related to portfolio optimization. These are:

- Out of three basic methods which one is better for portfolio optimization?
- Is variance a best measure of risk?
- Can high order moment replace variance as a measure of risk?
- How to develop model for many assets?
- How short selling can be allowed in that model?
- Which model is better to select assets?
- Which model is better to suggest for buy/sell?
- Data of inflation, GDP (Gross Domestic Product) how they affect market?
  Introduction of a portfolio optimization model consisting n-assets, measuring risk more accurately and being able to apply it efficiently in long-short selling.

CONCLUSIONS

However Sharpe's method employs quadratic optimization to minimize the variance of the excess return of the manager over a linear combination of the asset classes.

- Comparing results of each quarter
  In each quarter DEA's return is more than Market's Return while in most of the cases Sharpe's return is less than Market's return.
- Comparing Arithmetic Means
  Arithmetic Mean shows that return by DEA is more.
- Comparing Geometric Means
  Geometric Mean signifies average of returns & if we compare them then DEA is better in this case also.

By this analysis we can say that DEA can gives better results in every aspect (long-term i.e. 3 years & short-term i.e. 3 months). So DEA is a better technique in finding efficient securities compared to Sharpe's Method.

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ENVIRONMENT MANAGEMENT SYSTEM IN INDIAN FOOD PACKAGING INDUSTRY: VARIABLE IDENTIFICATION AND SELECTION

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ABSTRACT

Post–Liberalization era has proved that traditional regulatory approaches regarding environment protection has become incapable to attain the decided objectives. Developing Countries, India, in particular has weak norms and regulation regarding environment. Environment management practices in India these days have been limited to acquiring accreditations and present themselves as green in the market without actually knowing about the term "Environment Management". This paper is part of authors research work. It presents research gaps in the area of Environment management System (EMS) through the process of literature survey and also identifies the critical variables and discusses the methodology to develop a holistic model EMS in Indian Food Packaging, in particular.

KEYWORDS

Environment management, Food Packaging, Environment management System.

INTRODUCTION

Being "green" has resulted upon thought towards the environmental issues in corporate organization these days. Consumers are attracted by the term environment friendly. Due to superficial practices the main purpose behind the whole concept is not served. Environment Management (EM) is not just phrase rather it is "managing interaction organization, society and environment" .The need for EM can be viewed from the various perspective. The common philosophy and impetus behind EM is the concept of carrying capacity. Carrying capacity refers to the maximum number of organisms a particular resource can sustain. The concept of carrying capacity, whilst understood by many cultures over history, has its roots in Malthusian theory. Environmental management is therefore not the conservation of the environment solely for the environment's sake, but rather the conservation of the environment for humankind's sake. These types of practices need to be carefully planned executed and monitored so as to achieve the goal of environment management. Advantage of adopting the environment management in business has been mentioned in number of empirical studies. For instance, improved manufacturing performance (Klassen and Whybark, 1996), enhanced profitability (Russo and Fouts, 1997). Klassen and McLaughlin (1996), substantial and tangible benefits (Quazi, 1999), emergence of organizational capabilities (Sharma and Vredenburg, 1998). Factors are identified in literature Berry and Rondinelli, 1998; Epstein, 1996; Cairncross, 1995; Makower, 1994; Dechant and Altman (1994); Newman and Breeden, 1992; Hunt and Auster, 1990), all these are concentrated to manufacturing industry; no work has been yet reported on Indian food packaging Industry. This paper aims development and validation of a set of critical factors of environmental management. Furthermore, it has also been observed that no performance measures for such critical factor have been reported. Review of the extant literature and it analyses together with expert inputs has form the basis of variable identification and selection This paper is an attempt develop an holistic model of environment management system for food packaging industry .Details of research questionnaire design, sampling plan and scale refinement & validation methods has been discussed .

LITERATURE REVIEW

The requirements of successful environmental management practices proposed by various authors are briefly described below.
Kit-Fai Pun (2002) has emphasized on flexible adaptation of the framework can help organizations derive potential benefits from the EMS implementation leading to sustainable competitive advantage.
Berry and Rondinelli (1998) has identified six critical factors in order to create an effective proactive environmental management system. This research emphasized the role of a champion within the company in assuming responsibility for environmental issues. He should be equipped with superior management skills and have a influence within the organization with the authority to allocate adequate resources to environmental management. Furthermore, environmental goals and targets should be both clear and measurable. Decentralization is required to ensure commitment to environmental policies. Everyone associated with the business must be involved in environmental management,

including suppliers, customers and employees. Training and education programs are thus essential for employees. An environmentally proactive company should also engage in monitoring, auditing and reporting its environmental performance.

Epstein (1996) identified ten elements of corporate environmental integration review of internal and public documents of more than 100 leading corporations and interviews with more than 30 company representatives. These ten elements, which range from development of a corporate environmental strategy to the final implementation, appear to concentrate on the availability of appropriate systems for corporate environmental strategy implementation.

Yee Soo Wee(2003) has done illustration, through reliability and validity analyses , of seven critical factors , they are – top management commitment to environmental management, total involvement of employees, training, green product/process design, supplier management, measurement, and information management .

Hunt and Auster (1990) identified seven elements that a proactive company should have with regard to environmental management. They also suggest certain business practices to improve effectiveness of environmental management, such as environmental risk assessment, calculation of costs of poor environmental management likewise.

There has been continual imposition of regulations and legislation (Goddard 1997) in the packaging supply chain in order to reduce the environmental impacts associated with packaging. Mechanisms include the banning of certain types of materials and packs (e.g., Danish can ban); introduction of quantitative recycling targets (e.g., European Directive for Packaging and Packaging Waste); and implementation of taxes and deposit systems (e.g., beverage containers in South Australia).Regulations have been a means by which governments have enforced requirements upon industry to improve its environmental performance. Along with advances in technology and improved information, industry has been able to improve its management of discharges to air, water and land (Gibson 1999). Regulations can have a positive influence on reducing environmental emissions, discharges and waste that industry generates, though as Porter and van der Linde (1995) suggest it can also deter the benefits of innovations if not designed correctly, therefore, reducing the opportunities for resource productivity and competitiveness. Regulations addressing solid waste generation from packaging materials are in place throughout the world. Examples include the Packaging Covenant in the Netherlands enforced since 1991, the Japanese Packaging Law enforced since 1995 (Hunkeler *et al.* 1998), and the European Directive of Packaging and Packaging Waste, which has been in force since 1995 (Perchard 1997). Another regulatory measure is the collection, by governments throughout the world, of emission data from companies, which can be accessed publicly. Audit records, in addition to showing compliance with the regulations, can at other times also act as a certificate, which can be used for accreditation and marketing purposes

Margaret (1999) found in his paper that in the food and retailing sector only around 25 per cent of companies were found to operate wastes minimization programmes. This paper aims to demonstrate the benefits of wastes minimization, in both financial and environmental terms, for the food and drink sector. Large multiprocess food and drink companies have found they can make annual savings of greater than one per cent of turnover by implementing wastes minimization strategies.

M.Ruhul.Amin has suggested that ISO 14001 certification cannot serve as an end in itself for industries as peer companies under voluntary compliance may exceed environmental performance. Minimum acceptable environmental standards could be enforced through industry-wide consensus. Public access to performance indicators can be ensured under a voluntary mandate; peer benchmarking may allow for competitive goal setting. The model proposed could be gainfully replicated particularly in developing countries

Gonzaele (2008) found a positive relation existed between the possessions of certified EMS, specifically ISO 14001 and eco-management and audit scheme, and the environmental demands that these organizations impose on their suppliers. This finding implies that environmental concern spreads upstream in the supply chain. The environmental demands on suppliers increase with customer organization size, but the degree of internationalization, measured by the rates of imports and exports, does not show a significant relationship to these pressures.

Arpanutud (2009) had presented the results hypothesis testing indicated that the adoption of a food safety management system can be significantly predicted by: expected gain of social legitimacy; expected gain of economic competitiveness; perceived importance of external stakeholders (government, community, food safety organizations, and media); top management commitment to food safety; firm size and amount of export sales. It can also be predicted by the extent to which firms exchange food safety knowledge with other stakeholders.

Thorough analysis and synthesis of literature has resulted into eleven variables. These variables are latent variables which cannot be measure directly. For eg: Life cycle perspective and assessment for environmental management cannot be measured directly. Therefore Life cycle costing is a manifestation of Life cycle perspective for environmental management. Now, for further study, each manifestation is measured with an item in scale. .Now a scale achieves content validity when the items in a scale sufficiently span the scope of the variable. In this study, content validity of the variable was achieved through literatures review and expert inputs for the selection of their representative items. For developing theory, the performance measuring instrument should be reliable, viable and indicative which should be backs by hard core evidence based on meticulous methodology. The above review of literature on critical factors reveal that various authors have indicated a number of requirements for corporate environmental management, which are based either on examinations of current best practices of corporate environmental practices or the authors' personal experience. By closely examining the above-mentioned studies, there seems to be a set common critical success factors of environmental management in firms. In Indian context the studies and limited to manufacturing and allied industry. The objective of the present study is to identify and validate a set of such factors for environment management system in Indian Food Packaging industry using appropriate statistical techniques in food packaging.Research gaps in the area of development of EMS framework for Food packaging industry were identified. The following specific objectives were selected to fill the research gaps:

To identify the critical factors to implementation of environment management system in Food Packaging Organization (FPO) in particular and validate them to develop a holistic model for Environment management System.

Since there is no straight forward and easy way to define environment costs and implementation methods to achieve environmental management and more on in food packaging industry to identify the critical factors for the organization wide implementation need a stout methodologies. The critical key issues like Current and future environmental issues, environment accounting, environmental cost allocation, environmental reporting and management system, voluntary agreement, life cycle perspective and assessment can be used as guidelines for implementation as well as performance criteria. In general, environment performance measurement provides organizations about the current practices, assumption and beliefs to develop a system which overcome their shortfall in existing system. Therefore it is crucial   to identify 'critical success factors' for EMS in food packaging industry. The process used in this study to develop measures of the critical factors of

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environmental management is the systematic research methodology in the social science emphasizing generation of theory from data in the process of conducting research.

QUESTIONNAIRE DEVELOPMENT

Based on the literature review, a tentative list of critical factors of environmental management was developed. These factors are summarized in Table 1.The measurement items under each critical factor were identified based on the literature review and expert input. A total of 69 items were developed under the eleven critical factors. The interviewees further suggested that the items were more suitable for manufacturing firms.The questionnaire was finalized by rearranging the various items. Respondents were asked to rate each item under a five-point interval rating scale (1=not at all, 2=little extent, 3=moderate extent, 4=large extent, 5=very large extent), to indicate the extent of practice in their respective organizations. The level of practice of environmental management in an organization was assessed by the average ratings of the measurement items for each factor which is consistent with the methodology adopted by Saraph *et al.* (1989) in their study on critical factors of quality management.

DATA COLLECTION

The Sample population for the study consisted of 350 organizations listed as major food and packaging companies in trade India online directory for Indian manufacturers. The environmental health and safety manager or senior persons such as managing director or Chief executive officer (where the post of environmental health and safety manager doesn't exist) were contacted. Since the information are at private and confidential level in company, so the consent for not revealing the identity was given by researchers to company. The target persons were contacted and given questionnaire personally and through email. Out of 350 it was possible to obtain 150 filled questionnaires, out of them only 126 was analyzed as rest 24 were not considered for analysis as they were missing o the substantial data. After number of follow up through telephone calls it was possible to get a return rate of 36 % (126 responded out of 350).

DATA ANALYSIS

RELIABILITY ANALYSIS

This analysis has been carried out in SPSS 16 version. In our analysis, before assessing the internal consistency of measure, an inter item correlation matrix is also been created and table presents the mean inter item correlation. Values of each variable inter item correlation show that all of them are adequate enough to be included in the list. Variables have cronbach alpha value range from 0.7295 to 0.9315 which shows that the high acceptability level of the variables form the extensive literature review. The instrument can be said statistically reliable and homogenous in nature.

VALIDITY ANALYSIS

The first step to establish the internal consistency validity, the mean score and standard deviation of all items within a scale were first examined. Followed by this there should be a face and content validity analysis which is presented in the following section. This particularly refers to the goodness of fit of item within the scale .To sustain the Item internal consistency Validity, these values should be roughly equivalent for all items within the scale.

FACE VALIDITY

Face validity is a property of a test intended to measure something. It is the validity of a test at face value. In other words, a test can be said to have face validity if it "looks like" it is going to measure what it is supposed to measure. Through literature review and expert comments such insights are possible and further the systematic analysis of the whole concepts and measure of environment management system it was possible to arrive at useful measures. High degree of face validity was obtained further through expert as well as academician's opinion.

CONSTRUCT VALIDITY

Factor analysis is usually used to identify items, which should be included in a consistent measuring instrument (Muttar, 1985). Appropriateness of the factor model is determined by examining the strength of the relationship among the variables. Correlation matrix, Barlett's test of sphericity and Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy are the three measures recommended in the literature for this purpose (see Hair *et al.*, 1995; Norusis, 1994).

CORRELATION MATRIX

Correlation matrix shows the correlation values between the items in each factor shows greater than 0.3. This concludes the commonality of factors under items of factors. (Hair *et al.*, 1995; Norusis, 1994).

BARLETT'S TEST OF SPHERICITY

Barlett's test assesses the overall significance of the correlation matrix. If the value of the test statistic for sphericity is large and the associated significance level is small, it can be concluded that the variables are correlated. Barlett's test of sphericity demonstrated sufficiently high values for all the eleven critical factors (at $p <= 0.000$).

KMO MEASURE OF SAMPLING ADEQUACY

The test result shows factors ranging from 0.7256 to 0.9661, which is much above the suggested minimum standard of 0.5 required running factor analyses (Hair *et al.*, 1995; Norusis, 1994). Hence, based on the above tests, it is concluded that all eleven factors are suitable for applying factor analysis.

FACTOR ANALYSIS

Principal Component Analysis with Varimax Rotation Factor analysis was conducted on items under each critical factor. Each factor was tested for Unidimensioanlity and out eleven nine were found one-dimensional and rest two split into sub factors. A total of seven analyses were carried out. The number of factors to be extracted in each analysis was determined by the Eigenvalue number of factors will be extracted in accordance to the number of Eigenvalue over 1. This means that items hypothesized under these 6 of the 7 factors each formed into a single factor. Next, an analysis of the factor loading was performed. The factor loading represents the correlation between the variables and their respective factor. The squared loading of each variable is the amount of the variable's total variance accounted for by its factor. Based upon the sample size, factor loading is considered to be significant if they are greater than ±0.45 (Hair *et al.*, 1995). The factor loading of all the items under factors, 2, 3, 5, 6, 7, 8,9,10 and 11have met the above criteria, with the lowest loading at 0.623.For factor (construct) 1& 4, Environmental Accounting: three sub-factors and Life Cycle Assessment: two sub factors emerged from the analysis.

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FINDINGS

The various factors on environmental practices proposed by different authors were organized into a set of eleven critical factors of environmental management and performance measures for each of the critical factors developed. With reliability and validity established, the items under the eleven critical factors of environmental management should be able to act as gauging measures of performance for firms. All the factors are highly correlated.
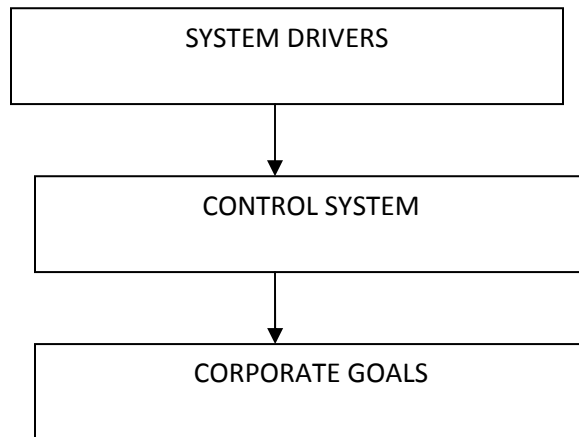
DISCUSSION

For the decision making regarding important environmental issues and strategies, the managers require a valid instrument to measure the environmental performance of their company and improvise with the changing scenarios. The present research aimed to develop an integrated EMS Framework to achieve a standardize level of environmental management in food and packaging industry. The specific objective were: to identify the critical factors to implementation of environment management system in Food Packaging organization(FPO) in particular, to develop an empirically tested reliable and valid performance measurement instrument for EMS in FPO, to propose an integrated framework for EMS for the target industry. The analysis included the internal consistency using cronbach alpha reliability coefficient and item analysis (descriptive statistics), Kaiser-Meyer Olkin (KMO) Measure of sample adequacy ad construct validity for checking the Unidimensioanlity of the factors with the help of Principle component Analysis. The Labeling of the sub factor emerged from the factor analysis was done using Delphi Technique. Further, the relationship between these eleven variables was analyzed using Pearson bivariate correlation base on the rating of environmental performance on each variable in comparison to the actual level of implementation in the industry. A positive correlation among these variable showed that these variable are interrelated and can be combine d in a holistic manner in order to propose an integrated framework of Environment Management System. Finally, a conceptual integrated framework for EMS with eleven variables in Food Packaging Organization. Those variable and their sub factors that form the holistic model are:

System Drivers: Environmental Accounting: Environmental policy management(EPM); Account Management(AM); Environmental Control System(ECS), Employee involvement(EI)

Control System: Commitment of Top management(CTM);Environmental Cost allocation(ECA);Life cycle Assessment: Life cycle management(LCM); Product and Process Design and Improvement(PPDI);Regulatory Issues(RI)Current and Future Environment Issues: Sustainable energy issues(SEI); Employee health and related issues(EHRI);Environment reporting(ER);Training(T);Information management(IM)

Corporate Goals: Corporate social responsibility(CSR)

PROPOSED HOLISTIC MODEL FOR EMS FRAMEWORK

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┌─────────────────────────────────────┐
│           SYSTEM DRIVERS            │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│           CONTROL SYSTEM            │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│           CORPORATE GOALS           │
└─────────────────────────────────────┘
```

IMPLICATION OF RESEARCH

The research has identified a comprehensive list if eleven factors for EMS management addressing the entire range of environment management dimension in food packaging organization. The strength of EMS framework is based upon an extensive literature review and a synthesis of academic and practitioner quality management literature in food and packaging as well in other industries also. Multidisciplinary approach was adopted so as to strengthen the subject of theory building was used as because of the limited empirical research in the context of environmental management in food packaging organization. An integrated framework for EMS implementation has been proposed explains the relationship among the variables.

This particular research is a sincere attempt to add the environment management context in Indian food packaging industry as compared to other countries. This would hereafter provide the future researchers and practitioners of with information in the field of environment management practices.

LIMITATION

The major limitations of the study:

Factor analysis has resulted in sub factors of the variables. Therefore possibility of perplexing of factors in those variables is there.

Self-reported information from the respondents has the formed the basis of development measure. The items in the questionnaire are subjective in nature. Respondents had rated the items based on their perception, as to the extent to which the items were applicable in their respective companies. Hence, the lack of objective measures might introduce certain amount of bias into the data collected.

This study covered only food and packaging industries in India. To test the wider validity of the instrument, similar studies may be undertaken across a larger number of industries. Further, to test the robustness of the instrument studies may also be carried out in different countries.

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TABLE

TABLE 1

Top management commitment	Employee involvement	Training,	Process/Product design	supplier management	Measurement	Life Cycle perspective and assessment	Information management
Involvement of top peoples into decisions related to environment		Awareness program for employees regarding environment.	Product and process development	supply chain is a global network of organizations that cooperate to improve the flows of material and information between suppliers and customers		Life cycle assessment (LCA) examine the potential environmental aspects associated with a product or service by compiling an	
Setting of vision mission policies by top manager regarding environment	Setting of green team to encourage employee involvement	Employee being trained to understand their environmental responsibility	Designing product and process in a way to minimize the environment impact.	Environmental performance as criteria to choose supplier	Measures set to gauge the environmental issues		Information system to set best practice of EMS
Top Management Leadership, Appointment of Senior officer as environment champions	Participatory decision making by employee in environment management.	Training And Education Program		Supplier Involvement And assessment	Measurable goals, target and environmental audit.		Using information to reevaluate environmental program
Top management leadership and support is vital Appointment of a champion has been identified as a key role for top management		Learning from other organizations' experiences and benchmarking. Employee induction and training		General training and awareness for suppliers and other stakeholders	Identification of aspects and impacts and setting of objectives and targets	Conducting cost-benefit analysis	Integration of existing management systems
The management attitude can be understood by examining the top management commitment and support, appropriate environmental policy and regular management reviews.					System for measuring the various aspects of EMS		
Develop and implement environmental strategy, Corporate mission statement	Empowerment, Company environmental awards, Establish individual environmental goals	Increase environmental awareness	Integrating environmental concerns into product design system, Life cycle analysis, Waste reduction through product and process assessment	Put pressure on suppliers to reduce negative impact of inputs	Internal and external environmental auditing system, costing system Capital budgeting System.		Internal and external reporting system
Role of environmental mangers in assessing the impact of their activities			Green product design	Assessment of food packaging supply chain	Measuring tangible and intangible cost	LCA and LCC approaches	Integrating the environmental information into EMS

Critical Factors	Corporate Social Responsibility	Regulatory Issues	Environment Accounting
	Corporate Social Responsibility	Regulatory Issues	Environment Accounting
Kit-Fai Pun,2002	Social responsibility towards society	Compliance issues	Environment Audits and internal audit
Yeo Soo Wee,2003			
Berry and Rondenelli, 1998	CSR initiatives		
Ambika Zutshi,2004			Necessity and usage of audits
Kwai-Sang Chin(1999)	Address issues related to CSR		
Epstein 1996			
James Karles (2003)	Responsibility towards the societal impact	environmental legislation and environmental specialist assistance	

BSE AND SECTORAL INDICES: A COMPARITIVE STUDY

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ABSTRACT

The global economic meltdown has influenced all the sectors of the Indian economy. Its impact is more visible on the capital market and the indices. The indices are falling down and the markets are following the same trend. The BSE SENSEX has been the worst hit among the Indian stock market indices. The other sectoral indices are also following the SENSEX until a revival in the last quarter. Because of the declining trends in the capital markets, the investors are in a dilemma whether their investments will be safe or not. Even though the situation has stabilized a little bit now, still there is an ambiguity among the investors about the performance of the indices. In this backdrop, an attempt was made to study the performance of the sectoral indices in comparison with SENSEX. The author has taken the data of the last financial year and studied the correlation coefficients to establish the relationship between the selected sectoral indices and BSE. Six leading sectoral indices were taken for the analysis, which have a significant impact on the total economic situation of the country.

INTRODUCTION

Indian financial market has been going through a fascinating change and it opened up excellent business and investment opportunities in the financial sector.   The growth and evolution of the financial market led to the development of well-structured capital markets with attractive investment opportunities for the individuals. The development of capital markets have led to the development of regulatory bodies and development of various indices in order to provide authentic information to the investors. Financial deregulation and innovations have changed the whole structure and functioning of the financial markets of many industrialized countries since 1990s. Initially the stock market index was formed and later on the sectoral indices were developed and these are comprehensively providing the necessary information to the investors to invest their funds for productive utilization of the country. Understanding the importance of the stock market indices, a study has been initialized to establish a relationship between the leading stock market index of the country, the SENSEX, and six significant sectoral indices, which are of prime importance to the overall performance of the economy. The relation of SENSEX with these indices has been computed with the help of the statistical tool, correlation coefficient. Further, the study has taken the financial year April, 2008-2009, as this has been the period which has witnessed the impact of global financial crisis.

BOMBAY STOCK EXCHANGE

The Bombay Stock Exchange is the first and leading stock exchange of India, which obtained permanent recognition in 1956 from the Government of India under the Securities Contracts (Regulation) Act 1956. BSE's pivotal and pre-eminent role in the development of the Indian capital market is widely recognized throughout the country. BSE provides an efficient and transparent market for trading in equity, debt instruments and derivatives. It has a nation-wide reach with its mark in more than 359 cities and towns of India. BSE has always been on par with the international standards. Keeping in view the larger interests of the investors, the systems and processes are designed to safeguard market integrity and enhance transparency in operations. BSE is the first exchange in India and the second in the world to obtain ISO 9001:2000 certification. It is also the first exchange in the country and second in the world to receive Information Security Management System Standard BS 7799-2-2002 certification for its On-line Trading System popularly known among the markets as BOLT.

SENSEX

The BSE's Index, SENSEX, is India's first stock market index that enjoys a specific identity and is tracked worldwide. It is an index of leading 30 stocks representing 12 major sectors. The SENSEX is constructed on a 'free-float' methodology, and is sensitive to market sentiments and market realities. Apart from the SENSEX, BSE offers 21 indices, including 12 sectoral indices. The SENSEX is the guide to all the investors of the country. In one way it regulates the inflow and outflow of funds into the companies listed in the exchange.

CALCULATION METHODOLOGY

SENSEX is calculated using the "Free-float Market Capitalization" methodology, wherein; the level of index at any point of time reflects the free-float market value of 30 component stocks relative to a base period. The full market capitalization of a company is determined by multiplying the price of its stock by the number of shares issued by the company. This market capitalization is further multiplied by the free-float factor to determine the free-float market capitalization. Initially the index calculation was based on full market capitalization, later on to give more realistic version of the trading activities, the free-float methodology has been adopted by the stock exchange.

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The base period of SENSEX is 1978-79 and the base value is 100 index points. The notation indicates that 1978-79=100. The calculation of SENSEX involves dividing the free-float market capitalization of 30 companies in the Index by a number called the Index Divisor. The Divisor is the only link to the original base period value of the SENSEX. It keeps the Index comparable over time and is the adjustment point for all Index adjustments arising out of corporate actions, replacement of scrips etc. During market hours, prices of the index scrips, at which latest trades are executed, are used by the trading system to calculate SENSEX on a continuous basis.

SENSEX - SCRIP SELECTION CRITERIA
There are certain guidelines for the selection of scrips to constitute the index. The general guidelines for selection are as follows:

1.   **History of Listing:** The scrip should have a listing history of at least 3 months with BSE. However, there may be certain exceptions for the companies ranked among the top 10 of newly listed companies. Similarly those, which may be listed due to mergers, amalgamations and other corporate alliances, are exempted from the past history of listing.
2.   **Trading Frequency:** The scrip should have been traded on each and every trading day in the last three months at BSE. Exceptions can be made for extreme reasons like suspension of the scrip by the exchange for trading etc.
3.   **Final Rank:** The scrip should figure among the top 100 companies listed by final rank. The final rank is arrived at by assigning 75% weightage to the rank on the basis of three-month average full market capitalization and 25% weightage to the liquidity rank based on three-month average daily turnover & three-month average impact cost.
4.   **Market Capitalization Weight age:** The weight age for each scrip of SENSEX should be at least 0.5% of the Index, based on three-month average free-float market capitalization
5.   **Industry/Sector Representation:** Scrip selection would generally take into account a balanced representation of the listed companies in the universe of BSE.
6.   **Track Record:** The Company should possess a good track record of its operations as per the norms and expectations of the members of the BSE committee.

FREE FLOAT METHODOLOGY
Free-float methodology refers to an index construction methodology that takes into consideration only the free-float market capitalization of a company for the purpose of index calculation and assigning weight to stocks in the index. Free-float market capitalization takes into consideration only those shares issued by the company that are readily available for trading in the market. It excludes promoters' holding, government holding, strategic holding and other locked-in shares that will not come into the market for trading in the normal course. In other words, the market capitalization of each company in a free-float index is reduced to the extent of its readily available shares in the market for trading.

DETERMINING FREE-FLOAT FACTORS OF COMPANIES
BSE has designed a Free-float format, which is filled and submitted by all index companies on a quarterly basis. BSE determines the Free-float factor for each company based on the detailed information submitted by the companies in the prescribed format. Free-float factor is a multiple with which the total market capitalization of a company is adjusted to arrive at the Free-float market capitalization. Once the Free-float of a company is determined, it is rounded-off to the higher multiple of 5 and each company is categorized into one of the 20 bands given below. A Free-float factor of say 0.55 means that only 55% of the market capitalization of the company will be considered for index calculation. The following table gives an idea of free float factors.

Table: 1 Free-float Band

% Free-Float	Free-Float Factor	% Free-Float	Free-Float Factor
>0 – 5%	0.05	>50 – 55%	0.55
>5 – 10%	0.10	>55 – 60%	0.60
>10 – 15%	0.15	>60 – 65%	0.65
>15 – 20%	0.20	>65 – 70%	0.70
>20 – 25%	0.25	>70 – 75%	0.75
>25 – 30%	0.30	>75 – 80%	0.80
>30 – 35%	0.35	>80 – 85%	0.85
>35 – 40%	0.40	>85 – 90%	0.90
>40 – 45%	0.45	>90 – 95%	0.95
>45 – 50%	0.50	>95 – 100%	1.00

SECTORAL INDICES
In order to equip the investors with more comprehensive and reliable information, the BSE has launched various sectoral indices, which reflect the performance of that particular sector. To construct indices, the scrips of the companies working in the particular sector will be selected on the basis of various factors like trading frequency, market capitalization etc.
As these indices present a picture of the independent sector, it was decided to analyze the sectoral indices. The leading sectors of the Indian economy like IT, FMCG, OIL & GAS, BANKEX, METAL AND REALTY sectors have been taken for the study. The sectoral indices for last financial year April2008-March 2009 has been taken for the study, as this has been the most turbulent time for the stock markets. All the indices were presently working with a free float methodology of calculation only even though some of them were initially launched with full market capitalization methodology. The following table shows a comprehensive picture of the specifications of indices selected for the analysis.

Table:2 Index Specifications

Index	Base Period	Base Index Value	Date of Launch	Method of Calculation
BSE IT	01 February, 1999	1000	09 August, 1999	Launched on full market capitalization method,

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				shifted to free-float market capitalization
BSE FMCG	01 February, 1999	1000	09 August, 1999	Launched on full market capitalization method, shifted to free-float market capitalization
BSE Oil & Gas	01 February, 1999	1000	23 August, 2004	Free-float market capitalization
BSE BANKEX	01 January, 2002	1000	23 June, 2003	Free-float market capitalization
BSE Metal	01 February, 1999	1000	23 August, 2004	Free-float market capitalization
BSE Realty	2005	1000	09 July, 2007	Free-float market capitalization

MAINTENANCE OF BSE INDICES

One of the important aspects of maintaining continuity with the past is to update the base year average. The base year value adjustment ensures that replacement of stocks in Index, additional issue of capital and other corporate announcements like 'rights issue' etc. do not destroy the historical value of the index. The beauty of maintenance lies in the fact that adjustments for corporate actions in the Index should not per se affect the index values.

The BSE Index Cell does the day-to-day maintenance of the index within the broad index policy framework set by the BSE Index Committee. The BSE Index Cell ensures that all BSE Indices maintain their benchmark properties by striking a delicate balance between frequent replacements in index and maintaining its historical continuity. The BSE Index Committee comprises capital market expert, fund managers, market participants, and members of BSE Governing Board.

ON - LINE COMPUTATION OF THE INDEX

During trading hours, value of the indices is calculated and disseminated on real time basis. This is done automatically on the basis of prices at which trades in index constituents are executed.

To analyze the performance of the indices in relation with the SENSEX, the correlation coefficients of the sectors with the SENSEX have been computed f or the selected time period. The following table presents the closing values of the indices along with SENSEX.

Table: 3   Values of BSE SENSEX and Sectoral Indices

Sl. No.	Month	SENSEX	IT	FMCG	OIL&GAS	BANKEX	METAL	REALTY
1	April 2008	17,287.31	4,261.93	2,461.38	11,505.79	8,819.68	16,914.63	8,505.49
2	May 2008	16,415.57	4,643.79	2,427.76	10,396.85	7,714.59	13,207.30	7,008.66
3	June 2008	13,461.60	4,019.82	2,080.33	9,009.16	5,915.98	12,912.61	4,543.47
4	July 2008	14,355.75	3,689.57	2,139.18	9,729.48	6,516.41	12,348.02	5,079.01
5	August 2008	14,564.53	3,966.75	2,215.60	9,659.46	7,009.69	8,992.06	4,995.25
6	September 2008	12,860.43	3,095.08	2,160.76	9,039.28	6,478.85	5,367.60	3,508.77
7	October 2008	9,788.06	2,861.94	1,799.83	6,195.62	5,011.24	4,383.38	1,978.24
8	November 2008	9,092.72	2,558.94	1,936.60	5,618.16	4,645.40	5,214.35	1,561.01
9	December 2008	9,647.31	2,227.96	1,987.38	6,050.04	5,454.54	5,100.14	2,274.13
10	January 2009	9,424.24	2,236.51	2,032.69	6,252.46	4,900.06	4,690.97	1,668.08
11	February 2009	8,891.61	2,096.17	2,043.26	6,064.11	4,240.10	5,795.07	1,413.19
12	March 2009	9,708.50	2,285.68	2,036.24	7,053.04	4,490.97	5,795.07	1,560.83

After taking the values of the indices for a period of one year the individual correlation coefficients are calculated with SENSEX as correlation represents the relationship between two variables effectively. The following table shows the computation of correlation between BSE-IT with SENSEX.

Table: 4 Correlation Coefficient between BSE - BSEIT

S.No.	x-BSE	y-BSEIT	x-$\bar{x}$	y-$\bar{y}$	(x-$\bar{x}$).(y-$\bar{y}$)	(y-$\bar{y}$)^2	(x-$\bar{x}$)^2
1	17287.31	4261.93	5162.51	1099.92	5678347.99	1209824.00	26651509.500
2	16415.57	4643.79	4290.77	1481.78	6357977.17	2195671.96	18410707.19
3	13461.60	4019.82	1336.80	851.81	1146720.40	735837.99	1787034.24
4	14355.75	3689.57	2230.95	521.56	1176959.98	278319.55	4977137.90
5	14564.53	3966.75	2439.73	804.74	1963348.32	647606.46	5952282.47
6	12.860.43	3095.08	735.63	-66.93	-49235.71	4479.62	541151.49
7	9788.06	2861.94	-2336.74	-300.07	701185.57	90042.00	5460353.82
8	9092.72	2558.94	-3032.08	-603.07	1828556.48	363693.42	9193509.12
9	9647.31	2227.96	-2477.49	-934.05	2314099.53	872449.40	6137956.70
10	9424.24	2236.51	-2700.56	-925.5	2499368.28	856550.25	7293024.31
11	8891.61	2096.17	-3233.19	-1065.84	3446063.22	1136014.90	10453517.57

| 12 | 9708.50 | 2285.68 | -2416.3 | -876.33 | 2117476.179 | 767954.26 | 5838505.69 |
| | | | | | 29180867.40 | 9158443.81 | 102696690 |

$$\sum \bar{x} = 145497.63 \qquad \sum \bar{y} = 37944.14$$

$$\bar{x} = \frac{\sum x}{12} = \frac{145497.63}{12} = \qquad 12{,}124.8$$

$$\bar{y} = \frac{\sum y}{12} = \frac{37944.14}{12} = \qquad 3162.01$$

$$r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2(y-\bar{y})^2}}$$

$$r = \frac{29180867.40}{\sqrt{1026966.90 \, x \, 9158443.81}}$$

$$= \frac{29180867.40}{(10133.93).(3026.29)}$$

$$= \frac{29180867.40}{30668211.01}$$

$$r = 0.95$$

All other indices were similarly treated with the same formula to find out the relationship. The following table presents the correlation coefficients of the select sectors.

Table: 5

Sl. No	Sectoral Indices	Correlation Coefficients with BSE SENSEX
1	BSE IT	0.95
2	BSE FMCG	0.88
3	BSE Oil & Gas	0.98
4	BSE BANKEX	0.96
5	BSE Metal	0.94
6	BSE Realty	0.98

By observing the trends in the correlation coefficients, one can note that all the indices are showing a high range of positive correlation with SENSEX. This confirms the fact that the movements of the leading index of the country influence all these indices. So, the investors can follow the leading index for their investments in various sectors.

CONCLUSION

Financial planning is a holistic approach and it has everything to do with the success of the investments either by the individual investors or institutional investors. The principle of financial planning will provide an understanding of both long term and short-term strategies for investments in various sectors. The study re-emphasizes the fact that the stock markets are very much sensitive to the market conditions and the leading indices will always have their impact on the associated indices. To be pragmatic, a person has to take into consideration both the

fundamental parts of the company like profitability, past records and reliability, along with a close watch of the comings and goings of the markets. This is possible with continuous monitoring of the markets. Instead of depending on individual perceptions, one can rely upon the stock market indices, as these provide authentic   and unbiased information on the performance of the market. To conclude we can say that a blend of fundamental and market analysis is always will be the best choice for selection of investment opportunities.

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ERM: A KEY TO THE SUCCESS OF CRM

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ABSTRACT

Customer Relationship Management has emerged as an important component in the area of marketing to cater to the modern marketing dynamics that involves various newer facets and dimensions. But a very crucial aspect has been found towards successful implementation of CRM program is the employee's involvement and willingness. The success of CRM lies in the way it has been implemented. Thus, selling CRM program to the internal customers i.e. the employees and motivating them to implement those CRM programs is the key. Employee Relationship Management has thus come at fore. Companies have been resorting to various new initiatives to create employee loyalty and help them realise the importance of customers and motivate them to do that extra bit for customers. The paper discusses how important it has become to build relationship with employees for effective relationship and how it impacts towards service orientation basis

INTRODUCTION

Customer Relationship Management has emerged as an important component in the area of marketing to cater to the modern marketing dynamics that involves various newer facets and dimensions. But a very crucial aspect has been found towards successful implementation of CRM program is the employee's involvement and willingness. The success of CRM lies in the way it has been implemented. Thus, selling the CRM program to the internal customers i.e. the employees and motivating them to implement those CRM program is the key.

EMPLOYEES ARE THE KEY

In modern corporate, it is believed that employees are the key drivers for marketing success not just because they generate sale but also because they play a very important role in deciding how long will the employee stay with the company and what will be his pattern of transaction with the company. Great companies listen to their employees and encourage them to listen to their customers. Companies need to take extra care in hiring people for the organisation. And, hiring is one part of the equation; creating a winning culture and training employees in the ways of service are equally important. The above is important whatever strategy Company's management designs; it actually has got to be carried out by the people i.e. the employees. There has to be willingness on part of the employees to practice the policies and the procedures set by the company management and also in its true spirit. Such performance and the consequent result cannot be extracted by force.

Employees need to be communicated thoroughly about the fact that it is the customer who pays money for acquiring the services of the service organisation. This money compensates all other stakeholders viz. shareholders, financiers, suppliers, society and last but not the least, employees for investments they have made in the organisation. If customers desert the bank or if the bank has not been able to attract the customers, the business will cease to exist.

At the same time, employees also play a very vital role in the growth of the organization as he is the one who actually buys the company's business concept and concretize it by providing their knowledge, skill, effort and time. They interact with all other stakeholders and satisfy the interest of each of the stakeholders. The company in turn, fulfils the need of the employees like physiological, security, social needs etc. Employees also inherit several attributes of customers and hence are called as Internal Customers. If the customer is the purpose of the business, employees are the means to achieve the purpose.

Illustration 1 **Employee Care and Infosys**

While recruiting a German, Infosys HR professional asked the candidate, "why do you want to join Infosys"? He replied I want to join the company where Narayan Murthy works. This shows if the employees are taken care properly, they remain with the organisation for long and with full dedication.

BUILDING EMPLOYEE RELATIONSHIP

Since the employees are the pillars for the companies building of relationship with the customers, a deliberate and well thought out initiative is required by the companies to build foundation for strong relationship of employees with the organisation. The steps may be as follows:

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1.   **Finding right person of customer first orientation:** The process of getting closer to the customers starts with the company management and builds with every employee across the organisation. Superior service is crucial to customer satisfaction, but it comes back to the people hired. This approach has forced companies incorporate personality tests in the hiring process. There is an imperative to hire the right temperament for the job, for the company culture and also for the mix of clients.

Illustration 2 **Employee Orientation issues in the merger of Bank Of Madura And ICICI BANK**
In January 2001, the proposal for the merger of Bank of Madura Limited with ICICI Bank, the first merger of an old private sector bank with a new private bank, was unanimously approved by the Members. This merger had given the bank, the advantages of a larger balance sheet size, extensive geographic reach through enhanced branch network, increased customer base with cross-selling opportunities, increased threshold to financing small and medium enterprises (SME) segments and an opportunity for expanding agro-based lending and micro credit. More specifically, the merger enabled ICICI Bank to gain an additional customer base of 20 lakhs.
An issue ICICI Bank probably could not realize at the time of deciding for merger was the people issue. ICICI Bank was a leading and professionally managed bank with a workforce of approx 17,000, where most of the employees were coming from top Business Schools of the country. Bank of Madura on the other hand had been an old private bank with a workforce of 2600 spread across 280 branches where average staff age being on the higher side and most of the managerial staff were coming through traditional mode of recruitment. After merger, there was a huge issue of merging people who were of two different forms. ICICI Bank wanted the older set of staff to respond to the changes that ICICI Bank was introducing. Since that was the time when ICICI Bank was preparing to take a big leap, it was introducing lot many changes. There was huge incorporation of technology in the functions of banks and enormous emphasis on Customer service and customer relationship. This led to a difficult situation for the bank to deal with. The bank's success was hugely based on the superior customer service while the employees of Bank of Madura were too old and too rigid to be carried along with the customer relationship management practices of ICICI Bank.

2.   **Establishing Employee – Customer Parity:** There are companies who request their valued customers to help them hire right kind of employee. It is all about matching up the right employees with the right customers and the right job. To get fruitful results, the company may provide a forum for employees and customers to become mutually acquainted. Pro-Driver Leasing Systems help employees get to know his customers through a quarterly newsletter in which customers also get the scoop on the company's drivers. Each edition of "The Pro-Driver Times" includes a customer's business, the owner and more. Driver profiles include career highlights as well as personal information on hobbies. This helps bring the drivers and customers together in a friendly atmosphere and he believes that it is one of the reasons many of his clients continually requests certain drivers.

3.   **Designing recruitment strategy from customer perspective:** The quest to match the employees to the best customers is critical in building *customer relationship management*. It may at times require revamp the recruitment strategy from the customer perspective.
Illustration 3 **Winning Customers through Employee behaviour**
Once CEO of Relocation Management Resources found one of his best customer service managers during a frustrating experience at the airport. Upon finding out his flight was cancelled, the CEO called the airline company to complain – bitterly. The women who took the call remained poised despite the CEO's self-described ranting and raving. By the end of the conversation, the CEO made the woman a job offer, which she later accepted.

4.   **Training the employees with customer first approach:** Hiring customer oriented employees is important from the perspective of strong customer relationship management. But organisation also needs to provide staff with training and support they need to make good decisions, asks good questions in a nice manner, give customers satisfying answers, be courteous in behaving with the employees and most of all readily present themselves before the customers to address their problems. Beyond training employees to feel for the customers, the company should target them to be particularly sensitive to the needs of specific customers.

5.   **Educating employees about listening the customer first:** One of the greatest things the company can teach new recruits is to listen to the customer first. There have been companies who created night-time classes. Some companies follow the practice of "Don't try to solve someone else's problem; help the person arrive at their own solution". This model is based on the principle of "Making assumption about a customer's needs does not get you the sale. Listening does".

6.   **Imbibing Empathy for Customers:** To help build empathy for customers, people working in whatever department can be made to experience the environment and the conditions with which the customers undergo. This on one hand enables employees understand the customers problems better and generate a feel for it, on the other helps in creating an enterprise wide CRM orientation.

7.   **Sharing the customer profile with the employees:** Communicating employees about the profile of the best customers is a best because segmentation is a key in implementing CRM program. So, the employees must be aware of who "butters their bread" and accordingly they need to reciprocate. Hence, along with the company, employees should also be actively engaged in exploring the characteristics of the top customers. One needs to understand an important aspect in customer profiling, there are customer doing high volume business with the bank and there are customers who presently are not doing very high turnover with the bank but has the potential of getting bigger over time. These customers should also be taken care of. Such customers' black book needs to be prepared which may contain all information about him, his family, profession and even personal details.

8.   **Directing employees to remain focused:** Mere hiring good employee or teaching and training them to be customer oriented would not suffice. As one moves further in the job, the work environment be it monotony or any other thing distracts them from the focus generated initially. It is a difficult task to keep that focus alive and sustained.

SERVICE DEVELOPMENTS
The fact that services are intangible makes it even more imperative for a new service development system to have four basic characteristics (1) it must be objective, not subjective (2) it must be precise, not vague (3) it must be fact driven, not opinion driven (4) it must be methodological, and not philosophical.
Services are produced and consumed simultaneously and often involve interaction between employees and customers, it is also critical that the new service developments process involve both employees and customers, it is also critical that the new service development process involve both employees and customers. For Metropolitan Life Insurance Co,. cross functional teams comprising representatives from administration,

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claims, marketing and information systems are included to ensure that all aspects of the service and delivery processes are considered before full scale developments of a new insurance service begins.

STAGES IN NEW SERVICE DEVELOPMENTS
Here we focus on the actual steps to be followed in service development. New service or product development is rarely a completely linear process. Many companies are finding that to speed up new service development, some steps can be worked out simultaneously, and in some instances a step may even be skipped. The overlapping of steps and simultaneous development of various pieces of the new service development process has been referred to as "flexible product development".
The process of development is shown below into two sections: **front end Planning & Implementation**

Front end Planning

- **Business strategy development or review**

- **New service strategy development**

- **Idea generation**

  STOP   *Screen ideas against new service strategy*

- **Concept development and evaluation**

  STOP   *Test concept with customers and employees*

- **Business analysis**

  STOP   *Test for profitability and feasibility*

- **Service development and testing**

  STOP   *Conduct service prototype test*

- **Market testing**

  STOP   *Test service and other marketing mix elements*

Implementation

- **Commercialization**

- **Post-introduction evaluation**

FRONT END PLANNING

Business Strategy Development

It is assumed that an organization will have an overall strategic vision and mission. Clearly a first step in new service development is to review that vision and mission.

New Service Strategy Development

Research suggest that without a clear new product or service strategy, a well planned portfolio of new products and service, and an organizational structure that facilitates product development via ongoing communication and cross functional sharing of responsibilities, front end decisions become ineffective.

Idea Generation

The next step is in the process is the formal solicitation of new ideas. The ideas generated at this phase can be passed through the new service strategy screen described in preceding step. Formal brainstorming, solicitation of ideas from employees and customers, lead users research, and learning about competitors offerings are some of the most common approaches.

Service Concept Development and Evaluation

Once an idea surfaces that it is regarded as a good fir with both the basic business and the new service strategies, it is ready for initial development. In the case of tangible product, this would formulating the basic product definition and then presenting consumers with description and drawings to get their reactions.

BUSINESS ANALYSIS

Assuming the service concept is favourable evaluated by consumers and employees at the concept development stage, the next step is to determine its feasibility and potential profit implications. Demand analysis, revenue projections, cost analyses, and operational feasibility are assessed at this stage.

IMPLEMENTATION

Once the new service concept has passed all of the front end planning hurdles. It is ready for the implementation of the process

Service Development and Testing

In the development of new tangible products, this stage involves construction of product prototypes and testing for consumer acceptance. Again, because services are intangible and largely produced and consumed simultaneously, this step is difficult.

Market Testing

It is the stage of the development process that a tangible product might be marketed in a limited number of trading areas to determine marketplace acceptance of the product as well as other marketing mix variables such as promotion, pricing, and distribution system.

Commercialization

At this stage in the process, the service goes live and is introduced to the market place. This stage has two primary objectives. The first is to build and maintain acceptance of the new service among large numbers of service delivery personnel who will be responsible day to day for service quality .The second objective is to monitor all aspects of the service during introduction and through the complete service cycle. If the customer needs six months to experience the entire service, then careful monitoring must be maintained through at least six months.

Post-introduction Evaluation

At this point, the information gathered during commercialization of the service can be reviewed and changes made to the delivery process, or marketing mix variables on the basis of actual market response to the offering.

CONCLUSION

Customer Relationship Management is not all about schemes and technologies. It is the people, which is the most important factor in effective and successful CRM program implementation, because they are the ones who actually have to carry out the plans designed by the management. People need to be handled with care because there are so many factors that creep into the system of human. They need to be motivated such that they are themselves interested in their dealing with the customers and an external system for watching the activities is not at all required. The implementation of CRM program would lead to customer loyalty if and only if the organisation enjoys employee loyalty. Hence the real and the modern buzzword is *Employee Relationship Management.*

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POST - PRODUCTIVITY PERFORMANCE OF INDIAN ESOP PHARMACEUTICAL CORPORATE SECTOR

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ABSTRACT

Productivity is the key to Prosperity, to accelerate the process of economic growth and raise the standards of living of the people of a nation. Productivity improvement has become a challenging issue in fiercely competitive business world. The study has devoted efforts to measure the post-productivity performance of Indian ESOP Pharma units. The sample size for the research is to be taken ten (n = 10) ESOP Pharma companies for measuring productivity from 1st April, 2004 to 31st March, 2010 by using secondary data. The study found that the Productivity index for ten top ESOP Pharma units is not significantly changed from group average of Indian Pharma corporate sector. The post-productivity performance of 40 percent the sample size is associated with net sale whereas 30 percent the sample size is associated with total assets.

INTRODUCTION

Productivity is the key to Prosperity, which in turn is an indicator of a country's potential for economic growth in the short to medium term. Increasing productivity has to emerge as a new national priority, where the efforts of all converge to accelerate the process of economic growth and raise the standards of living of the people. The business organizations will have to improve their performance to ensure their survival and growth in a fiercely competitive world. This improvement will come about only if we focus on production of quality goods, in a cost effective manner and by generating enough surpluses to plough back into the business for further improvement in productivity. And this must occur continuously, to create an advantage in the market place, which is what productivity is all about. There were many studies conducted to measure the productivity performance of business organization world wide to impart the knowledge productivity improvement. The corporate sector world wide uses different tools/plans for raising the productivity performance through the employed talented work forces. The present paper is based on this challenge issue to provide empirical outputs for the persons/bodies those are devoted the efforts to find new ways in the business line for good productivity performance. The study would going to measure (trend) the productivity performance of ESOP (employee stock option plan) pharmaceuticals sector in India.

THE VISTA OF ESOP

Employee stock option scheme (ESOP) under which a company grants share to its employees to buy a specified number of shares at a specified prices. The rationale behind ESOP is that it will help companies to retain staff, attract talent, motivate employees and enable them to share the long-term growth of the company as well as good productivity performance. But in India, Employers used ESOPs as an effective tool to cut down attrition rates in share exchange. But after the stock market crash, most of these options have slipped under water. An ESOP invests primarily in employer stock and can own anywhere from a fraction of 1% to 100% of a company stock. An ESOP stock is held outside the company in a separate trust known as employee stock option trust. The trustee acts on behalf of, and in the best interest of, all the employee participants. It is the responsibility of the ESOP trustee to insure that the transactions are made according to the ESOP plans rules, as well as to represent the interest of ESOP participants at shareholders meetings. The next section of this paper would like to present a review of previous studies to make it more understandable and valuable for the concern units as well as the research scholars

REVIEW OF LITERATURE

In this study an attempt has been made to briefly review the work already undertaken on productivity performance of ESOP units. A brief review of selected studies has been presented in the following section.

Richard (1990) empirically revealed that share price variances increased after the approval of an executive stock option plan. An increase in stock return volatility also found with variances estimated from stock return data. The study suggested that stock option holding executives undertake more risky investment opportunities. They documented an increase in shareholder wealth surrounding the announcement of an executive stock option plan. The study found a significant negative reaction between the bond market reaction and changes in stock option plans. Derek and Takao (1993) have showed that Japanese ESOPs are pervasive and neglected institution A production function framework is used to examine the impact of various dimensions of ESOP on enterprise productivity. The study empirically estimated the effect of ESOP on corporate productivity. On average, the net effect of introducing an ESOP is to increase productivity by almost 7%. In 1988, more than 90% of all firms listed on Japanese stock workers had an ESOP and close to 50% of the labour force in firms with ESOP participated in the plan. James and Kata (1995) empirically estimated that firms enjoy a 4-5 percent increase in productivity by introducing an ESOP. The study has generated first rigorous econometric evidence for the positive role played by ESOP and the bonus system of the Japanese economy in the 1970's and 1980's. Moreover, the productivity pay off of ESOP's takes considerable time. This productivity payoff takes 3-4 years. Mehram (1999) in his longitudinal study based on a sample on 382 companies found that more than 60% of the companies recorded an increase in their stock prices in the two days following the announcement of the plan with positive abnormal returns of 1.6%. Blasi et al (2000) found that stock option companies have 17% greater productivity in a three year post plan period than would have been expected based on per plan performance relative to their industry. Their results have indicated that ESOP companies have sales growth 2.4% per year faster in the year following their ESOP adoption than would have been expected based on the match up against competitors in the pre-ESOP period. Joseph Blasi, Krure and Sesil (2002) compared the performance of corporations with and without employee's broad-based stock option plans. The study was based on 490 companies over 1992-97. The empirical study suggested that there is no systematic evidence publicity - traded corporations with broad-based stock option plus had worse performance than the larger group of publicly traded corporations that did not adopt the plans or industry group pairs regarding productivity total share holder return, return on assets. Rajesh Kumar B (2004) indicated that ESOP established in Indian firms has little effect on a firm's productivity and profitability based on accounting performance. The changes in productivity measure have shown deterioration following ESOP adoption. The study using a sample of 36 ESOP companies for two-time window. It concluded that the comparison group change in productivity is negative for the first time window of -1 to +1 year.

OBJECTIVES OF THE STUDY

The study is derived to achieve the below said objectives in order to provide empirical output in the field of productivity performance of ESOP Pharma industry in India.
To measure the post – productivity performance of ESOP Pharma industry in India.
To compare the productivity of individual ESOP Pharma unit with the Pharma industry.

HYPOTHESES OF THE STUDY

The following null hypotheses are designed to get the significant value after statistical testing of the data.

H_{01} :   The Post - Productivity performance does not significantly associate with core
        variables of ATO.

H_{02} :   ATO (Productivity measure) of individual Pharma unit does not significantly
        changed from the group average of Indian ESOP pharmaceutical sector.

RESEARCH DESIGN

The study is based to measure post – productivity performance of ESOP Pharma industry in India. The present research is opted ten (10) top pharma companies as sample size n = 10 those implemented ESOP for their employees to retain his/her talent and skills in the same company. The ten top pharma companies implemented ESOP on or after 1st April 2002 but before 31st March 2004 are included in small sample. The study took an assumption that ESOP improves the productivity performance in long period not in short period. Therefore the study is based on six (6) sessions secondary data published in annual report as well as displayed on individual website of each Pharma unit. The first session starts from 1st April, 2004 to 31st March, 2010. The list of ten top ESOP pharmaceuticals companies is given below.

Name of Company	Industry
Aurobindo Pharma Ltd	Pharma
Suven Life Sciences Ltd	Pharma
Unichem Laboratories Ltd	Pharma
Dabur India Ltd	Pharma
JB Chemicals & Pharmaceuticals Ltd	Pharma
Venus Remedies Ltd	Pharma
Cipla Ltd.	Pharma
RPG Life Sciences Ltd	Pharma
Ranbaxy Lab. Ltd.	Pharma
Dr.Reddy Lab. Ltd.	Pharma

RESEARCH VARIABLES AND TOOLS

The productivity performance can be measured through two ways in finance 1. Productivity based on strength of employee 2. Productivity based on sales volume. The easily availability of data of sale volume, the study would prefer to measure the productivity performance through sales performance under the period considered for the research i.e. six years. The study under consideration measures the productivity performance of each pharma unit with the financial tool known as Assets Turnover Ratio (ATO).

$$\text{Assets Turnover Ratio (ATO)} = \frac{\text{Net Sale}}{\text{------------------------}}$$

Total Assets

Where net sales is being calculated sales minus return inward for each sample unit and total assets is summation of fixed assets excluded investment only & current assets. The ATO is calculated for each pharma unit and same is tested with group average of industry to get empirical results by employed t – test and to know where or not the ATO of each unit is statistically significant from industry ATO. Moreover the study is also calculated Pearson coefficient of correlation between ATO and core variables (net sale & total assets). The t –test is also employed to find significant association between ATO and net sale as well as ATO and Total assets.

COMPARISON OF POST – PRODUCTIVITY PERFORMANCE OF ESOP PHAMA CORPORATE SECTOR

Table - 1
Post-Productivity (ATO) Comparison of ESOP Pharma Sector in India

| Year | Productivity Index of ESOP Pharm Sector | | | | | | | | | |
	Aurobindo	Suven	Uni. Chem.	Dabur	JB Pharma	Venus Ltd.	Cipla Ltd.	RPG Ltd.	Ranbaxy	Dr. Reddy
1 year	0.664	0.475	1.307	2.189	0.874	1.693	0.897	0.817	1.281	0.653
2 year	0.649	0.598	1.168	1.931	0.925	1.651	0.843	0.657	1.353	0.350
3 year	0.636	0.673	1.139	2.191	0.791	1.107	0.822	0.809	1.369	0.747
4 year	0.733	0.612	1.135	1.934	0.783	1.174	0.725	0.848	1.575	0.584
5 year	0.746	0.665	1.058	1.877	0.964	1.304	0.741	0.880	1.366	0.829
6 year	0.866	0.716	0.865	1.656	0.823	1.643	0.850	0.988	1.192	0.814
Avg.	0.716	0.62	1.112	1.963	0.860	1.429	0.813	0.833	1.356	0.663
t – test	-8.91	-11.81	1.37	11.24	-5.63	3.69	-7.95	-4.46	6.28	-5.00
μ (Industry Average) = 1.03										

NOT SIGNIFICANT AT ANY LEVEL OF RISK

Table – 1 shows the productivity index and their t-value of all pharma firms under consideration for the study. The industry average is 1.03 (overall average) which is test value being used for finding the significant value of ATO for all the ESOP pharma units. The t-value for Aurobindo, Suven, JB, Cipla, RPG and Dr. Reddy are – 8.91, -11.81, -5.63, -7.95, -4.46 and -5.00 respectively which lie on negative side (left) of the distribution. Thus Productivity index for Aurobindo, Suven, JB, Cipla, RPG and Dr. Reddy are not significantly changed from group average. On the other hand, t-value for Uni Chem, Dabur, Venus, Ranbaxy are 1.37, 11.24, 3.69 & 6.28 which are positive value and lie on positive side (right) of the distribution but not significant at any level of risk. Moreover the null hypothesis (H_{02}) is accepted as against alternate hypothesis that individual productivity index is changed from group average.

CORE VARIABLES AND POST-PRODUCTIVITY PERFORMANCE OF SAMPLE UNITS

The next section of the study would like to find either individual ATO of each sample unit is more associated with net sale or total assets of the firm.

Table – 2
Karl Pearson coefficient between core variables and ATO of Aurobindo Ltd.

(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	11591.7	17468.3	0.664
2 year	14722.0	22698.4	0.649
3 year	19797.2	31148.0	0.636
4 year	23511.2	32054.8	0.733
5 year	28064.4	37639.0	0.746
6 year	36513.3	42139.3	0.866
R	$R_{S \cdot P} = 0.915*$	$R_{A.P} = 0.796$	-

* Correlation is significant at 5 percent level of significance

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$R_{s.p}$ presents the coefficient of correlation between net sale and productivity whereas $R_{A.P}$ stands for association between total assets and productivity of Aurobindo Pharma Ltd. The negative correlation exists between net sale and productivity index of the firm. The coefficient of correlation between net sale and ATO is $R_{S.P} = 0.915*$ which is significant value at 5 percentage level of risk whereas $R_{A.P} = 0.796$ is non-significant correlation exists between total assets and ATO of the firm. The alternate hypothesis is accepted as against the null hypothesis (H_{01}) for net sale in comparision of total assets of Aurobindo Pharma Ltd.

Table – 3
Pearson correlation index between core variables and ATO of Suv. Sci. Ltd.
(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	594.72	1251.89	0.475
2 year	821.92	1373.76	0.598
3 year	1130.63	1681.09	0.673
4 year	1199.81	1961.04	0.612
5 year	1408.32	2117.94	0.665
6 year	1623.45	2268.65	0.716
R	$R_{S.P} = 0.914*$	$R_{A.P} = 0.824*$	-

* Correlation is significant at 5 percent level of risk

High degree positive correlation $R_{S.P} = 0.914*$ exists between net sale and ATO of the firm and is also significant at 5 percent level of risk. This means both net sale and ATO will increase simultaneously. The value of coefficient of correlation between total assets and ATO is high degree i.e. $R_{A.P} = 0.824*$ and also significant at 5 percent level of risk. Thus net sale is more correlated with ATO in comparison of total assets of the Suven Life Science Ltd in post-adoption period. The H_{01} is rejected as against alternate hypothesis that the post-productivity performance of the firm is significantly correlated with core variables.

Table – 4
Pearson correlation index between core variables and ATO of Uni Pha. Ltd.
(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	4245.61	3247.18	1.307
2 year	4777.06	4090.56	1.168
3 year	5624.13	4935.71	1.139
4 year	6841.67	6028.66	1.135
5 year	7422.10	7018.20	1.058
6 year	6838.35	7908.43	0.865
R	$R_{S.P} = 0.914*$	$R_{A.P} = 0.824*$	-

* Correlation is significant at 5 percent level of risk

The coefficient of correlation between net sale and productivity is $R_{S.P} = 0.914*$ which is high degree of positive correlation and also significant at 5 percent level of significance in post adoption period of ESOP. The coefficient of correlation between total assets and ATO is $R_{A.P} = 0.824*$ which is also positively significant at 5 percent level of risk. The null hypothesis is rejected in faviour of alternate hypothesis that post-productivity performance of Uni Chem Pharma ltd. significantly associated with core variables in post adoption period of ESOP.

Table – 5
Pearson correlation index between core variables and ATO of Dabur Ltd.
(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	4245.61	3247.18	1.307
2 year	4777.06	4090.56	1.168

3 year	5624.13	4935.71	1.139
4 year	6841.67	6028.66	1.135
5 year	7422.10	7018.20	1.058
6 year	6838.35	7908.43	0.865
R	$R_{S.P}$ = - 0.737	$R_{A.P}$ = -0.926**	-

**** Correlation is significant at 0.01 levels of risk (two-tailed)**

The coefficient of correlation between net sale and ATO of Dabur Ltd. is $R_{S.P}$ = - 0.737 which is negative moderate degree correlation but not significant at any level of risk. The total assets of the firm is also negatively associated $R_{A.P}$ = - .926** with ATO and highly significant in post-adoption period. The null hypothesis is rejected as against the alternate hypothesis that the productivity index significantly associated with total assets of the firm whereas the H_{01} is accepted for net sale.

Table - 6
Karl Pearson index between core variables and ATO of JB Pharma Ltd.

			(Rs. in millions)
Year	**Net Sale (Rs.)**	**Total Assets (Rs.)**	**Productivity (ATO)**
1 year	3580.90	4094.92	0.874
2 year	4660.07	5039.34	0.925
3 year	5314.59	6722.13	0.791
4 year	5480.94	6998.32	0.783
5 year	7231.55	7500.79	0.964
6 year	7409.70	9002.45	0.823
R	$R_{S.P}$ = 0.077	$R_{A.P}$ = -0.263	-

Not significant at any level of risk

The coefficient of correlation between net sale and productivity is $R_{S.P}$ = 0.077 which is positive low degree correlation and not significant at any level of risk. The total assets and ATO is negatively associated with each other $R_{A.P}$ = -0.263 which is low degree negative correlation. The null hypothesis is accepted that ATO does not significantly associate with core variables of the firm.

Table – 7
Pearson coefficient between core variables and ATO of Venus Pharma Ltd.

			(Rs. in millions)
Year	**Net Sale (Rs.)**	**Total Assets (Rs.)**	**Productivity (ATO)**
1 year	875.12	517.04	1.693
2 year	921.45	558.28	1.651
3 year	1447.53	1307.08	1.107
4 year	2154.35	1835.44	1.174
5 year	3145.02	2411.03	1.304
6 year	4236.12	2578.19	1.643
R	$R_{S.P}$ = -0.035	$R_{A.P}$ = -0.318	-

Not significant at any level of risk

The table – 7 shows the Pearson coefficient between net sale & ATO and total assets & ATO of Venus Pharma Ltd. The coefficient between net sale and ATO is $R_{S.P}$ = -0.035 which is low degree negative correlation existed whereas low degree negative correlation $R_{A.P}$ = -0.318 exists between total assets and productivity index. The null hypothesis is accepted as against alternate the productivity index is significantly associated with core variables of the pharma firm.

Table – 8
Pearson coefficient between core variables and ATO of Cipla Pharma Ltd.

(Rs. in millions)

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Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	2327.63	2593.91	0.897
2 year	2897.41	3435.90	0.843
3 year	3533.17	4295.94	0.822
4 year	4088.56	5638.46	0.725
5 year	5021.64	6778.38	0.741
6 year	6548.45	7705.93	0.850
R	$R_{S \cdot P}$ = -0.322	$R_{A.P}$ = -0.513	-

Not Significant at any level of Risk

The moderate negative degree correlation $R_{S \cdot P}$ **= -0.322** existed between net sale and ATO of Cipla Pharma Ltd. The change in net sale and ATO was in opposite direction from 1 year to 6 year. On the other hand, the coefficient of correlation between total assets & ATO is $R_{A.P}$ **= -0.513** which is moderate negative degree. Thus null hypothesis is accepted that post-productivity performance does not associate with core variables of the Cilpa Pharma Ltd.

Table – 9
Karl correlation index between core variables and ATO of RPG Pharma Ltd.

(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	685.90	839.40	0.817
2 year	756.56	1150.83	0.657
3 year	985.20	1218.10	0.809
4 year	1236.20	1458.03	0.848
5 year	1469.00	1669.80	0.880
6 year	1639.90	1660.50	0.988
R	$R_{S \cdot P}$ = 0.830*	$R_{A.P}$ = 0.635	-

* Correlation is significant at 0.05 levels (two-tailed)
The correlation coefficient between net sale and ATO is $R_{S \cdot P}$ = 0.830* which is positive high degree correlation. The said coefficient is also significant at 5 percent level of risk. The moderate degree of correlation $R_{A.P}$ = 0.635 exists between total assets and productivity performance of RPG Life Science Ltd. The alternate hypothesis is accepted as against null hypothesis that ATO is significantly associated with net sale of the firm in comparison of total assets.

Table – 10
Pearson index between core variables and ATO of Ranbaxy Pharma Ltd.

(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	35366.50	27610.00	1.281
2 year	40587.10	29989.10	1.353
3 year	41844.90	30557.60	1.369
4 year	43083.50	27348.00	1.575
5 year	45211.80	33093.90	1.366
6 year	47258.56	39655.25	1.192
R	$R_{S \cdot P}$ = -0.036	$R_{A.P}$ = -0.670	-

Not significant at any level of risk

The correlation coefficient between net sale and ATO is $R_{S-P} = -0.036$ which is negative low degree correlation. On the other hand, the Pearson coefficient between total assets (A) and ATO (P) is $R_{A,P} = -0.670$ which is negative moderate degree correlation but not significant t at any level of risk tested by t-test. The null hypothesis (H_{01}) is accepted in case Ranbaxy Pharma Ltd.

Table – 11
Pearson coefficient between core variables and ATO of Dr. Reddy Lab. Ltd.

(Rs. in millions)

Year	Net Sale (Rs.)	Total Assets (Rs.)	Productivity (ATO)
1 year	19126.18	29288.36	0.653
2 year	24077.20	68768.06	0.350
3 year	64185.37	85919.10	0.747
4 year	50006.00	85634.00	0.584
5 year	69441.00	83792.00	0.829
6 year	68832.50	84538.97	0.814
R	$R_{S-P} = 0.771$	$R_{A,P} = 0.267$	-

The correlation coefficient between net sale and total assets is $R_{S-P} = 0.771$ which is positive moderate degree correlation but not significant at any level of risk. On the other hand, the correlation index between total assets and ATO is $R_{A,P} = 0.267$ which is also positive moderate degree correlation. The null hypothesis (H_{01}) is also accepted in case Dr. Reddy Labs. Ltd.

CONCLUSION

Productivity index for ten top ESOP Pharma is not significantly changed from group average at any level of risk. Moreover the null hypothesis (H_{02}) is accepted as against alternate hypothesis that individual productivity index is changed from group average. High degree coefficient of correlation between net sale and ATO is $R_{S-P} = 0.915*$ and $R_{A,P} = 0.824*$ which are also significant value at 5 percentage level of risk for Aurobindo Pharma Ltd and Suven Sci. Ltd. respectively. Thus the alternate hypothesis is accepted as against the null hypothesis (H_{01}) for net sale in comparison of total assets of Aurobindo Pharma Ltd. Ltd. and Suven Sci. Ltd. The coefficient of correlation between total assets and ATO is $R_{A,P} = 0.824*$ which is also positively significant at 5 percent level of risk for Uni Chem Pharma ltd. The null hypothesis is rejected in favour of alternate hypothesis that post-productivity performance of Uni Chem Pharma ltd. is significantly associated with core variables in post adoption period of ESOP. The null hypothesis is accepted for Dabur Pharma Ltd. as against the alternate hypothesis that the productivity index significantly associated with net sale of the firm whereas the alternate hypothesis is accepted for total assets. The null hypothesis is accepted that ATO does not significantly associate with core variables of the JB Pharma Ltd, Venus Pharma firm and Cilpa Pharma Ltd. High degree correlation coefficient between net sale and ATO is $R_{S-P} = 0.830*$ for RPG Pharma Ltd. The alternate hypothesis is accepted as against null hypothesis that ATO is significantly associated with net sale of the firm in comparison of total assets. The null hypothesis (H_{01}) is accepted in case Ranbaxy Pharma Ltd. and Dr. Reddy Labs. Ltd those post-productivity performances of both the companies are not significantly associated with the core variables.

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FINANCIAL INCLUSION: OLD WINE IN NEW BOTTLE

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ABSTRACT

Government and finance ministry is working hard for financial inclusion in the country. Basically financial inclusion is related with the delivery of financial services at an affordable cost to vast sections of low income groups which includes savings, credit, insurance, and remittance facilities. This article critically examines the efforts and role of government in financial inclusion as it is not a new project. Providing a financial service to low income group and channelizing them to main stream of country's financial system remains an important agenda of government. Earlier also government launched various schemes like Prime Minister Employment Scheme, priority sector advance, etc. for the up- liftment of these people but due to poor implementation at the ground level could not achieve desired success. Now the government is trying to revive the same under the new banner called Financial Inclusion. This article is an effort to elaborate the Motive, Problems & Suggestions.

KEYWORDS
Financial Inclusion, Financial Services, Financial System, Microfinance.

INTRODUCTION
"Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost." It is the buzz word today. Every second day we find a headline in newspaper related to financial inclusion. RBI and Finance Ministry are very keen towards financial inclusion. Even finance ministry has announced to launch financial inclusion index this year.

Basically financial inclusion means providing access to financial services such as payments, savings, insurance etc. at an affordable cost, to low income group and weaker section of society, who are not using banking and financial services through organized channel.

Banks act as mobilizers of public saving. They channelize the funds in organized way. The people, who have surplus with them, put their money with banks and banks lend these surpluses to those who need it. Banks also facilitate people to route their business and financial transactions through banks, which helps in efficient management and flow of funds throughout the country.

As per available data, 66% of Indian people are not using financial services through organized sector. They borrow from local vendors at unfavorable conditions in times of need and also disburse their surplus in unorganized way (like there are some local agents who run some schemes often called kametis or chit funds in which a group of 12-20 people pay some fixed amount every month depending upon the number of members). If the members are businessman they bid for the kitty every month and the highest bidder takes the money. Sometimes it is merely a lottery system in which the names are chosen through lottery and the member chosen through lottery gets discounted amount of the kitty. These systems have their own merits and demerits. The major drawbacks of these systems are: These are quite risky and the returns are unsystematic and inadequate.

The key purpose of financial inclusion is to bring these unorganized people into the mainstream of country's financial system, so as to get these funds into the system and provide due benefits to the investors. Banks being regulated by the government regulations and controlled by the Central Bank of the country have to keep caution and their uttermost priority is the security of the deposits placed by the depositors whereas money with local agents is always at the risk of not only loosing the interest but even the capital. Further the interest rates on credits provided by the banks are comparatively low and planned (EMIs).

Banks market customized products according to the needs of the customers like loan for small & rural businesses, housing loans, personal loans, child future plans, pension plans etc. Banks also provide extra benefits with accounts like insurance plans and risk covers. The return on the deposits are fixed which helps the customers in future planning and if required the depositor can take loan against their deposits by paying a marginal higher rate of interest in case of need, without breaking the deposit. This loan can be repaid as and when the depositor gets the money or can be adjusted at the time of final maturity. In case of emergency the deposits can be broken and taken away with a nominal loss in interest.

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But in spite of all these rural and uneducated people hesitate to go to the banks because of certain difficulties remarkably, the complex procedures and formalities for opening of accounts, and the non-cooperation of bank officials. The biggest difficulty faced by the borrowers is the requirement of collaterals for availing loan facility.

REVIEW OF LITERATURE

So far researchers have carried out a little work on the prospectus and problems of Financial Inclusion in India, but the suggestions based on the Theories/Material Published/Development so far are mentioned hereunder:

- Fed Governor, Frederick Mishkin in his JMCB-FDIC Lecture presented at the FDIC, Washington, D.C. on September 22, 2005 said "The importance of finance to economic growth has also frequently been ignored by economists.
- The leading textbook on economic growth, Weill (2005) does not discuss the link between finance and growth at all.
- In initial finance theories like Modgillani Miller theorems and Efficient Market Hypothesis (developed by Eugene Fama and Kenneth French) were based on the assumption that markets are perfect and there are no frictions. But if these theories were correct then there was very little reason for financial markets to exist. However, later development showed that there were imperfections in the financial market and how various financial entities led to reduction of these imperfections.
- Rangarajan Committee, 2008, "Report of the Committee on Financial Inclusion", Committee Report.
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WHY IS FINANCIAL INCLUSION IMPORTANT?

Financial inclusion is important to divert the funds from unorganized financial sector to productive organized sector. The surplus money if infused in the system can give risk free returns and to channelize these funds to those who can put it to productive use and encash the available opportunities as such helping the economy to grow. On the other hand, low income groups and weaker section of society can be provided the credit facility to uplift their living conditions. There are many government schemes providing subsidies for the benefit of the rural and unorganized poor strata of the society. But it is very difficult to implement these schemes in absence of proper distribution channels. Another important sector, of which the benefits have still not reached to this section of society, is the insurance sector.

PREVIOUS EFFORTS MADE BY GOVERNMENT

The phenomenon of Financial Inclusion is not new in India. Government had initiated several schemes to streamline the financial markets i.e. converting them from unorganized to organize. Various schemes were initiated like priority sector advances, providing easy loans in rural areas to buy cattle, for agriculture purposes, poultry, handicrafts, Scheme for unemployed educated youth to establish their own business etc. Government also encouraged cooperative societies, established specific financial institutions for sectoral developments i.e NABARD, SIDBI, Bhoomi Vikas Banks etc., All these efforts did not give the desired results due to poor implementation. The plans were really good and their purpose to benefit the lower sections was also very pious, but all these went in vain due to poor implementations.

THE MAJOR REASONS BEHIND THE FAILURE OF THESE SCHEMES WERE

Firstly, the employees at the implementation level were not motivated enough to implement these schemes. Government developed these schemes to increase their vote bank and through RBI, tried to implement the schemes that in turn imposed them on banks by giving them specific targets and linking the same with new branch licences. The banks, in order to achieve their targets, forced the staff at these places to implement these schemes. The employees who were posted in rural areas who already considered their posting as a punishment did not take much interest in disbursing and monitoring these schemes. These Employees had no motivation factor working in rural areas, so they just wanted to kill their time and wait to complete their rural posting so that they could get a transfer to an urban city.

Secondly, the employees worked under pressure. They had to achieve the targets, so they just disbursed the loan by misguiding the people that they will get subsidy from the government and there was no need to repay these loans. They did not bother to educate people about the benefits of the scheme i.e. to plan the financials, efficient use of loans, plan the repayments and encouragement for small savings. They did not blend the social values in their working.

Thirdly, the corruption was another reason. Rural and low income people are illiterate. In lack of knowledge and awareness, the government agencies in connivance with bank officials took the advantage. They took loan by using their name and use for personal purposes; the schemes were implemented only in papers.

Additionally, the repayment was very poor. People were unable to pay their debts due to bad management of loans. For example, agriculture loans were used for personal purposes like marriages etc. then the farmers were unable to pay and it lead to suicides. Banks did not show any interest to provide them adequate knowledge about the financial management. Also the products and services were not suitable to the needs of people.

Lastly, people did not have collateral security to provide against these loans. No alternative was evolved to cover the risk of banks money. Banks stick to their policy of providing loans based on collaterals. So in absence of collaterals people could not be benefited from these government schemes.

REASONS BEHIND GOVERNMENT INTEREST TOWARDS FINANCIAL INCLUSION

RBI and Finance ministry are very keen regarding financial inclusion. Finance Ministry assigns targets to various banks to open the bank accounts of people. Banks are opening "no-frill accounts" with minimum or zero balance. Now question is that what makes government think about the financial inclusion at high pace. The major motivation behind this is success stories of microfinance institutions. The microfinance institutions play a vital role to provide small loans to rural and low income groups. In spite of the fact that they charge a very high interest rate, they have shown remarkable profits and growth in client base in very short time span. More and more people and financial institutions are getting attracted towards the financial inclusion or microfinance. The success stories of the microfinance institutions like SKS Microfinance have opened the eyes of RBI and finance ministry. The area which had always been considered as an expenditure and burden for government has

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been proved milk giving cow for microfinance institutions. Many microfinance institutions which had started their operations as NGOs, converted to NBFC's have a large client base and earning handsome profits with complete safety of their money.

For example SKS Microfinance, India's first biggest Microfinance Institution started by Vikram Akula, an IIT'ian in the year 1997 as NGO, converted it into NBFC in the year 2005, is coming with its IPO worth INR 1658 crore this year, working in 16 states, having branches in 340 districts, has 1627 centers, 5.3 million clients, total loan disbursement INR 32,319 million, total portfolio outstanding INR 32,080 millions, has shown INR 556 million profits, has total assets INR 36,435 million till September 2009.(Data source www.sksmicrofinance.com)

What SKS Microfinance did differently to convert the expenditure & burden to milk giving cow? The credit goes to better implementation strategies, understanding the needs of the people and implementing the schemes in well planned and systematic way. They adopt a village, train people to efficiently use the loans, help them to start small businesses. They have efficient weekly collection system, along with better risk hedging strategies like joint liability groups. Therefore they have excellent repayment record and hence able to get good returns.

Success of these microfinance institutions gave insight to government that if these MFIs earning profits out of rags then why not banks.

GOVERNMENT IS MAKING A MISTAKE AGAIN

However government is motivated enough for financial inclusion, finance ministry as well as RBI are planning for the implementation of financial inclusion. However they have not learnt lesson from the previous failures. If finance ministry wants 100% financial inclusion it has to look upon the working of microfinance institutions. It has to apply various strategies for successful implementation of its plans. It has to make policies for ground level activities and need strong controlling and monitoring strategies so that the project does not loose its motive. Finance ministry is thinking to include local kirana stores as their agents, but again it needs an effective controlling and monitoring system so that the owners of these kirana store holders can effectively transfer the benefits to the people and also insure that they do not cheat the people due to their illiteracy and unawareness.

SUGGESTIONS

The following prerequisites are certain to give a big boost to Financial Inclusion in India such as:

- The main emphasis is here to impart the financial awareness among people so that they can themselves take decisions and the agents, local vendors, bank officials can not take advantage of them and help in delivering the benefits to them which they deserve and made especially for them.

- As finance ministry going to take the help of local kirana stores, in addition to that government can take the help of Postal Department because it has a strong network throughout the rural areas of India as well as it is already have some financial products like savings and insurance products, through which it is serving low income groups and rural societies. As Bancassurance is a collective effort of insurance department and banks through which banks are distributing insurance products, similarly there should be collaboration between post offices and banks so that post offices can distribute banks products.

- Additionally government can emphasized financial inclusion through its existing systems. Government can restructure cooperative societies and self help groups and impart more efficient controlling and monitoring system so that they can come out with desired results.

- Also, banks should have enough motivational incentives for the employees who are working in rural areas. Banks also recognize those employees, who have high need of achievement and reorganization derive in them and send them to rural areas with targets and should reward appropriately, so that employees take it as challenge rather than punishment to work in rural areas.

CONCLUSION

Since there has been numerous research analyzing how financial systems help in developing economies. This research has not just looked at how finance inclusion helps economic activity but also social aspects like Employment, poverty, hunger etc. Like any research on a particular topic, the findings have been diverse and the consensus is that finance helps but the magnitude of impact differs. Also research provide the way to give a big boost to Financial Inclusion in India.

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WORKING CAPITAL MANAGEMENT AND PROFITABILITY – CASE OF INDIAN PETROCHEMICALS COMPANY- RIL, HPCL, GAIL

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ABSTRACT

Working Capital Management has its effect on profitability of the firm. In this research, we have selected a sample of 3 firms from Petrochemical industry for a period of 5 years from 2004 – 2009, we have studied the effect of different variables of working capital management including the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle (CCC) and Current ratio on the Gross operating profitability of the firms.. Pearson's correlation and linear regression t-test are used for analysis. The results show that there is a strong negative relationship between variables of the working capital management (CCC) and profitability of the firm. It means that as the cash conversion cycle increases it will lead to decreasing profitability of the firm, and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. We find that there is a significant negative relationship between liquidity and profitability. We also find that there is a negative relationship between net working capital of the firm and its profitability.

KEY WORDS

Cash Conversion Cycle, Gross operating Profitability, Liquidity, Working Capital Management.

INTRODUCTION

Maintaining the smooth and continuous flow of organization is the challenging task for each organization, for this management needs the availability of each and every component of 4M i.e. Man, Machine, Money and Material. Day to day management of these four components is known as "WORKING CAPITAL MANAGEMENT". Working capital management is an important activity for any organization as it maintains the continuous flow. Purchase of fixed assets decisions are taken once and it continues for a longer period of time but the decisions relating to the working capital are taken on each day based on the circumstances. Working capital is very important component of corporate finance because it directly affects the liquidity and profitability of the company. Working capital is the base for any organization especially for manufacturing organization.

Excessive levels of current assets can easily result in a firm's realizing a substandard return on investment. However firms with too few current assets may incur shortages and difficulties in maintaining smooth operations (Horne and Wachowicz, 2000) The Working Capital Management of a firm in part affects its profitability. The ultimate objective of any firm is to maximize the profit. But, preserving liquidity of the firm is an important objective too

The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Therefore, there must be a trade off between these two objectives of the firms. One objective should not be at cost of the other because both have their importance. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy. For these reasons working capital management should be given proper consideration and will ultimately affect the profitability of the firm.

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 the one hand and avoid excessive investment in these assets on the other hand (Eljelly, 2004). Many surveys have indicated that managers spend considerable time on day-to-day problems that involve working capital decisions. One reason for this is that current assets are short-lived investments that are continually being converted into other asset types (Rao 1989). With regard to current liabilities, the firm is responsible for paying these obligations on a timely basis. Liquidity for the on going firm is not reliant on the liquidation value of its assets, but rather on the operating cash flows generated by those assets (Soenen, 1993).

Current assets include all those assets that in the normal course of business return to the form of cash within a short period of time, ordinarily within a year and such temporary investment as may be readily converted into cash upon need. Firms may have an optimal level of working capital that maximizes their value. Large inventory and a generous trade credit policy may lead to high sales. Larger inventory reduces the risk

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of a stock-out. Trade credit may stimulate sales because it allows customers to assess product quality before paying (Long, Maltiz and Ravid, 1993, and Deloof and Jegers, 1996). Another component of working capital is accounts payable. Delaying payments to suppliers allows a firm to assess the quality of bought products, and can be an inexpensive and flexible source of financing for the firm. On the other hand, late payment of invoices can be very costly if the firm is offered a discount for early payment. A popular measure of Working Capital Management (WCM) is the cash conversion cycle, i.e. the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished goods. The longer this time lag, the larger the investment in working capital (Deloof 2003). A longer cash conversion cycle might increase profitability because it leads to higher sales. However, corporate profitability might also decrease with the cash conversion cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories and/or granting more trade credit to customers.

LITERATURE REVIEW

Many researchers have studied working capital from different views and in different environments. The following ones were very interesting and useful for our research:

Raheman & Nasr , (2007) the Paper focus on Working Capital Management has its effect on liquidity as well on profitability of the firm. In this research, a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years from 1999 – 2004 was taken, studied the effect of different variables of working capital management including the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio on the Net operating profitability of Pakistani firms. Debt ratio, size of the firm (measured in terms of natural logarithm of sales) and financial assets to total assets ratio have been used as control variables. Pearson's correlation, and regression analysis (Pooled least square and general least square with cross section weight models) are used for analysis. The results show that there is a strong negative relationship between variables of the working capital management and profitability of the firm. It means that as the cash conversion cycle increases it will lead to decreasing profitability of the firm, and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. The study finds that there is a significant negative relationship between liquidity and profitability. The study also found that there is a positive relationship between size of the firm and its profitability. There is also a significant negative relationship between debt used by the firm and its profitability

Eljelly, (2004) elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short-term obligations and avoids excessive investment in these assets. The relation between profitability and liquidity was examined, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affects profitability. The size variable was found to have significant effect on profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in the Saudi sample examined. Second, the study also revealed that there was great variation among industries with respect to the significant measure of liquidity.

Deloof, Marc (2003) The relation between working capital management and corporate profitability is investigated for a sample of 1,009 large Belgian non-financial firms for the 1992-1996 period. Trade credit policy and inventory policy are measured by number of days accounts receivable, accounts payable and inventories, and the cash conversion cycle is used as a comprehensive measure of working capital management. The results suggest that managers can increase corporate profitability by reducing the number of days accounts receivable and inventories. Less profitable firms wait longer to pay their bills.

Ghosh and Maji, (2003) in this paper made an attempt to examine the efficiency of working capital management of the Indian cement companies during 1992 – 1993 to 2001 – 2002. For measuring the efficiency of working capital management, performance, utilization, and overall efficiency indices were calculated instead of using some common working capital management ratios. Setting industry norms as target-efficiency levels of the individual firms, this paper also tested the speed of achieving that target level of efficiency by an individual firm during the period of study. Findings of the study indicated that the Indian Cement Industry as a whole did not perform remarkably well during this period.

Singh, (2000) study on working capital in Lupin laboratories Ltd., attempted to assess the significance of management of working capital through working capital ratio and operating cycle. Having analyzed seven years data (1995-2002), he concluded that the liquidity position of the company was good, mean percentage of current assets was very high when compared to the percentage of net fixed assets and the operating cycle showed declining trend. The element –wise analysis of working capital also revealed that trade debtors constituted the highest percentage of current assets followed by loans and advances, inventories and cash and bank balances. The study brought out the need for efficient management of debtors, the percentage of which was the highest.

METHODOLOGY

The purpose of this research is to contribute towards a very important aspect of financial management known as working capital management with reference to RIL, HPCL, and GAIL Petrochemical companies. The relationship between working capital management components and its affects on profitability of three companies for a five years from *2004 – 2009*. Objective behind selecting these three companies is there are very few companies which able to maintain its existence and growth in the petrochemical industry in India, due to high entry barriers and low growth rate of this sector. These three companies are similar in case of producing the products and the same we have selected these companies
and growth rate is also best in the industry.

OBJECTIVES

- To study the impact of "Working Capital Management" on Profitability of the "RIL", "HPCL" & "GAIL".
- To find out impact of different components of Working Capital (CCC) on Profitability."
- To establish a relationship between Liquidity & Profitability of "RIL", "HPCL" & "GAIL".

DATA SET & SAMPLE

The data used in this study was acquired from companies website for a period of five years from 2004- 2009.

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VARIABLES

Choice of the variables is influenced by the previous studies on working capital management. All the variables stated below have been used to test the hypotheses of our study. They include dependent, independent variables:

Gross Operating Profit (GOP) which is a measure of Profitability of the firm is used as dependant variable. It is defined as Operating Income plus depreciation, and divided by total assets minus financial assets.

Average Collection Period (ACP) used as proxy for the Collection Policy is an independent variable. It is calculated by dividing account receivable by sales and multiplying the result by 365 (number of days in a year)

Inventory turnover in days (ITID) used as proxy for the Inventory Policy is also an independent variable. It is calculated by dividing inventory by cost of goods sold and multiplying with 365 days.

Average Payment Period (APP) used as proxy for the Payment Policy is also an independent variable. It is calculated by dividing accounts payable by purchases and multiplying the result by 365.

The Cash Conversion Cycle (CCC) used as a comprehensive measure of working capital management is another independent variable, and is measured by adding Average Collection Period with Inventory Turnover in Days and deducting Average Payment Period.

Current Ratio (CR) which is a traditional measure of liquidity is calculated by dividing current assets by current liabilities.

Hypothesis testing formula (calculation done using Excel)

Regression :

$$b_{yx} = \frac{N \in dxdy - \in dx \in dy}{N \in dx^2 - (\in d_x)^2}$$

Correlation:

$$r = \frac{N \in dxdy - \in dx \in dy}{\sqrt{N \in dx^2 - (\in d_x)^2} \sqrt{N \in dy^2 - (\in d_y)^2}}$$

T – test:

$$t = \frac{b_{xy}}{Standard\ Error}$$

HYPOTHESIS TESTING

Since the objective of this study is to examine the relationship between profitability and working capital management, the study makes a set of testable hypothesis {the Null Hypotheses H0 versus the Alternative ones H1}. Correlation and Linear Regression T-test is been done to conduct analysis.

Hypothesis 1
H01 : There is no significance relationship between net working capital & profitability of "RIL", "HPCL" & "GAIL".
H11 : There is negative relationship between Net Working Capital & Profitability of RIL", "HPCL" & "GAIL".

Hypothesis 2
H02 : There is no significance relationship between Components of Net working capital (Cash Conversion Cycle) & Profitability of "RIL", "HPCL" & "GAIL".
H12 : There is negative relationship between Components of Net Working Capital (Cash Conversion Cycle) & Profitability of RIL", "HPCL" & "GAIL".

Hypothesis 3
H03 : There is no significance relationship between the Liquidity & Profitability of "RIL", "HPCL" & "GAIL".
H13 : There is negative relationship between the Liquidity & Profitability of RIL", "HPCL" & "GAIL".

DATA ANALYSIS
Pearson's Correlation Coefficient Analysis
Pearson's Correlation analysis is used for data to see the relationship between variables such as those between working capital management and profitability. If efficient working capital management increases profitability, one should expect a negative relationship between the measures of working capital management and profitability variable. There is a negative relationship between gross profitability on the one hand and the measures of working capital management on the other hand. This is consistent with the view that the time lag between expenditure for purchases of raw material and the collection of sales of finished goods can be too long, and that decreasing this time lag increases profitability.

Table 1 Pearson correlation coefficients for variables considered.

Correlation (r)	RIL	HPCL	GAIL	Overall
GOI – NWC				
	(0.688)	(0.670)	(0.458)	(0.505)

GOI – CCC				
	0.724	(0.899)	0.757	(0.280)
GOI – CR				
	(0.258)	(0.624)	(0.760)	(0.273)

Source: Annual Report of the RIL , HPCL, GAIL 2004-09

Correlation results between the Net working capital and gross operating profit. The result of correlation analysis shows a negative coefficient – 0.688, - 0.670, -0.458 (Table 1) respectively, It indicates that the result is highly significant at ά. = 5%, and that if the NWC increases it will have a negative impact on the profitability and it will decrease. Correlation results between current ratio a measure of liquidity and the Gross operating Profit also indicate the same type of result. The correlation coefficient is – 0.258, - 0.624, - 0.760 respectively. This again shows that the result is highly significant ά. = 5%. It indicates that if the firm increase more liquidity it will adversely affect its profitability. So, there is a need of trade-off between liquidity and profitability. The cash conversion cycle which is a comprehensive measure of working capital management also has a negative coefficient – 0.624 in HPCL. It is significant at ά. = 5%. It means that if the firm is able to decrease this time period known as cash conversion cycle, it can increase its profitability, whereas for RIL and GAIL shows positive correlation coefficient 0.724 and 0.757 respectively, it is significant at ά. = 5%.. It means that firms are able to manage its working capital components effectively.

Overall Correlation results between the NWC and gross operating profit is - 0.505 means if the current assets and current liabilities are managed in a proper manner as a whole in petrochemical industry increase the Profitability. Correlation results between the CCC and gross operating profit is - 0.280 it means that if the firms in petrochemical industry are able to decrease this time period known as cash conversion cycle, it can increase its profitability. Correlation results between current ratio a measure of liquidity and the Gross operating Profit also indicate the same type of result – 0.273 focusing on decrease in liquidity increases the profitability of the companies.

LINEAR REGRESSION T-TEST ANALYSIS

Table 2 Linear regression t-test between GOI and NWC for RIL, HPCL, GAIL

GOI - NWC	RIL	HPCL	GAIL
R	(0.688)	(0.670)	(0.458)
Byx	-0.0000105	-0.0000471	-0.0000563
SE	0.066019	0.121155	0.071778
T – value	-0.0001588	-0.0003887	-0.0007837

Source: Annual Report of the RIL , HPCL, GAIL 2004-09

As the t- value for each company is less than P-Value (0.05), alternate hypothesis is accepted (Table 2). It states that there is negative relationship between networking capital & profitability of "RIL", "HPCL", & "GAIL".

Table 3 linear regression t-test between GOI and CCC for RIL, HPCL, GAIL

GOI – CCC	RIL	HPCL	GAIL
R	0.724	-0.899	0.757
Byx	0.005783	-0.037546	0.00318
SE	0.063	0.072	0.053
T – value	0.092	-0.524	0.060

Source: Annual Report of the RIL , HPCL, GAIL 2004-09

As the t-value for HPCL Company is less than P-Value (0.05), alternate hypothesis is accepted (Table 3). It states that there is negative relationship between CCC & profitability of "HPCL", and t-value is greater than 0.05 for "RIL" & "GAIL", it means there is no impact of CCC on Profitability, as null hypothesis accepted.

Table 4 linear regression t-test between GOI and CR for RIL, HPCL, GAIL

GOI – CR	RIL	HPCL	GAIL
R	-0.258	-0.624	-0.760
Byx	-0.206739	-0.652818	-0.604323
SE	0.0879	0.127485	0.052462

T – value	-2.35198	-5.12075	-11.5192

Source: Annual Report of the RIL , HPCL, GAIL 2004-09

As the t-value for each company is less than P-Value (0.05), alternate hypothesis is accepted (Table 4). It states that there is negative relationship between Liquidity & Profitability of RIL", "HPCL", & "GAIL".

Table 5 linear regression t-test between GOI and NWC, CCC and CR overall for RIL, HPCL, GAIL as petrochemical industry

Regression t -test for GOI	NWC	CCC	CR
SLOPE	-0.0000125	-0.0017596	-0.2816624
SE	0.0997647	0.1111978	0.1109631
R	-0.5050860	-0.2731307	-0.2801843
t – value	-0.0000125	-0.0158237	-2.5383438

Source: Annual Report of the RIL , HPCL, GAIL 2004-09

As the t-value for each company is less than P-Value (0.05), all alternate hypotheses i.e. H11, H12, and H13 are accepted (Table 5). It states that there is negative relationship between petrochemical company's Net working capital, cash conversion cycle, Liquidity towards Profitability.

CONCLUSION

By analyzing the results we conclude that if the firm is able to reduce these time periods, then the firm is efficient in managing working capital. This efficiency will lead to increasing its profitability. We found a strong negative relationship between the measures of working capital management including the average collection period, inventory turnover in days, and average payment period and cash conversion cycle with corporate profitability. On basis of the above analysis we may further conclude that these results can be further strengthened if the firms manage their working capital in more efficient ways. Management of working capital means "management of current assets and current liabilities, and financing these current assets". If these firms properly manage their cash, accounts receivables and inventories in a proper way, this will ultimately increase profitability of these companies.

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APPENDIX

Appendix 1 – Five year data of GOI, NWC, CCC, CR of RIL, HPCL, GAIL

Year	Companies	GOI (%)	NWC (RS Corer	CCC (days)	C.R (%)
2004-05	RIL	0.288	3149.150	-3.133	1.146
2005-06		0.311	4352.930	8.393	1.168
2006-07		0.270	12522.700	1.593	1.389
2007-08		0.134	10622.380	-18.012	1.233
2008-09		0.165	15011.240	1.187	1.291
2004-05	HPCL	0.456	1138.880	-7.479	1.135
2005-06		0.155	1670.650	0.659	1.177

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2006-07		0.290	-75.690	-4.479	0.994
2007-08		0.086	5267.710	-0.712	1.370
2008-09		0.254	2633.510	-5.470	1.193
2004-05		0.466	1684.600	-15.778	1.180
2005-06	Gail	0.397	2274.950	-17.254	1.215
2006-07		0.291	1875.610	-49.364	1.316
2007-08		0.336	3029.920	-48.216	1.404
2008-09		0.320	2755.840	-23.809	1.286

Source: Annual Report of the RIL, HPCL, GAIL 2004-09

RELATIONSHIP BETWEEN FII & SENSEX (JANUARY 2007-DECEMBER 2009)

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ABSTRACT

Globalization had led to widespread liberalization and implementation of financial market reforms in many countries, mainly focusing on integrating the financial markets with the global markets. Capital Market has also undergone metamorphic reforms in the past few years, which has led to an increase in the foreign portfolio investments flowing to the Indian markets. A significant part of these portfolio flows to India comes in the form of Foreign Institutional Investors' (FIIs') investments, mostly in equities.

In this paper, an attempt has been made to determine the relationship between FII flows and the SENSEX returns in India with a closer look at the issue of causality. The coefficient correlation is used to establish the relationship between FII and SENSEX from January 2007 to December 2009. Then Correllogram and Unit root test are applied to find out, whether the given time series is stationery or not. Lastly a cause and effect relationship is established between FII and SENSEX returns by using granger causality test.

Thus the study ends with a conclusion which allows the readers to understand the cause and effect relationship between FII and BSE. It will be beneficial for the foreign and Indian investors in decision making with regards to investment in India. It can also help the policy makers to understand the importance of FII and to improve the policy and procedures for FII Coming to India.

KEYWORDS

Foreign Institutional Investors, SENSEX, Granger Causality test.

INTRODUCTION

Globalization had led to widespread liberalization and implementation of financial market reforms in many countries, mainly focusing on integrating the financial markets with the global markets. Indian Capital Market has also undergone metamorphic reforms in the past few years. Every segment of Indian Capital Market viz primary and secondary markets, derivatives, institutional investment and market intermediation has experienced impact of these changes which has significantly improved the transparency, efficiency and integration of Indian market with the global markets.

This is one of the prime reasons why the foreign portfolio investments have been increasingly flowing into the Indian markets. A significant part of these portfolio flows to India comes in the form of Foreign Institutional Investors' (FIIs') investments, mostly in equities. Ever since the opening of the Indian equity markets to foreigners, FII net investments have steadily grown.

The growth of the equity market in India has been phenomenal in the present decade. Right from early nineties, the stock market witnessed heightened activity in terms of various bull and bear runs. SENSEX has captured all these happenings in the most judicious manner. One can identify the booms and busts of the Indian equity market through SENSEX. As the oldest index in the country, it provides the time series data over a fairly long period of time (from 1979 onwards). Small wonder, the SENSEX has become one of the most prominent brands in the country. Rise and fall of the markets is part of normal economic activity in any market. But 'crash' of the markets is quite different from routine 'fall'. Recession and capital markets have some cause and effect relationship and it may be extremely difficult to establish as to which one of the two is responsible for the other. In fact, both the economic phenomena supplement each other.

But more than that is the factor of human psychology that is responsible for the crash. As per economic theory, the economic systems grow with cyclical fluctuations when every recession is followed by recovery and up-swing of the economy, to be again backed by the recessionary tendencies. The only thing not known is the time of the switch. All investors love the ideal situation and pray for the bullish trends in the markets. But the collective attitude of the society undergoes change during the bullish times and people wishfully hope that the markets would continue growing for all times to come.

The investments are made with this attitude and hope. But the bearish trends are inevitable at such a stage, as the economic cycle has to take full turn. Several economic factors play a major role in determining the timing of the downward trend to begin.

➢ **Liquidity position in the economy**

- ➤ **Effective demand**
- ➤ **Interest rates**
- ➤ **Money supply**
- ➤ **Inflation rate and**
- ➤ **Overall global economic situation**

The rest of the paper is organized as follows: Section 2 presents the snapshot on FII and its trend in India, Section 3 discusses the data and methodology being employed. Section 4 summarizes the findings and interprets the results. Section 5 concludes.

INCREASING TREND OF FII IN INDIA

FII is used to denote an investor - mostly of the form of an institution or entity, which invests money in the financial markets of a country different from the one where in the institution or entity was originally incorporated.FII investment is frequently referred to as hot money for the reason that it can leave the country at the same speed at which it comes in. SEBI have prescribed norms to register FIIs and also to regulate such investments flowing in through FIIs.

FIIs are more than just money. These investments are non- debt creating flows, also a reason why Indian policy makers sought to liberalize such flows in the wake of the BOP crisis. Theoretically, FII investments bring in global liquidity into the equity markets and raise the price-earning ratio and thereby reduce the cost of capital domestically. FII inflows help supplement domestic savings and smoothen inter-temporal consumption.

Studies indicate a positive relationship between portfolio flows and the growth performance of an economy, though such specific studies for India were not found. India, in the recent past few years seems to have received a disproportionately large part of its foreign investment flows via the FII investments in the equity markets.

The large build-up of foreign exchange reserves through FII inflows poses a potential threat of destabilization of the economy. Portfolio flows are most often referred to as "hot money" that can be notoriously volatile when compared to other forms of capital flows. The Mexican crisis and the East Asian crisis are classic examples of the damage that sudden outflows of portfolio money can do to an economy.

Without immediately implicating any significant withdrawal of funds out of India of crisis precipitating proportions, it needs to be noted that outflows of FII capital from the market could adversely impact the value of the Indian currency, as FII inflows form the most significant part of foreign inflows into the economy.

There is likely to be a break in the growth momentum of the Indian economy if FII inflows significantly slow down. This is because a large extent of buoyancy in consumption was possible due to the positive wealth effects of a booming stock market and a decline in the interest rates due to a large overhang of rupee liquidity in the system (also a by-product of large FII inflows over the last few years).

Therefore, if FII inflows were to slow down, it will reduce the wealth generated by the stock market, the Indian currency will depreciate and RBI will have to draw down on the foreign exchange reserves or hike interest rates to prevent wild swings in the exchange rate. But, certainly foreign institutional investors have gained a significant role in Indian capital markets. Availability of foreign capital depends on many firm specific factors other than economic development of the country.

Foreign portfolio inflows through FIIs, in India, are important from the policy perspective, especially when the country has emerged as one of the most attractive investment destinations in Asia.

With the emerging market crises of the late 1990s, the role of Foreign Portfolio Investment (FPI) and the major players therein i.e. the foreign institutional investors (FIIs) has come under intense scrutiny by academics as well as policymakers.

OBJECTIVE OF STUDY

To determine the relationship between FII returns and Sensex returns from the year 2007 to 2009.
To find out, whether the given time series of FII and Sensex returns is stationery or not
To establish a Cause and effect relationship between FII and Sensex returns and conclude whether FII causes Sensex returns or viceversa.

METHODOLOGY

To find out the relationship between FII and Sensex returns, Coefficient correlation is used.
In order to determine whether the time series is stationery or not, Correlogram and Unit root test is applied.
 Granger causality test is used to prove cause and effect relationship between FII returns and Sensex..

BENEFIT OF THE STUDY

This study will be beneficial to the foreign and Indian investors in decision making with regards to investment in India.

DATA COLLECTION TOOLS

Secondary data collection methods have been used in the research through sources such as internet, journals, and newspapers have been referred. Various Statistical tools have been used for analysis like MINITAB 15, GRETL, E VIEW, and Microsoft EXCEL 2007 for the study.

In order to achieve all the above mentioned objectives, month end data of FII and SENSEX have been used from 01/01/2007 to 31/12/2009, which are further converted into % returns for better analyses, so the total number of observations are 36, The above time period was considered because Indian stock markets witnessed an unprecedented rise in trading volumes during this time span because of very high volatility which resulted into stock market crash all around the world.

FII flows, measured in terms of the net investment by foreign institutional investors in Rupees million, available from the monthly bulletin of Securities and Exchange Board of India (SEBI) and BSE closing index returns from the Bombay Stock Exchange of India (BSE) have been used for the analysis.

ANALYSIS & FINDINGS

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Month	FII (RS in Mn)	% change	Month end BSE Index	% Change
Jan - 2007	-41,761		14,283	
Feb - 2007	55,954	1.746	12,938	-0.104
Mar - 2007	14,033	-2.987	13,072	0.010
Apr - 2007	59,987	0.766	13,872	0.058
May - 2007	40,968	-0.464	14,544	0.046
Jun - 2007	71,694	0.429	14,651	0.007
Jul - 2007	189,953	0.623	15,551	0.058
Aug - 2007	-41,913	5.532	15,319	-0.015
Sep - 2007	189,485	1.221	17,291	0.114
Oct - 2007	173,631	-0.091	19,838	0.128
Nov - 2007	-45,974	4.777	19,363	-0.025
Dec - 2007	37,558	2.224	20,287	0.046
Jan - 2008	-172,269	1.218	17,649	-0.149
Feb - 2008	48,827	4.528	17,579	-0.004
Mar - 2008	1,244	-38.250	15,644	-0.124
Apr - 2008	5,080	0.755	17,287	0.095
May - 2008	-46,722	1.109	16,416	-0.053
Jun - 2008	-105,777	0.558	13,462	-0.219
Jul - 2008	1,758	61.169	14,356	0.062
Aug - 2008	-35,979	1.049	14,565	0.014
Sep - 2008	-65,996	0.455	12,860	-0.133
Oct - 2008	-142,486	0.537	9,788	-0.314
Nov - 2008	-35,037	-3.067	9,093	-0.076
Dec - 2008	14,260	3.457	9,647	0.057
Jan - 2009	-42,502	1.336	9,424	-0.024
Feb - 2009	-26,905	-0.580	8,892	-0.060
Mar - 2009	2,690	11.002	9,709	0.084
Apr - 2009	73,842	0.964	11,403	0.149
May - 2009	206,069	0.642	14,625	0.220
Jun - 2009	32,249	-5.390	14,494	-0.009
Jul - 2009	116,253	0.723	15,670	0.075
Aug - 2009	40,287	-1.886	15,667	0.000
Sep - 2009	199,395	0.798	17,127	0.085
Oct - 2009	83,042	-1.401	15,896	-0.077
Nov - 2009	54,692	-0.518	16,926	0.061
Dec - 2009	103,514	0.472	17,465	0.031
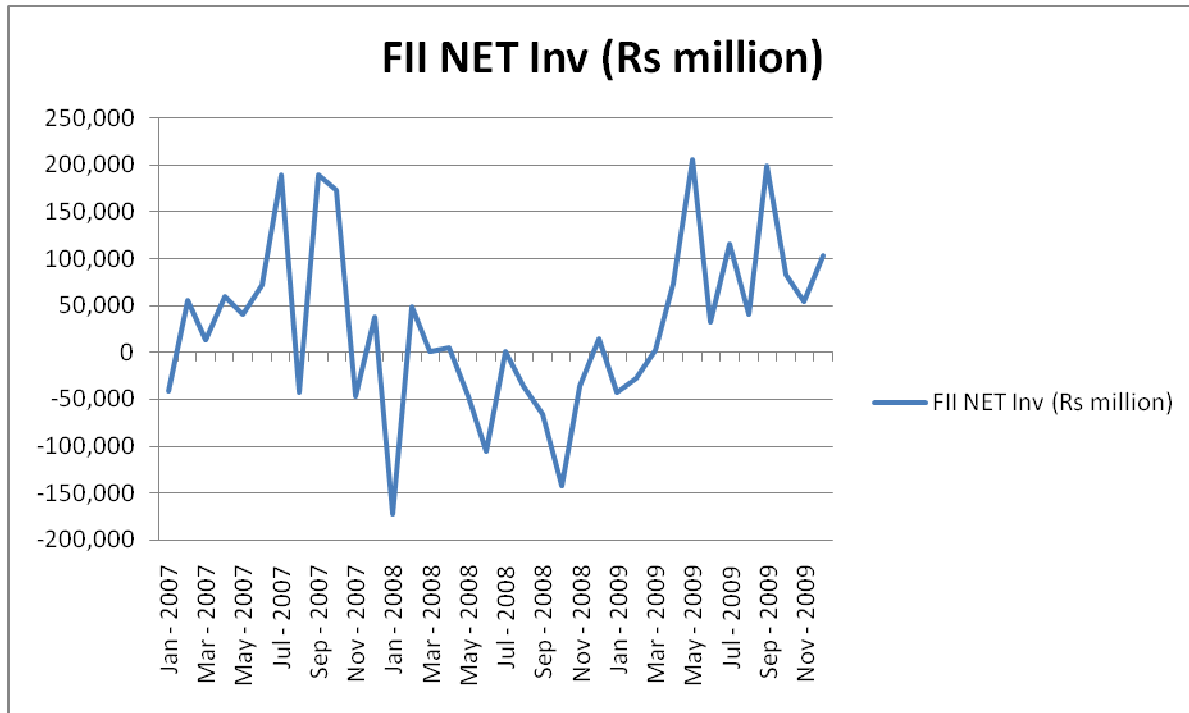
(Chart 1)
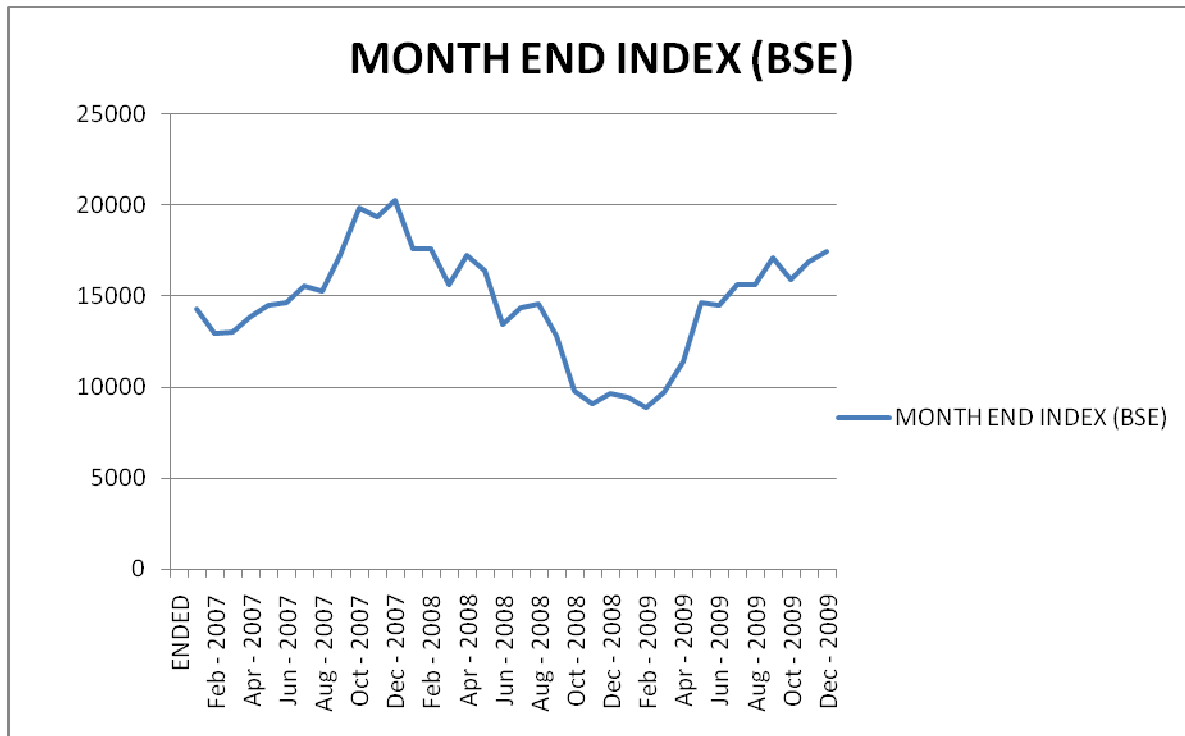
(Chart 2)

From the above 2 charts, it can be analysed that Net inv of FII was highest in the month July 07 i.e. Rs 189953 (million), the effect of same is also seen in BSE returns and as a result, BSE for that month has almost increase to above 900 basis point compared to June 07.

BSE closing for December 07 was around 20287 basis point compare to 15319 in August 2007, therefore an increase of 5000 basis point in just 5 months was a result of positive FII net investment for the period.

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In 2008, global recession poses crash to the market by 10000 basis point till the end of the year. As a result the year was also marked with outflows of more FII in 7 out of 12 months and resulted in the adverse condition in the stock market

Recovery was seen in the market in 2009 and as a result market was stabilized and gain almost above 8000 basis point due to positive inflow of investment by FII in the market.

Major corrections were found in the month of May 2009, where markets almost gained above 3000 basis points as the net investment by FII was up to Rs 206069 million for that month. 10 out of 12 months had the positive inflows of FII which overall resulted into bullish sentiments in the stock market.

COEFFICIENT CORRELATION

Here the Coefficient of correlation between % change IN NET FII INVESTMENT and % change in BSE RETURN measures the degree of relationship between the two. The reliability of estimates depends upon the closeness of the relationship.

✓ **Null hypothesis Ho is that % CHANGE in NET FII INVESTMENT has no effect on % change in BSE RETURN**

✓ **Alternative hypothesis H1 is that % change in NET FII INVESTMENT has effect on % change in BSE RETURN**

Here Pearson correlation of % change IN NET FII INVESTMENT and % change in BSE RETURN **(r) = 0.213,** so it can be concluded that there is a very low level of positive correlation between the two variables.

Also the calculated p-value is **0.212** which is more than tabulated (o value 0.05), therefore, the null hypothesis is accepted and it can be concluded that **% CHANGE IN NET FII INVESTMENT has no in BSE RETURN effect on % change**

AUTO CORRELATION: FII % CHANGE IN NET INVESTMENT FOR THE YEAR 2007 TO 2009

LAGS	ACF1
1	-0.032586
2	-0.003740
3	-0.016129
4	-0.514941
5	0.063674
6	0.005071
7	-0.038144
8	0.175672
9	-0.032378
10	0.003403
11	-0.012613
12	-0.054524
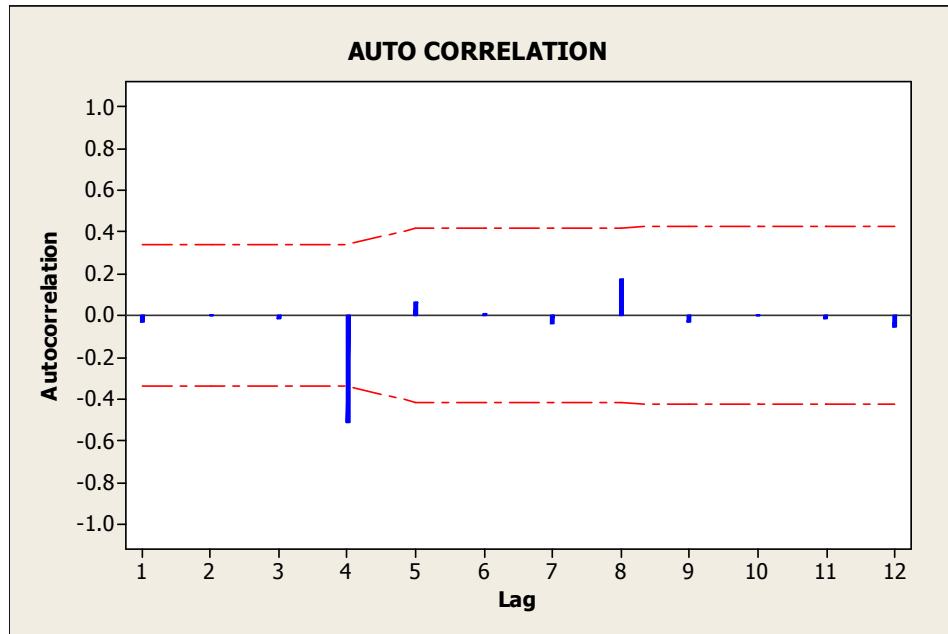
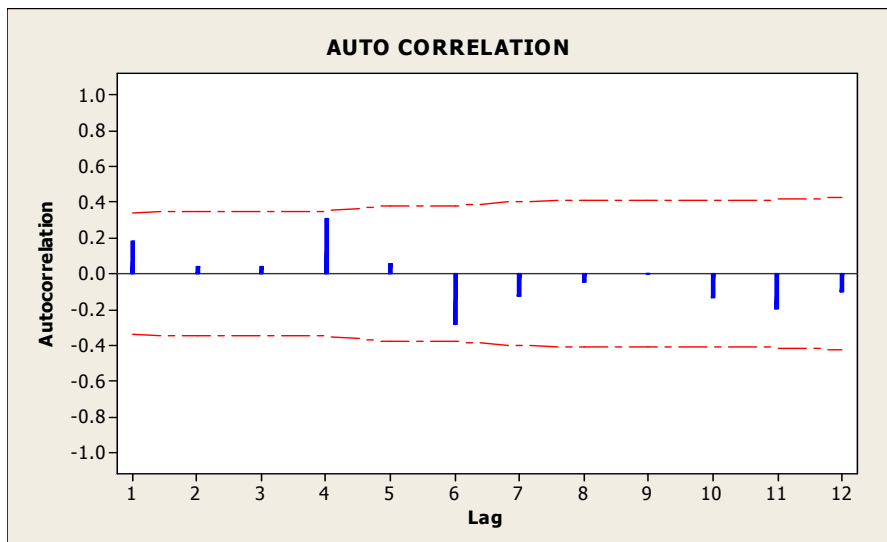(Chart 3 from Minitab 15)

Table 1 from Minitab 15)

From the above diagram, it is observed that the autocorrelation values at various lags hover around zero, which shows, that the FII time series from the year 2007 to 2009 is stationery time series.

However the ACF value at 4[th] lag is quite high compared to the others which suggests a significant impact at that lag interval.

AUTOCORRELATION: BSE CLOSING INDEX % RETURN FOR THE YEAR 2007 TO 2009

LAGS	ACF2
1	0.183829
2	0.041783
3	0.037692
4	0.307551
5	0.054654
6	-0.283563
7	-0.122692
8	-0.049581
9	-0.000200
10	-0.135215

11	-0.198565
12	-0.099647

(Chart 4 from Minitab 15)

(Table 2 from Minitab 15)

From the above diagram, it is seen that the autocorrelation values of BSE % returns at various lags hover around zero, therefore it can be concluded that the given time series of BSE returns is Stationery.

AUGMENTED DICKEY-FULLER

Augmented Dickey-Fuller test for % CHANGE IN NET FII INVESTMENT including 3 lags of (1-L)

Sample size 32

Unit-root null hypothesis: a = 1

1) Test with constant

Model: $(1-L) y = b_0 + (a-1)*y (-1) + ... + e$

1st-order autocorrelation coefficient for e: -0.015

Lagged differences: $F_{(3, 27)} = 3.323$ [0.0346]

Estimated value of (a - 1): -1.60631

Test statistic: tau c (1) **= -4.72904**[1]

Since the t value of 4.72904 in absolute terms is more than even the 5% critical r value of **-2.93**, suggesting that after taking care of possible autocorrelation in the error term, the FII series is stationary.

2) With constant and trend

Augmented Dickey-Fuller test for FII net invest including 3 lags of (1-L) FII net invest

Sample size 32

Unit-root null hypothesis: a = 1

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[1] > 5% table value of 2.93 as per dickey fuller table: series is stationery

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Model: (1-L) y = b0 + b1*t + (a-1)*y (-1) + ... + e

1st-order autocorrelation coefficient for e: 0.015

Lagged differences: F (3, 26) = 3.197 [0.0399]

Estimated value of (a - 1): -1.60691

Test statistic: tau ct (1) **= -4.63766**[2]

Since the t value of FII **-4.63766**, in absolute terms is more than the 5% critical r value of **-3.50**, suggesting that after taking care of possible autocorrelation in the error term, the FII series is stationary.

Augmented Dickey-Fuller test for % CHANGE IN BSE RETURN including 3 lags of (1-L) Sample size 32

Unit-root null hypothesis: a = 1

1) Test with constant

Model: (1-L) y = b0 + (a-1)*y (-1) + ... + e

1st-order autocorrelation coefficient for e: 0.026

Lagged differences: F (3, 27) = 1.004 [0.4061]

Estimated value of (a - 1): -0.507616

Test statistic: tau c (1) **= -1.68371**[3]

The t value of FII is **-1.68371**, but this value in absolute terms is much less than even the 5% critical r value of **-2.93**, again suggesting that even after taking care of possible autocorrelation in the error term, the BSE series is non stationery.

2) With constant and trend

Augmented Dickey-Fuller test for **% CHANGE IN BSE RETURN** including 3 lags of (1-L)

Sample size 32

Unit-root null hypothesis: a = 1

Model: (1-L) y = b0 + b1*t + (a-1)*y (-1) + ... + e

1st-order autocorrelation coefficient for e: -0.023

Lagged differences: F (3, 26) = 0.962 [0.4254]

Estimated value of (a - 1): -0.516373

Test statistic: tau ct (1) = **-1.68026**[4]

5% value with trend and constant is **-3.50** as per table

The t value of FII is **–1.26906**, but this value in absolute terms is much less than even the 5% critical r value of **-3.50**, again suggesting that even after taking care of possible autocorrelation in the error term, the BSE series is non stationery.

GRANGER CAUSALITY TEST

Causal relationships between Foreign Institutional Investments and stock returns in India

Here the causal relationship between FII flows (X) i.e. % change in month end net investment and BSE closing index (Y) i.e. % change in month end returns influenced by the rise of stock market, whether the rise in BSE index is attracting FII flows via higher returns or are they driven by the FII flows.

RESULTS OF GRANGER CAUSALITY TEST

Lags: 1			
Null Hypothesis:	Observations	F-Statistic	Probability
% CHANGE IN NET FII INVESTMENT does not Granger Cause % CHANGE IN BSE RETURN	35	**0.35585**[5]	0.55502
% CHANGE IN BSE RETURN does not Granger Cause % CHANGE IN NET FII INVESTMENT		**3.21738**[6]	0.08232

The results suggest that the direction of causality is from BSE to FII since the calculated value of F is 3.21738 which is quite high than the estimated value of F at the 5% level, the critical value is 1.36. On the other hand there is no reverse causation form FII to BSE since the F value is statistically insignificant.

Therefore it can be concluded that % change in BSE returns Granger causes % change in FII returns, as there is a unidirectional causality between them.

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[2] **> 5% table value of 3.5 as per dickey fuller table: series is stationery**

[3] **< 5% table value of 2.93 as per dickey fuller table: series is non stationery**

[4] **< % table value of 3.50 as per dickey fuller table: series is non stationery**

[5] **< 5% critical F value of 1.36: accept the hypothesis**

[6] **> 5% critical F value of 1.36: reject the hypothesis**

Lags: 2			
Null Hypothesis:	Observations	F-Statistic	Probability
% CHANGE IN NET FII INVESTMENT does not Granger Cause % CHANGE IN BSE RETURN	34	**0.28337**[7]	0.7553
% CHANGE IN BSE RETURN does not Granger Cause % CHANGE IN NET FII INVESTMENT		**1.72944**[8]	0.19518

The result suggests that the direction of causality is from BSE returns to FII net investment since the estimated F is significant at 0.25 percent level because the critical F value is 1.44 which is less than calculated value of 1.72944.

On the other hand there is no reverse causation from FII net investment to BSE returns, since the F value is statistically insignificant. So again it can be concluded that % change in BSE returns Granger causes % change in FII returns, as there is a unidirectional causality between them.

Lags: 3			
Null Hypothesis:	Observations	F-Statistic	Probability
% CHANGE IN NET FII INVESTMENT does not Granger Cause % CHANGE IN BSE RETURN	33	**0.7896**[9]	0.51068
% change in BSE return does not Granger Cause % change in FII returns		**1.24406**[10]	0.31399

The result suggests that there is independence in direction of causality from BSE returns to FII net investment since the estimated F is significant at 0.05 percent level because the critical F value is 1.42 which is more than 1.24406.

On the other hand there is no causation from FII net investment to BSE returns, since the F value is statistically insignificant.

Thus the direction of causality may depend critically on the number of lagged terms used in finding the results.

Lags: 4			
Null Hypothesis:	Observations	F-Statistic	Probability
% CHANGE IN NET FII INVESTMENT does not Granger Cause % CHANGE IN BSE RETURN	32	**0.58825**[11]	0.67443
% CHANGE IN BSE RETURN does not Granger Cause % CHANGE IN NET FII INVESTMENT		**2.83161**[12]	0.04796

The result suggests that the direction of causality is from BSE returns to FII net investment since the estimated F is significant at 0.25 percent level because the critical F value is 1.40 which is less than 2.83161.

On the other hand there is no reverse causation from FII net investment to BSE returns, since the F value is statistically insignificant.

FINDINGS

The key findings of this study can be summarized as:

The coefficient correlation between % CHANGE IN NET FII INVESTMENT and % CHANGE IN SENSEX RETURN in India shows a very low level positive correlation of 0.213

The Correlogram of FII and BSE both shows a stationery time series, since their AUTO CORRELATION starts at very low value and hover around zero. This means that the given time series hovers around zero which suggests that the time series is stationery.

The ADF test of FII is found to be stationery according to 'test with constant' and 'test with constant and trend', since their T value is lower than the significant value and the trend of FII series is nearly common in last 36 months. The reason for FII being stationery is growth in FII over the years which have resulted into many booming sectors in India in which there's a lot of scope for FII.

The ADF test of BSE is found to be non stationery according to 'test with constant' and 'test with constant and trend' which explains that the mean and variance of BSE series in last 36 months is not same,

The pair wise Granger Causality test results proves that, % CHANGE IN BSE RETURN Granger cause % CHANGE IN NET FII INVESTMENT, as its F value AT different lags is quite high than its critical table value, therefore the hypothesis, % CHANGE IN BSE RETURN does not cause % CHANGE IN NET FII INVESTMENT is rejected.

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[7] **< 0.25% critical F value of 1.44: accept the hypothesis**

[8] **> 0.25% critical F value of 1.44: reject the hypothesis**

[9] **< 5% critical F value of 1.42: accept the hypothesis**

[10] **< 5% critical F value of 1.42: accept the hypothesis**

[11] **< 0.25% critical F value of 1.40: accept the hypothesis**

[12] **> 0.25% critical F value of 1.40: reject the hypothesis**

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FII will always be beneficial for the ultimate growth of India which eventually depends upon the sectoral growth, therefore more liberal policies should be made to encourage FII in the uncover sectors of country.

CONCLUSIONS

Institutional investors are a permanent feature of the financial landscape, and their growth will continue at a similar and perhaps faster pace. The factors that underpin their development are far from transitory and in many cases have only just started having an impact. The behavioural characteristics of institutional investors, therefore, will be an increasingly important determinant of domestic and international financial market conditions, and the implications for financial market stability warrant serious consideration"

In conclusion, the results reveal that the BSE % returns may be a leading indicator to predict the future FII flows. Although it may not be surprising to find that fluctuations in economic activity may be preceded by changes in stock prices, the finding that changes in BSE returns "Granger-caused" changes in FII net investment is important because it provides additional support for the leading economic role of the stock market.

The Study ends with a conclusion which allows the reader to understand the cause and effect relationship between FII and BSE which are considered being a barometer of growth in Indian stock market.

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A STUDY OF FINANCIAL PERFORMANCE OF SELECT INDIAN SCHEDULED COMMERCIAL BANKS USING CAMELS METHODOLOGY FOR 2006-2010

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ABSTRACT

Globalization, technological development and volatile stock market have created an unparalleled competitive environment for organizations across the world. With the advent of liberalization, Privatization and Globalization, survival of corporate has become a challenge. The Indian banking industry in India has witnessed radical changes and enormous growth ever since the government initiated the financial sector reforms in 1991. As a result of the foundations laid through the first and second generation reforms, the banking industry has witnessed a strong growth rally during last few years. The contribution of Reserve Bank of India (RBI) and other policy maker, the industry has witnessed transformational regulatory requirements. These revolutionary changes in the regulatory requirements have influenced prominent improvement in efficiency and performance of the Indian Scheduled Commercial banks in the past few years.

Against this backdrop the research paper evaluates the performance and efficiency of select Indian Commercial Banks like State bank of India, ICICI bank, Axis Bank, HDFC and Bank of India during the period 2009-2010 using the CAMEL methodology. The data required for this study was obtained from Annual reports of the respective banks. The author could readily obtain publications for five years — 2006-2010; the analysis is, thus, restricted to five years ending March 2010. The financial performance of the banks was measured using the CAMELS methodology which is a widely accepted tool for evaluating financial performance in Banks. CAMELS is an acronym where C - Capital Adequacy, A- Asset Quality, M – Management Efficiency, E- Earnings Efficiency, L- Liquidity and S- Sensitivity to Market Risk. The paper also compares the Performance of these Banks with the previous year 2008-2009 and ranks each bank on the basis of the findings got by the CAMEL Methodology evaluations.

The findings show that the performance of the banks for the year ended 2010 has been much better as against their performance during the previous year ended 2009.

KEY WORDS

Indian Commercial Banks, Financial Efficiency, Financial Performance, ICICI Bank, State Bank of India.

INTRODUCTION

An analyst puts it very aptly: "In the Banking Industry, Profits always take care of themselves but losses never do." With the dawn of liberalization, Privatization and Globalization, survival of corporate has become a challenge. Globalization, technological advancements and unpredictable stock market have created an unparalleled competitive setting for organizations across the world especially banks. Lending and Borrowing activities were the only activities which were looked at as the main functions of the bank when banks came into existence. Over time the banking in India has reached a fair amount of maturity in terms of services provided, product range and extensive reach especially in rural India. Yet reach to the Rural India still remains a challenge for the private sector and foreign banks, the Public Sector banks have addressed this issue through Financial Inclusion. Today banking structure has transformed with the help of securitization and derivatives trading. Securitization has increased the risk involved in the banking sector.

Since Indian economy is in the development and growth phase the demand for banking services, especially retail banking, Corporate Banking, mortgages and investment portfolio services are expected to be strong. The momentum for M&As, takeovers, and asset sales is also suppose to pick in the future years. According to a report by ICRA Limited, a rating agency, the public sector banks hold over 75 percent of total assets of the banking industry, with the private and foreign banks holding 18.2% and 6.5% respectively. In terms of quality of assets and capital adequacy, Indian banks are considered to have clean, strong and transparent balance sheets relative to other banks in Comparable economies in its region.

BACK GROUND OF THE STUDY

Banking is becoming an increasingly global industry, which knows no geographic and territorial boundaries. The Indian Banking Sector has witnessed phenomenal growth over the last few decades, especially after the nationalization of the Indian Banks in 1969. Looking at the last 17 years or so post-the economic reforms, the banking sector has definitely come a long way.

THE INDIAN BANKING SYSTEM AND ECONOMIC REFORMS

Commercial banks in India may be broadly categorized based on ownership into Public Sector Banks (PSBs), Private Banks and Foreign Banks. Together they fall under the Reserve Bank of India (RBI) classification of Scheduled Commercial Banks (SCBs)[1]. The public sector banks comprised of nationalized banks and the State Bank of India and its Associates. Private sector banks are comprised of the old private banks and the new private banks. PSBs dominate the Indian Banking System accounting for over 70% of the assets of the SCBs in India (Report on Trends and Progress of Banking in India, 2005).

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The Banking Sector Reforms in India were initiated in 1992. The objectives of reforms were to strengthen the Indian banks, make them internationally competitive and encourage them to play an effective role to speedup the process of growth. The reforms process also initiated measures for improving the productivity, efficiency and profitability of the banking system.

The policy initiatives taken in these regards were largely based on the recommendations of Narasimham Committee I & II on Financial Sector Reforms and Banking Sector Reforms, respectively. Implementation of the recommendations of these two Committees was done sequentially to ensure that the progress of banking sector reforms takes place steadily without causing any systemic disturbance.

The major initiatives undertaken in pursuance of the recommendations of the Committees may be categorized under Deregulation, Prudential Measures, Competition and Enabling Measures. The impact of banking sector reforms on the performance of the banks in India as reflected in the prudential indicators on capital adequacy, asset quality, profitability and productivity, etc.

This study has highlights the fact that when it comes to fighting in the liberalized and globalized environment of today, PSBs are more geared now to survive in a fiercely competitive and highly complex global banking landscape. Banks have proven that when it comes to embracing global best practices, they are not behind even the best of the breed. Their successful migration to Basel II norms vouch for that.

The research paper analyzes the qualitative as well as quantitative factors for evaluating Indian Commercial Banks. The paper evaluates the adequacy of CAMELS in capturing the overall performance of a bank and also finds the relative weights of importance in all the factors in CAMELS. The paper also Ranks each bank on the basis of the findings got by the CAMEL Methodology evaluations.

While it would be too optimistic to expect banks to have the same level of performance that they delivered during the past few fiscal years, the findings show that their performance post recession for the fiscal year 2009 has been fairly acceptable and the performance and results during the fiscal year ended 2010 was positively remarkable.

OBJECTIVE OF THE RESEARCH
The objective of the research paper are
- Understand qualitative as well as quantitative factors for evaluating financial Banks
- To find the adequacy of CAMELS in capturing the overall performance of a bank .
- Analyze financial institutions and assign overall ratings through CAMELS model
- Provide recommendation for improvements of the bank performance

DATA COLLECTION AND SAMPLING
The data has been collected from the annual reports of the banks and other corporate databases. The Sample Size of the present research study involves an enhanced study of various banks.

My study includes comparison among the following banks:
- ICICI
- SBI
- AXIS
- HDFC
- Bank of India

The annual reports for 2006-2010 were readily available of the above stated banks.

METHODOLOGY
The present study of Banks is based on CAMELS Methodology, which evaluates each and every component that is of prime importance from the functioning of the Bank's perspective. The model examines the efficiency of banks among these important parameters like Capital Adequacy, Asset Quality, Management, Earnings Quality, Liquidity and Sensitivity of Select Indian Scheduled Commercial Banks. All the Banks were ranked in the Ascending/descending order based on the individual sub-parameters.

FINDINGS AND ANALYSIS
CAMEL MODEL
I) CAPITAL ADEQUACY
Capital adequacy reflects the overall financial position of a bank and also the ability of the management to meet the need for additional capital requirement.

A) Capital Adequacy Ratio (CAR)
CAR reflects the ability of a bank to deal with probable loan defaults. The RBI guidelines stipulate banks to maintain a CAR of minimum 9%. It is arrived at by dividing the Tier I and Tier II capital by risk-weighted assets. Tier I capital includes equity capital and free reserves. Tier II capital comprises subordinated debt of 5-7 year tenure. The higher the CAR, the stronger the bank.

Capital Adequacy Ratio Table

Capital Adequacy Ratio				
Banks	2009-10	2008-09	2007-08	2006-07
SBI	13.39	14.25	13.54	12.34
ICICI	19.41	15.53	13.96	11.69
AXIS	15.80	13.69	13.73	11.57
HDFC	17.44	15.69	13.60	13.08
BOI	12.94	13.01	12.04	11.71
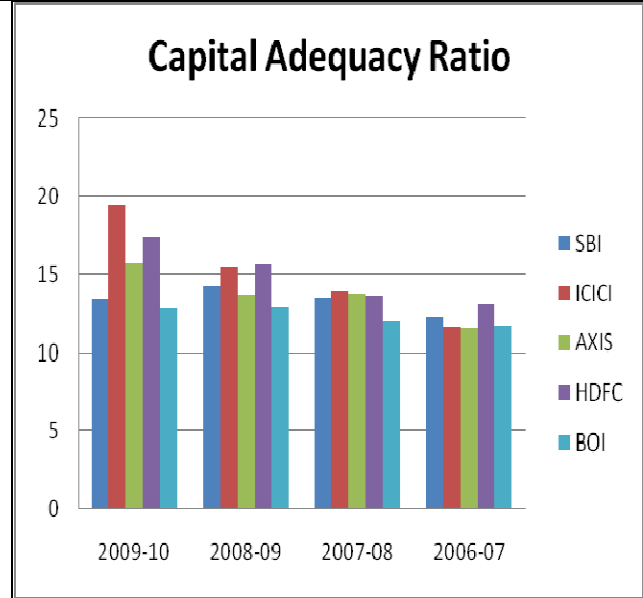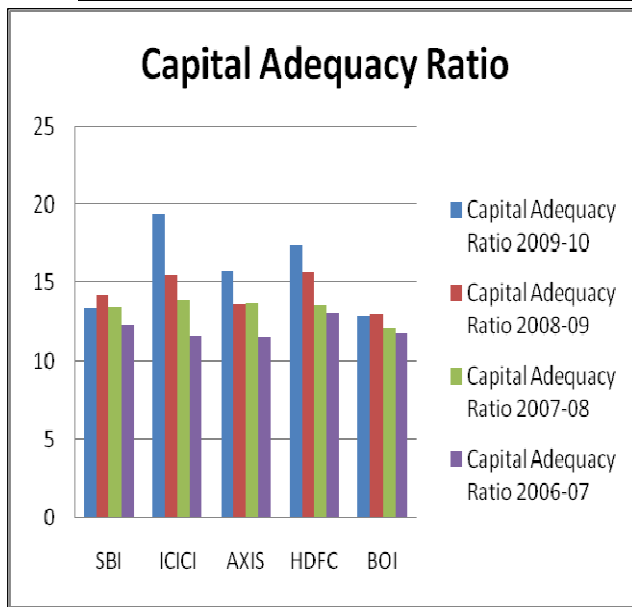
INTERPRETATION

CRAR is a ratio of Capital Fund to Risk Weighted Assets. Reserve Bank of India prescribes Banks to maintain a minimum Capital to risk-weighted Assets Ratio (CRAR) of 9 % with regard to credit risk, market risk and operational risk on an ongoing basis, as against 8 % prescribed in Basel documents. From the above table it is clear that HDFC has the most favored Capital adequacy ratio i.e. of 15.69% in the year 2008-09 however in 2009-10, ICICI Bank has outdone HDFC bank with a Capital Adequacy ratio of 19.41%. All the banks have maintained the minimum CRAR requirement of RBI.

Higher the ratio higher is the risk taking capabilities of banks due to any unexpected loss in the banking portfolio.

With respect to RBI norms of 9% every bank analyzed is in the favorable position. The main reason for a higher Capital is less disbursement of funds so that any unexpected loss can be handled properly by banks. The higher CAR would also lead to a favorable risk negotiations.
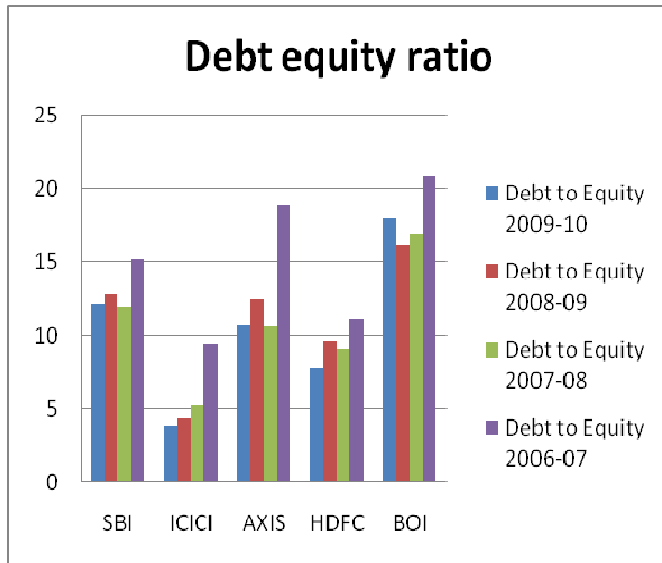
B) Debt-Equity Ratio (D/E)

Debt-Equity Ratio is arrived at by dividing the total borrowings and deposits by shareholders' net worth, which includes equity capital and reserves and surpluses.

Debt to Equity Ratio Table

Debt to Equity				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	12.19	12.81	12.02	15.18
ICICI	3.91	4.42	5.27	9.50
AXIS	10.70	12.49	10.63	18.81
HDFC	7.78	9.67	9.15	11.05
BOI	17.95	16.10	17.00	20.86

Debt to Equity Ratio Chart.
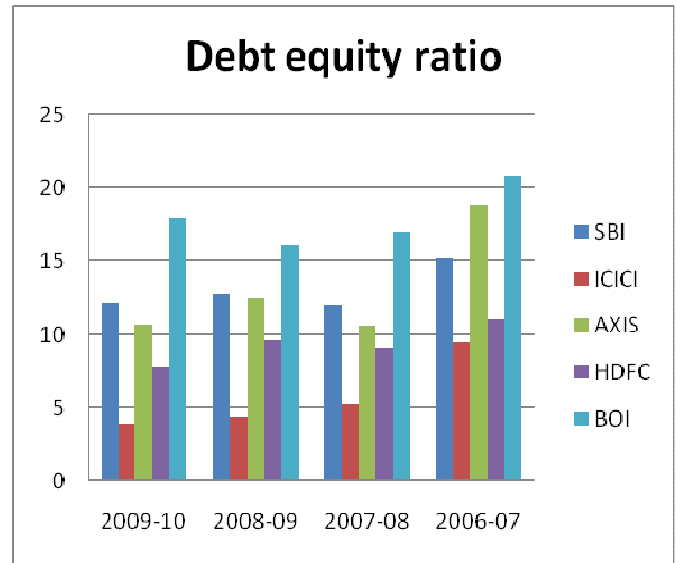
INTERPRETATION

The Debt to Equity Ratio measures how much money a bank should safely be able to borrow over long periods of time. Generally, any bank that has a debt to equity ratio of over 40% to 50% should be looked at more carefully to make sure there are no liquidity problems.

If we look at the debt to equity ratio of State bank of India it is the highest as it relies more on cheaper funds i.e. CASA, the bank has largest amount of current accounts and saving accounts due to pan India presence. The CASA funds are the cheapest form of debt available to banks.

Now in the year 2008-09 ICICI bank has a Debt to equity of 5 times which is less compared to the other banks mainly because bank raised equity capital in the year 2009 and is 4 times in 2010 as it raises money through equity.

C)Advances to Assets (ADV/AST)

This is the ratio of the Total Advances to Total Assets. Total Advances also include receivables. The value of Total Assets excludes the revaluations of all the assets.

Advance to Asset Table

Advances to Assets				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	0.60	0.56	0.58	0.60
ICICI	0.50	0.58	0.56	0.57
AXIS	0.57	0.55	0.54	0.50
HDFC	0.56	0.55	0.54	0.50
BOI	0.61	0.63	0.63	0.60

Advance to Asset Table
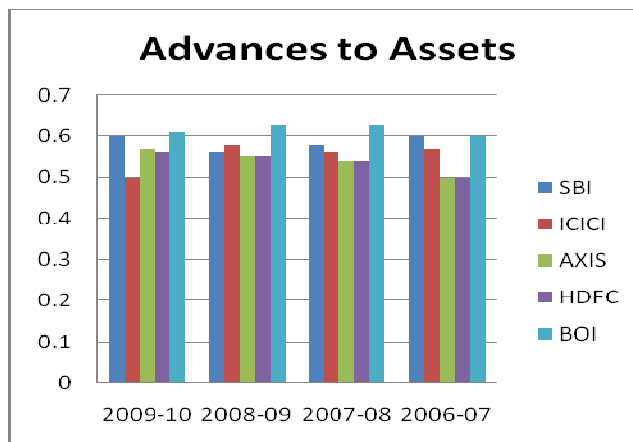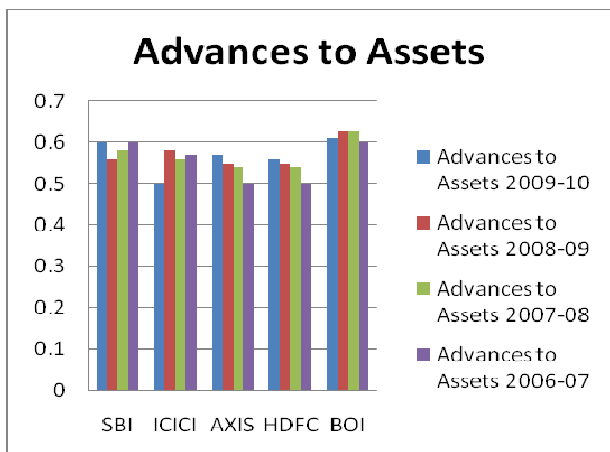
Interpretation:

An advance to Assets ratio reflects a bank's positions and risk taking ability in lending funds. A higher Advances/Asset ratio shows that the bank is aggressively lending fund and vice versa. A general perception has been that private sector banks are more aggressive lenders as compared to their public sector counterparts. However, the trend seems to have reversed in the fiscal 2008-09 during which the PSBs have bettered the Ratio while the private sector banks turned risk-averse. Here in AXIS Bank, from 2006 to 2010 this ratio is continuously increased because increase in advances is more than increase in total assets which shows growth in investments.

Of this rise the corporate advances (comprising large and mid-corporate) increased by 41.98% during the same period, while agricultural lending increased by 49.23%. Retail loans grew 18.10%. The advance to asset ratio of SBI is strong and constant during the entire period of 2006-2010

II) ASSET QUALITY

The asset quality is to ascertain the proportion of non-performing assets as a percentage of the total assets .It also ascertains the NPA movement and the amount locked up in investments as a percentage of the total assets.

A Net NPAs to Total Assets (NNPAs/TA)

It is a measure of the quality of assets in a situation where the management has not provided for loss on NPAs. Net NPAs reflects the performance of banks. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and net-worth of banks and also wear down the value of the asset.

Net NPA's to Total Assets Table

Net NPA's to Total Assets				
Banks	2009-10	2008-09	2007-08	2006-07
SBI	1.03	0.99	1.03	0.93
ICICI	0.78	0.08	0.89	0.59
AXIS	0.23	0.22	0.23	0.36
HDFC	0.17	0.34	0.22	0.22
BOI	0.80	0.28	0.33	0.57

Net NPA's to Total Assets Chart
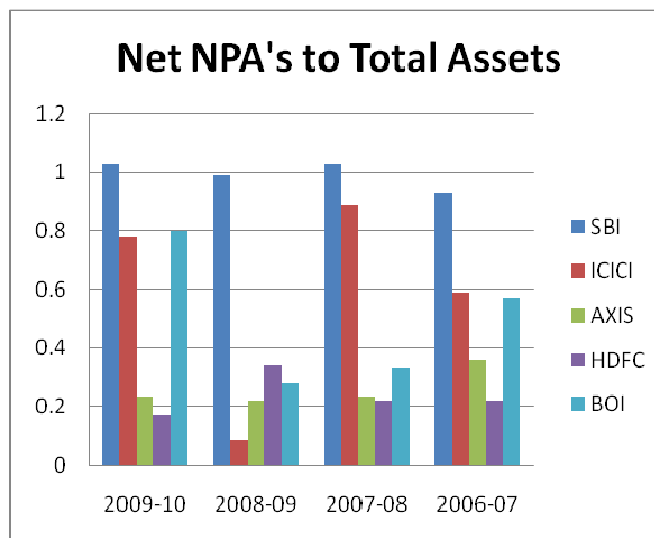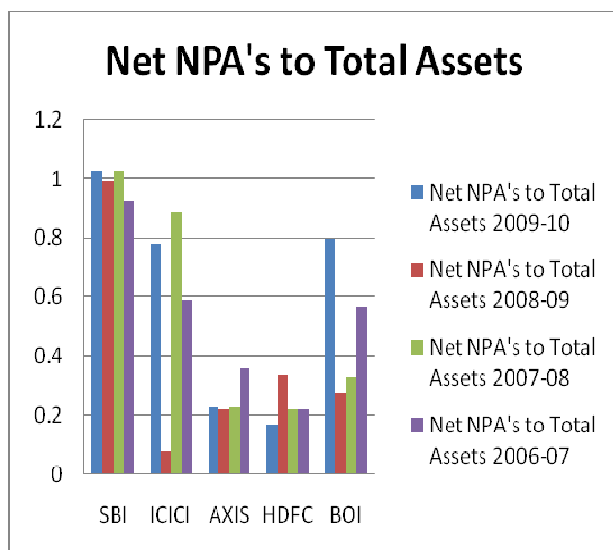
INTERPRETATION

An ICICI bank Net NPA's in 2008-09 was the lowest at 0.08 times and 0.78 times the total assets. The main reason for such low NPA's in 2008-09 is the good asset quality as well as securitization of the portfolio of loans by ICICI bank. There has been gradual decrease in the NPA for Bank of India with the increased focus on the client checks and background. SBI being the biggest provider of loans at Pan-India level the quality of loans given is not that good. The main reason for high level of NPA's is providing loans to important sectors like farming where the default rate is high.
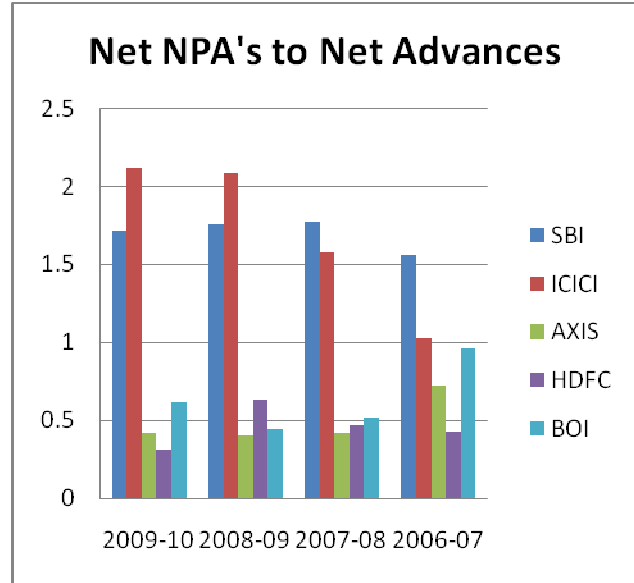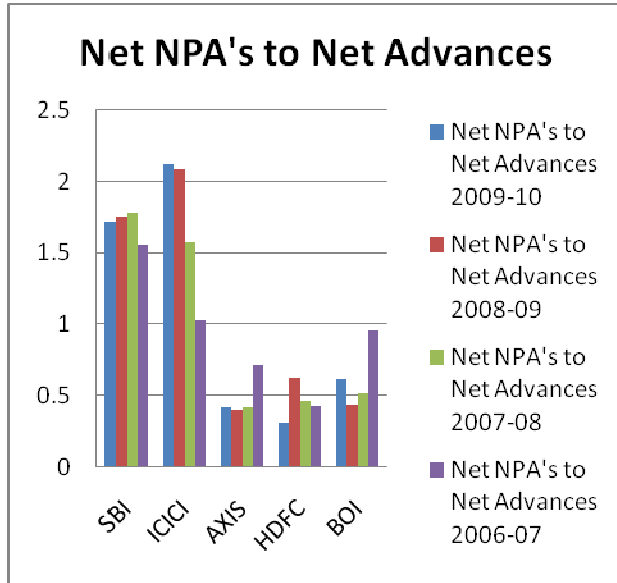
B Net NPAs to Net Advances (NNPAs/NA)

Net NPAs are Gross NPAs net of provisions on NPAs and suspense account.

Net NPA's to Net Advances Table.

Net NPA's to Net Advances				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	1.72	1.76	1.78	1.56
ICICI	2.12	2.09	1.58	1.03
AXIS	0.42	0.40	0.42	0.72
HDFC	0.31	0.63	0.47	0.43
BOI	0.62	0.44	0.52	0.96

Net NPA's to Net Advances Chart

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INTERPRETATION

The trend in Net NPA's to Net Advances shows a similar to the trend in Net NPA's to Total Advances. The ratio would help us to determine the quality of advances that banks have. The quality of advances has a direct relation with the Net NPA's.

Axis bank has Net NPA's to Net Advances 0.4 is amongst the best performer in 2008-09 and 2009-2010. The quality of advances of ICICI bank has reduced drastically in 2008-09 and has further reduced in 2009-10.

C Percent âge Change in Net NPAs

This measure gives the movement in Net NPAs in relation to Net NPAs in the previous year. The higher the reduction in Net NPA levels, the better it is for the bank.

Percentage change in Net NPA's Table				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	13.80%	22.51%	29.00%	41.00%
ICICI	-15.65%	-91.00%	77.00%	88.00%
AXIS	28.00%	32.00%	-7.00%	21.00%
HDFC	-37.53%	110.24%	47.00%	31.00%
BOI	-65.62%	6.08%	-27.09%	-27.50%

Percentage change in Net NPA's Chart
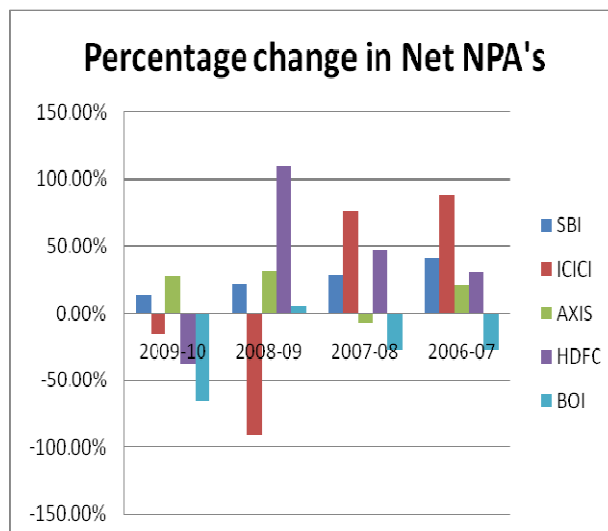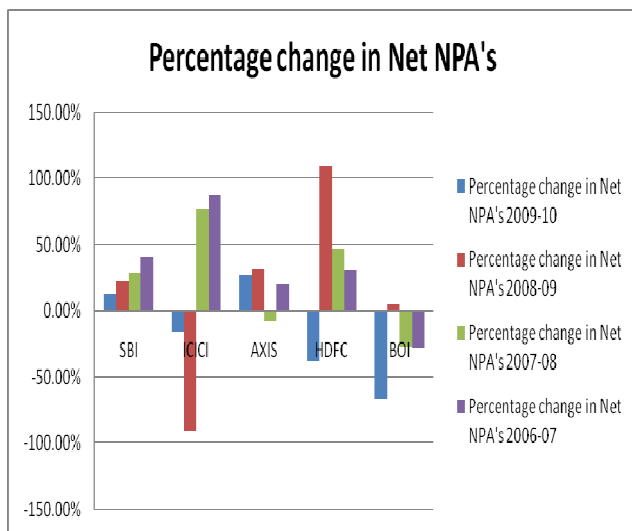
Interpretation:

Asset quality refers to the financial strength of and risk inherent in loans/advances and investment made by a bank.

The percentage change in Net NPA's would determine the improvement in the quality of advances year on year basis. The change in Net NPA's could mainly be due increase or decrease in the advances, the quality of advances, portfolio securitization, and default rate.

In 2008-09 and 2009-2010 the increase in Net NPA's was mainly due to the poor economic conditions. The increase in Net NPA's in HDFC bank was the highest in 2008-09 from 2007-08. However in 2010, the position is very favorable.

III) MANAGEMENT EFFICIENCY

Refers to the efficiency of the Management in managing the bank

A Total Advances to Total Deposits (TA/TD)

This ratio measures the efficiency of the management in converting the deposits available with the bank (excluding other funds like equity capital, etc.) into advances.

Total Advances to Total Deposit Table

Total Advances to Total Deposits				
Banks	2009-10	**2008-09**	**2007-08**	**2006-07**
SBI	0.92	0.73	0.78	0.77
ICICI	0.89	0.99	0.92	0.85
AXIS	0.78	0.69	0.92	0.85
HDFC	0.75	0.69	0.63	0.69
BOI	0.73	0.75	0.76	0.71

Total Advances to Total Deposit Chart
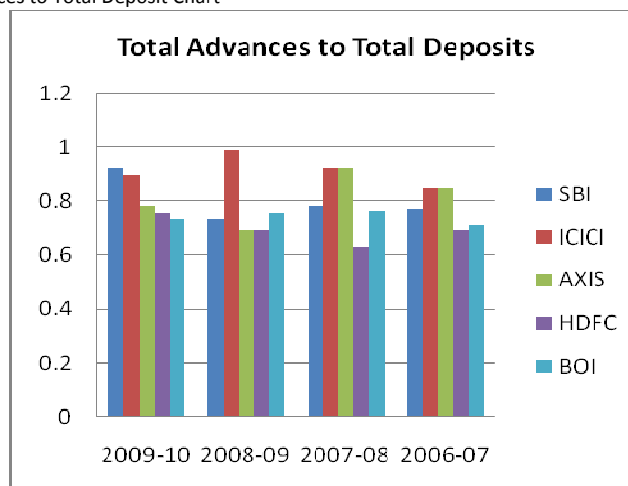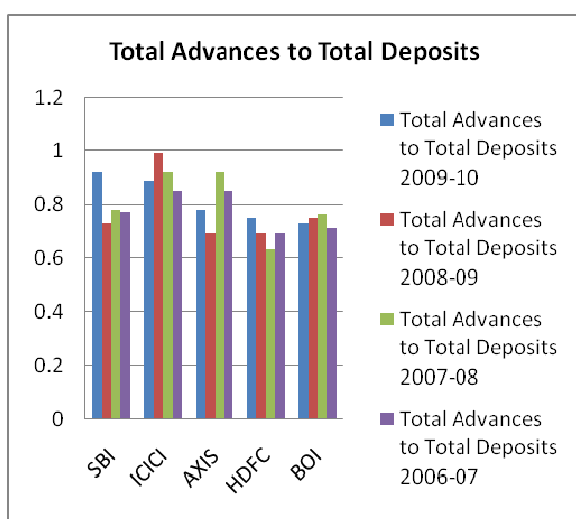
INTERPRETATION

This ratio shows the investment of the bank through approving the loans against accepting the loan. In Axis bank the ratio is continuously improving year by year from 0.85 in 2007-06 to 0.69 in 2008-09and 0.78 in 2009-2010. This shows a good sign of the bank, if it increases than it may be risky for the banks. In the year 2009, the ratio is improved because of 37% increment in Advances and 34% increment in deposits.

In Bank of India the ratio is continuously improvement from 0.76 in 2007 to 0.75 in 2008 and decreased a little to 0.73106 in the year 2009. In the year 2009 the ratio is decreased because of approximately 32% increment in Deposits and against that there was not any notable deference in advances.

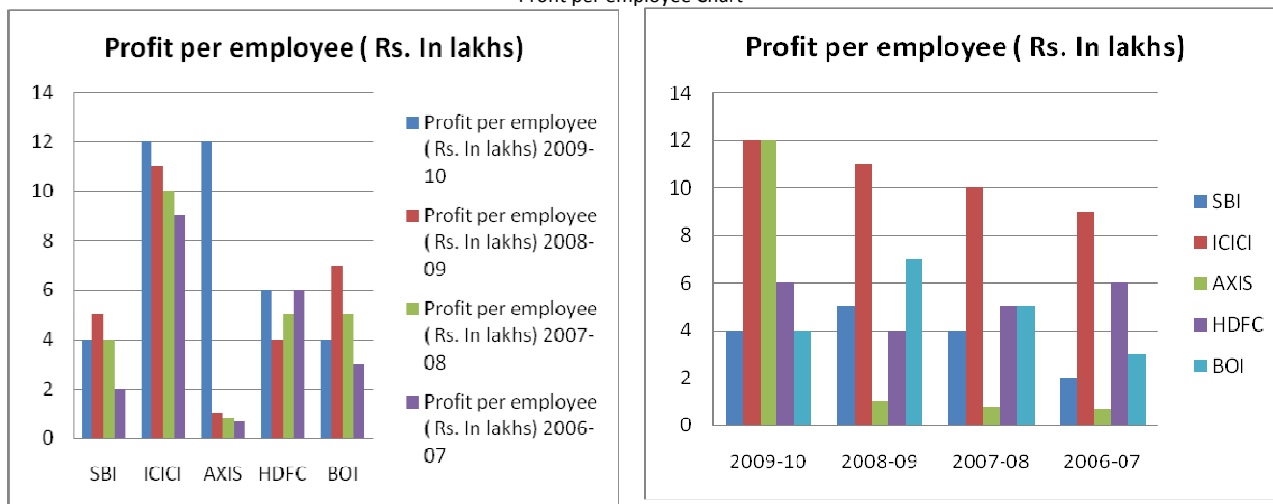*B Profit Per Employee (PPE)*

This measures the efficiency of the employee at the branch level. It also gives valuable inputs to assess the real strength of a bank's branch network. It is arrived at by dividing the net profit of the bank by total number of branches.

Revenue per employee is a measure of how efficiently a particular bank is utilizing its employees. Ideally, a bank wants the highest business per employee possible, as it denotes higher productivity. In general, rising revenue per employee is a positive sign that suggests the bank is finding ways to squeeze more sales revenue out of each employee.

Profit per employee Table

Profit per employee (Rs. In lakhs)				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	4.00	5.00	4.00	2.00
ICICI	12.00	11.00	10.00	9.00
AXIS	12.00	1.00	0.80	0.70
HDFC	6.00	4.00	5.00	6.00
BOI	4.00	7.00	5.00	3.00

Profit per employee Chart

The maximum profit per employee is for ICICI bank which is 12 lakhs in 2009-10 This shows the quality of work force with ICICI bank which has increased the profits year on year. Axis banks have superior staff with respect to the profits they generate. The maximum amount of profit that the employee generates would determine the skill sets of the employee as well as the HR policies of the bank. Good HR policies would benefit the banks with respect to the profit increment.

C Return on Net Worth (RoNW)

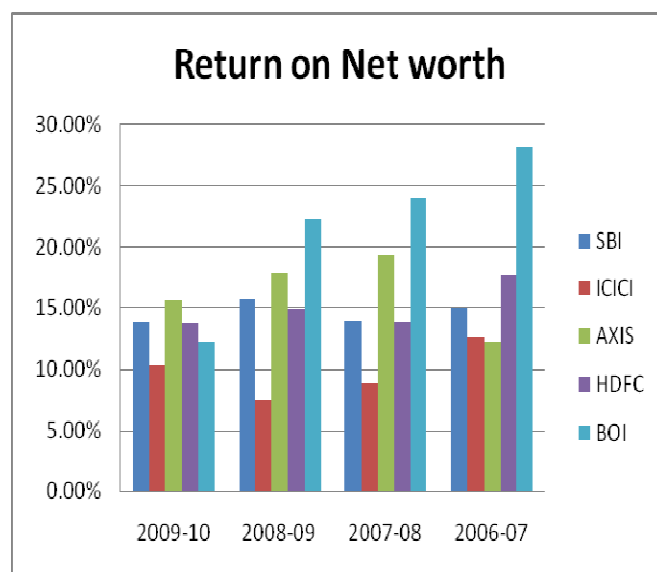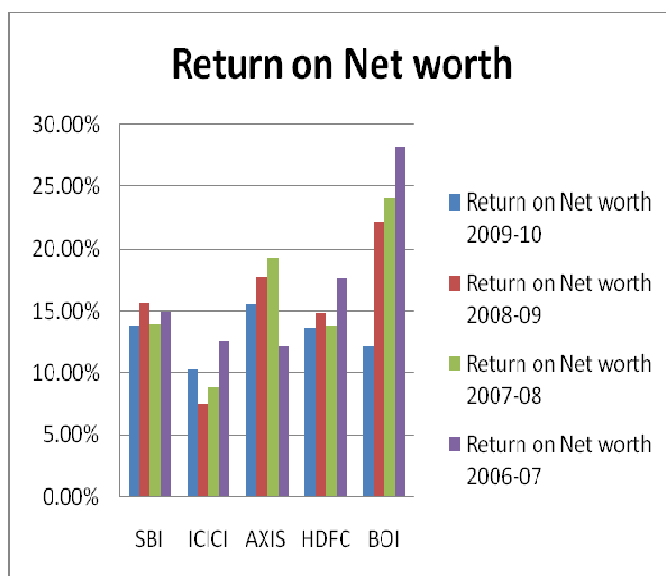It is a measure of the profitability of a bank.

Return on Net worth				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	13.89%	15.74%	14.00%	15.00%

ICICI	10.36%	7.53%	8.88%	12.61%
AXIS	15.67%	17.77%	19.37%	12.21%
HDFC	13.70%	14.91%	13.83%	17.74%
BOI	12.23%	22.29%	24.09%	28.24%

Return on Net worth Chart

INTERPRETATION

Return on net worth determines the management quality as to how the assets are used. This ratio would help the shareholders determine is the management being able to generate additional value for them. The banks good return on net worth would enhance confidence in the mind of the customers as well as the share holders.

SBI with the highest RONW of 15% is being able to generate positive confidence and faith in the minds of investors and general public. SBI is the largest bank in India with highest amount of assets so the return of 15% is a good return.

IV) EARNINGS EFFICIENCY:

Much of a bank's income is earned through non-core activities like investments, treasury operations, corporate advisory services and so on.

A Percentage Growth in Net Profit

It is the percentage change in net profit over the previous year.

Percentage growth in Net Profit				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	0.49%	35.55%	48.18%	3.06%
ICICI	7.10%	-9.61%	33.68%	22.45%
AXIS	38.51%	69.50%	62.52%	35.86%
HDFC	31.35%	41.18%	39.31%	31.08%
BOI	-42.11%	49.66%	78.90%	60.12%

Percentage Growth in Net Profit Chart
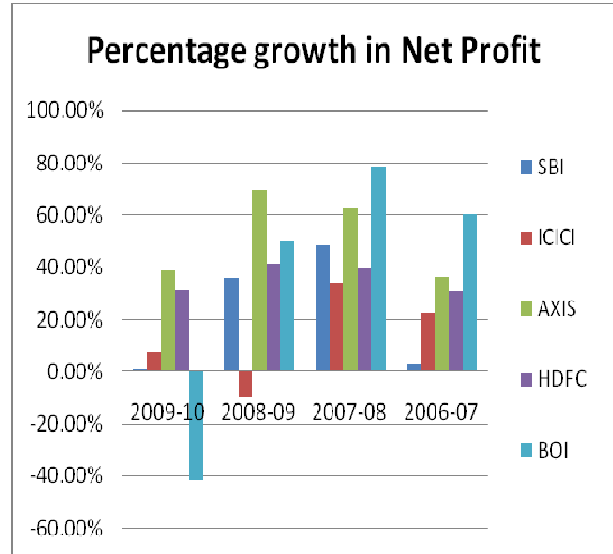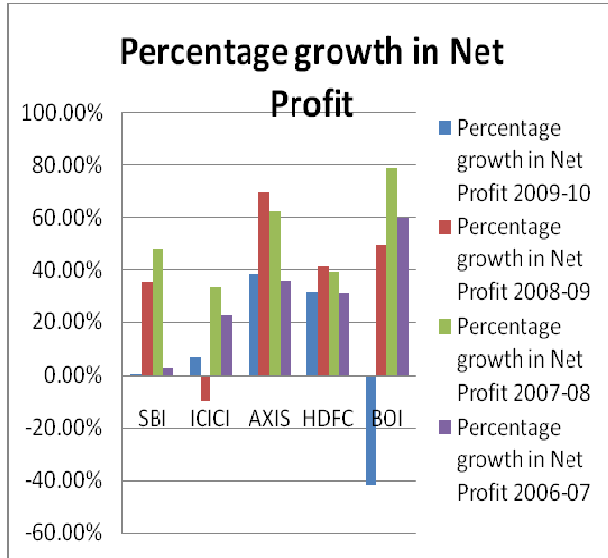
INTERPRETATION

The profit after tax would determine the efficiency of banks in using their assets and how have they generated the revenues. In 2009-10, banks generated the revenues from non core activities mainly from the treasury operations. ICICI bank has negative impact on net profit because of it having some shares in risky assets which caused the global meltdown.

B Net Interest Margin (NIM)

Net Interest Margin (NIM) is defined as the difference between interest earned and interest expended as a proportion of average total assets. Interest income includes dividend income. Interest expended includes interest paid on deposits, loans from RBI, and other short-term and long-term loans.

Net Interest Margin Chart

Net Interest Margin				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	2.25%	2.81%	3.17%	3.46%
ICICI	2.23%	2.60%	2.17%	1.96%
AXIS	2.77%	3.14%	2.95%	2.50%
HDFC	3.77%	5.20%	5.19%	5.08%
BOI	2.09%	2.81%	3.11%	3.20%

Net Interest Margin Chart
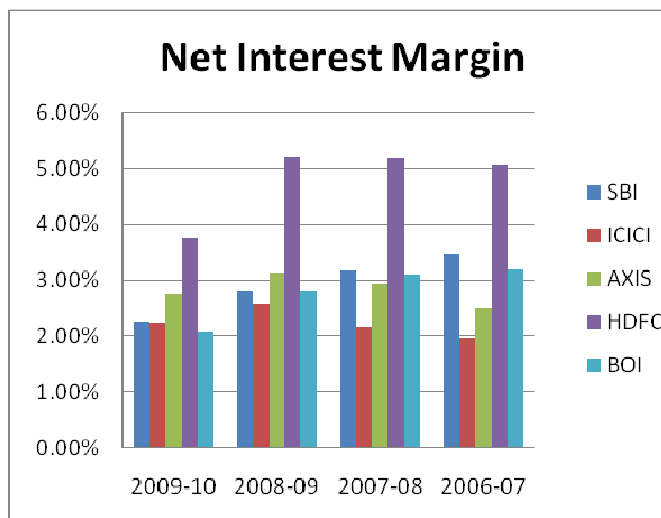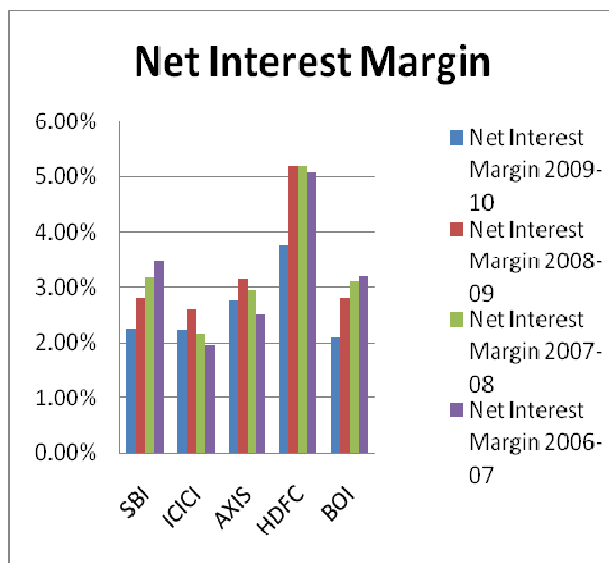
INTERPRETATION

Net interest margin (NIM) is a measure of the difference between the interest income generated by banks or other financial institutions and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their assets. It is similar to the gross margin of non-financial companies. The banks NIM depend on how the assets are utilized and how the bank is able to cope up with the changes in the economic conditions.

Net Interest margin of HDFC bank is the highest as the bank depends more on CASA and the quality of assets is also good. Management has taken care of the capital structure of the bank as they depend more on the cheaper form of debt.

C Non-interest Income/Total Funds (NII/TF)

This measures the income from operations other than lending as a percentage of Total funds. A bank's earnings quality reflects its profitability and sustainability of the same.

Non-Interest Income to Total Funds				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	1.98	2.16	2.36	2.66
ICICI	2.10	2.21	1.83	1.64
AXIS	2.13	2.50	2.36	2.00
HDFC	3.58	4.05	3.93	3.80
BOI	2.00	2.44	2.36	2.43

Non Interest Income to Total Funds Chart
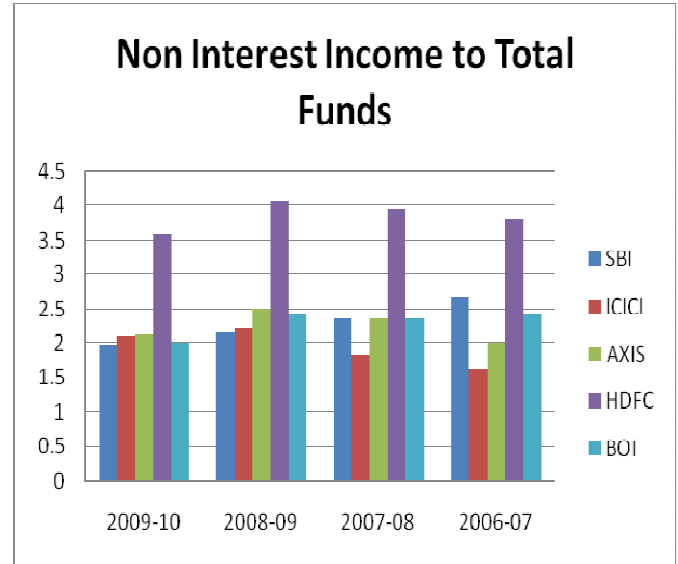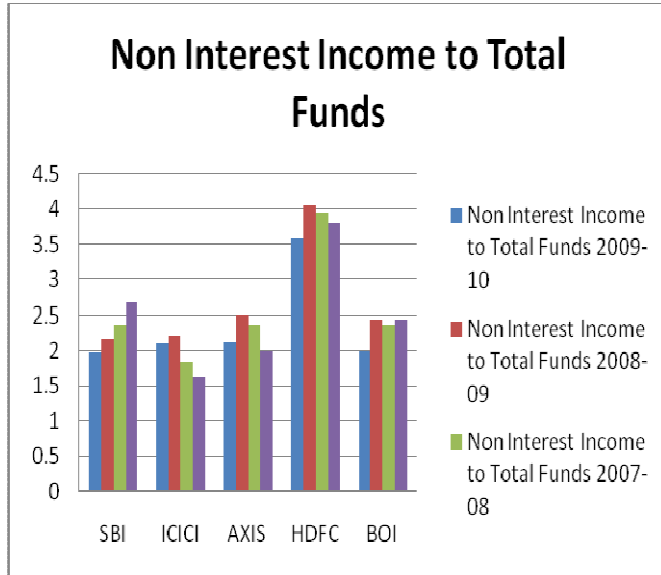
INTERPRETATION

Non Interest Income would help us to determine the ability of the bank to earn revenue from sources other than the core activities of the bank. The bank's core activities are lending and borrowing. The other activities which have developed over the years are mainly fee based activities like treasury operations and investment activities.

HDFC because its main focus on treasury operations and a strong revenue base in fee based segment has the highest ratio of 4.05 in 2008-09 and 3.58 in 2009-2010. It has tried to increase its ratio over the years to be a top player in this segment.

V) LIQUIDITY:

A Loans to Deposit Ratio :

This ratio measures the ability of a bank to meet the demand from demand deposits in a particular year.

Loans to Deposits				
Banks	**2009-2010**	**2008-09**	**2007-08**	**2006-07**
SBI	0.09	0.07	0.10	0.09
ICICI	0.47	0.43	0.27	0.22
AXIS	0.12	0.13	0.06	0.09
HDFC	0.04	0.02	0.04	0.04
BOI	0.10	0.05	0.05	0.06

Loans to Deposit Chart

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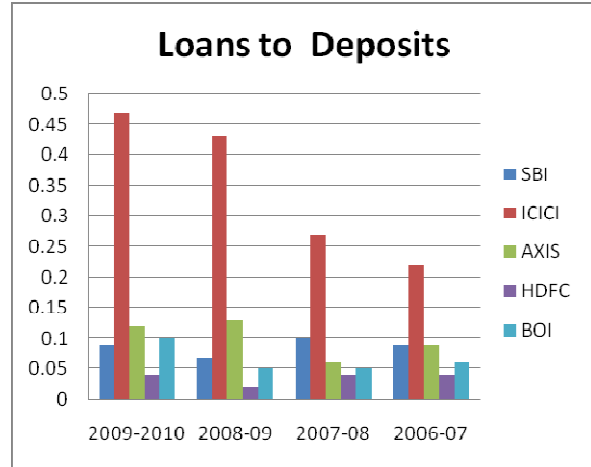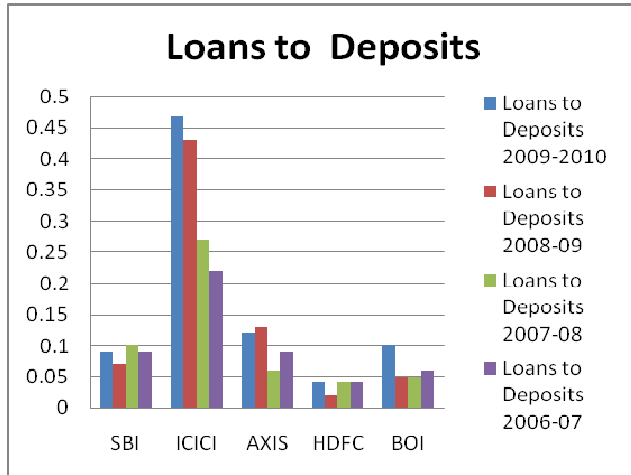
INTERPRETATION

Loans to Deposits would help to determine the capability of the banks to cater to the needs of liquidity requirements. The current account and saving account clients can ask for withdrawals at any period and if banks are not able to fulfill the requirements it would affect the liquidity as well as proper functioning of the bank.

ICICI bank and BOI have good liquidity position in the market. The liquidity in the market would be helpful to cater to short term needs, if any short term loans can be taken. But taking short term loans would be expensive.

B *Liquid Assets/Total Assets (LA/TA)*

Liquid Assets include cash in hand, balance with RBI, balance with other banks (both in India and abroad), and money at call and short notice. The ratio is arrived by dividing liquid assets by total assets.

Liquid Assets to Total Assets Table

Liquid Assets to Total Assets				
Banks	**2009-10**	**2008-09**	**2007-08**	**2006-07**
SBI	0.10	0.11	0.09	0.09
ICICI	0.09	0.08	0.10	0.11
AXIS	0.11	0.10	0.11	0.09
HDFC	0.10	0.10	0.11	0.10
BOI	0.12	0.10	0.10	0.12

Liquid Assets to Total Assets Chart
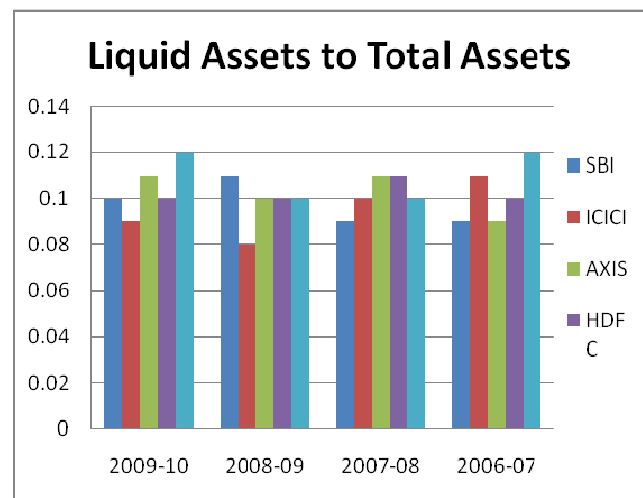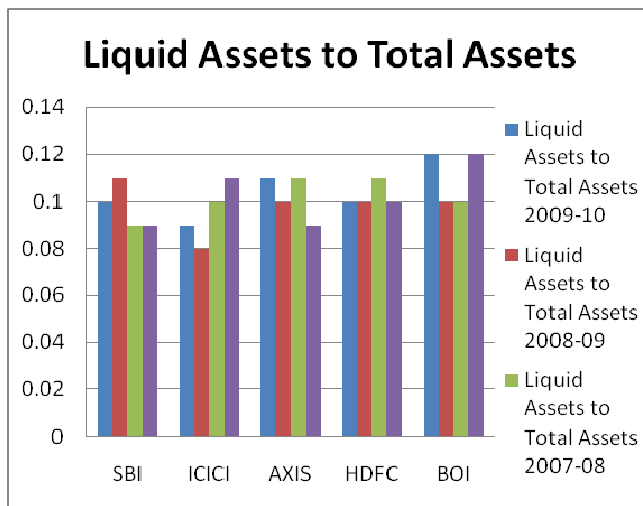
INTERPRETATION

The ratio show much part of the deposits invested into the liquidity asset, which can be easily convert in to monetary value in the time of need. In Axis bank there is a huge variation in the percentage due to changes in the liquid assets base of the bank.

The highest percentage of liquid assets to total assets is for SBI bank and it is mainly because of the fact that the bank has major investments in short term assets.

VI) SENSITIVITY TO MARKET RISK

The sensitivity to market risk is an assessment of the effect of changes in market prices, changes in interest rates, currency exchange rates, , and stock prices on the banks earnings and capital. That is evaluation of the degree which changes in market prices, changes in interest rates, currency exchange rates, and stock prices, unfavorably affect a bank's earnings and capital. Some of the important aspects that may be considered to measure the sensitivity to market risk: The sensitivity of the bank's profits or the economic value of its capital base or net equity value due to unfavorable effect in the interest rates of the market. The Banks trading and foreign operations also have an impact on the market risk.

As regards the sensitivity to market risk, Basel Committee on Banking Supervision highlights the aspects like a) sensitivity of the financial institution's net earnings or the economic value of its capital to changes in interest rates under various scenarios and stress environments, b)volume, composition and volatility of any foreign exchange or other trading positions taken by the financial institution, c) actual or potential volatility of earnings or capital because of any changes in market valuation of trading portfolios or financial instruments, and d) ability of management to identify, measure, monitor and control interest rate risk as well as price and foreign exchange risk where applicable and material to an institution.

All of the Indian Scheduled Commercial Banks have become sensitive and responsive to customers' needs as well as have very well leaped into universal banking

DATA ANALYSIS

The analysis of all the above banks on different ratios' would be done based on the ranking. Ranking would be given to each parameter of the banks. Ratios' which is good would be given as rank no. 1 and accordingly other rankings would be determined. The data for determine the ranks of banks would be based on the year 2009-10.

CAPITAL ADEQUACY:

Banks	CAR (%)		D/E (times)		ADV/AST (times)	
	2008-09	Ranks	2008-09	Ranks	2008-09	Ranks
SBI	13.39	4	12.19	4	0.60	2
ICICI	19.41	1	3.91	1	0.50	5
Axis	15.80	3	10.70	3	0.57	3
HDFC	17.44	2	7.78	2	0.56	4
BOI	12.94	5	17.95	5	0.61	1

From the above data it is clear that in Capital adequacy ICICI bank tops the list. There is adequate capital in the banks. This has lead to an increased growth of performance in the bank.

ASSETS QUALITY:

Banks	NNPA/TA (times)		NNPA/NA (times)		CH in NPA (%)	
	2008-09	Ranks	2008-09	Ranks	2008-09	Ranks
SBI	1.03	5	1.72	4	13.80	4
ICICI	0.78	3	2.12	5	-15.65	3
Axis	0.23	2	0.42	2	28	5
HDFC	0.17	1	0.31	1	-37.53	2
BOI	0.80	4	0.62	3	-65.62	1

In Asset quality Bank of India has outperformed any other bank. The bank has a good mixture of loan portfolio and prudence risk management which has led bank to perform well in this front.

MANAGEMENT EFFICIENCY:

Banks	TA/TD (times)		PPE (Rs. Lakhs)		RONW (%)	
	2008-09	Ranks	2008-09	Ranks	2008-09	Ranks
SBI	0.92	1	4.00	4	13.89	2
ICICI	0.89	2	12.00	1	10.36	5
Axis	0.78	3	12.00	1	15.67	1
HDFC	0.75	4	6.00	3	13.70	3
BOI	0.73	5	4.00	4	12.23	4

The above table indicates that ICICI bank as well as State Bank of India has been able to perform efficiently on the management front. This has led to an increase confidence in the mind of the customers and investors. The performance of HDFC has been more or less consistent throughout.

EARNINGS EFFICIENCY:

Banks	PAT growth (%)		NIM (%)		NII/TF (times)	
	2008-09	Ranks	2008-09	Ranks	2008-09	Ranks

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SBI	0.49	4	2.25	3	1.98	5
ICICI	7.10	3	2.23	4	2.10	3
Axis	38.51	1	2.77	2	2.13	2
HDFC	31.35	2	3.77	1	3.58	1
BOI	-42.11	5	2.09	5	2.00	4

From the above data it is clear that the performance of banks is different in all the three fronts, i.e. Axis bank has performed well with respect to PAT growth as well as respect to NII/TF. The bank was able to generate revenue from non core activities. So Axis bank would be leading all the other banks with respect to Earnings efficiency. SBI has not done well at all with respect to PAT growth due to provision for NPA's as well as operating cost increase due to merger of its subsidiaries. It would also determine the aggressiveness of the banks. Banks which would be more aggressive would have higher PAT growth also with higher revenues from both the core and non core activities.

LIQUIDITY

Banks	LA/DD (times)		LA/TA (times)	
	2008-09	Ranks	2008-09	Ranks
SBI	0.09	4	0.10	3
ICICI	0.47	2	0.09	5
Axis	0.12	3	0.11	2
HDFC	0.04	5	0.10	3
BOI	1.10	1	0.12	1

Bank of India has outperformed the other banks with respect to the liquidity parameter. The liquidity in banks would be helpful for the banks to cover the short term needs. Banks can borrow in the short term money market but it would affect the NII and PAT of the banks.

SENSITIVITY TO MARKET RISK

All of the Banks under study have become sensitive and responsive to customers' needs as well as have very well migrated to BASEL II norms as well as have leaped into universal banking.

CONCLUSION

With The effect of the crisis subsidizing in the global banking sector, The Indian banking sector having shown extraordinary financial performance even amidst the financial crisis.

Since liberalization the Indian banking sector has definitely come a long way, a hallmark of which has been the coming of age of the public sector banks, in particular. This Study finds that Public Sector Banks like Bank of India has done remarkable well on every CAMEL parameter. In the Case of Private Sector banks ICICI Bank has outperformed the other Private Sector Banks.

The Financial Performance in 2009-2010, proves that it is only a matter of time before the domestic banks foray abroad and with the growing globalization of Indian businesses through Mergers and Acquisitions, banks need to have global scale and size to compete effectively with their foreign counterparts, which are much bigger and efficient. With the support of the regulators Indian Banks have already started proving that they are really big and competitive.

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PASSENGER'S ATTITUDE & SATISFACTION IN RAILWAYS (SPECIAL REFERENCE TO COIMBATORE DISTRICT)

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PASSENGER'S ATTITUDE & SATISFACTION IN RAILWAYS
(SPECIAL REFERENCE TO COIMBATORE REGION)

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ABSTRACT

After 1991, the reforms process has gathered some momentum and several important decisions have been taken by the Central and State governments. There are indications that political support for deepening the economic reform process is gradually increasing. The general perception is that policy makers realize that reform is an essential pre-requisite for the economic development of India at the targeted GDP growth rate of 7-8 percent per year. With the economy on track for a planned growth at 7-8 per year, the demand for freight and passenger transport is expected to grow at around 10 percent a year. At present, however, India's transport system, especially surface transport, is highly congested, and the sector performance is poor and inefficient by international standards. One way is to improve the conditions of service to satisfy the expectations of the customers. For this it is necessary to know their attitude towards the present conditions of services provided by the Indian railways. Hence, the present study on attitude towards Indian railways.

INTRODUCTION

The economic growth of a country mainly depends on the infrastructure facilities available. Transport facility is an important aspect of infrastructure facilitating mobility of goods and people from one place to another place. To keep pace with the changing business paradigms along with its growing needs of the hour ensuring availability of sufficient transport facility is necessary. In this concept, the railways are remained as energy efficient transport mode ideally suited for long distance travel as well as perfect for bulk mode of transport.

The developing countries like India with thick population, Railway transport plays an important role in the development of the economy. The country's economy would be tampered if the railways were not in a position to provide transportation capacity and quality of service required by the growing transport market amidst the globalized scenario. The present Indian railways are characterized by challenges of market changes and increasing demand in capacity Moreover, competition is a key factor in achieving improved productivity, lower prices and higher quality of services and products that respond to the changing needs of the customers.

A certain degree of competition exists between rail and road transport, but the level of competition varies widely with volume, distance and customer needs regarding transit time, reliability of service and value of goods Indian railways can provide the necessary customers focus and compete effectively with road provided its reliability, productivity and efficiency are enhanced. So, it is imperative for Indian railways to develop innovative approach by considering customer focus and competition.

STATEMENT OF THE PROBLEM

Indian railways is one of the largest and busiest rail network in the world. It is an important form of public transportation in the country. Its operations are characterized by a dominance of traffic and long haul of bulk commodities. Since their inception 155 years ago, the railways in India have been contributing significant share to the growth of Indian economy. The social and economic development of the country also depends to a large extent upon Indian railways and for future development.

Indian railways have interesting historical turnaround in its fortunes in recent years largely due to the responsiveness of the organization to align itself to the strategy of striking unit cost and higher social obligations as a common carrier by providing affordable transport service to the masses.

Apart from this, there is also intense competition between railways and roads with substantial investment to improve the highway network in India. For the most part, the highways being improved parallel to the high density railway routes. In addition larger capacity and modern technology trucks that offer advantage of high speed, reliability and lower unit cost in its own way. Thus, the railways need to substantially improve the quality of service, customers focus and service profile to meet the challenges of more intense competition in the transport market.

In view of the above, the Indian railways are expected to provide safe, fast and comfortable service at reasonable prices and good behavior towards customers, it should also focus towards amenities provided and the service profile that meets changing customer's requirements.

As the market needs change and competition becomes more intense, Indian railway has to reinvent itself to continue playing an important role in the Indian transport market. Hence, the Indian railways are expected to change its insides aiming provision of high quality service in line with the changing atmosphere and hectic competitions and maintain and increase the share through market research.

So, a study on the attitude of the customers towards Indian railways about the services and other amenities provided is felt, which resulted into the present research work with the following objectives.

BACKGROUND OF THE STUDY

A study on railway passenger service quality valuation carried out from December 1999 to June 2000 by the organization named Steer Davies Gleave of London prepared for Shadow Strategic Rail Authority to study the importance of rail passengers into improvement of the range and

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quality of facilities and service on stations and in trains (Gleave, S. D., 2000). This study gives emphasis on monetary valuation of the improvement of service for a number of passenger groups. Key aim of this study to provides some robust parameters which can use in different circumstances of assessment of railway service. In subsequent steps of current study those parameters provide essential help to short out the service quality attributes which affect the passenger satisfaction of service regarding the particular study area. About 22 attributes were used to conduct the railway passenger quality valuation process which helps to identify the responsible attributes regarding the particular study.

Another study named service quality attributes affecting customer satisfaction for bus transit for measuring the relationship between global customer satisfaction and service attributes of public transport especially of bus transit for University of Calabria student to reach the campus from the urban area of Cossenza of southern Italy. A model proposed in this study which may useful to analyze the correlation between service quality attributes and identify the more convenient attributes for improving the supplies service (Fu, L. and Xin, Y. 2007). This study provides the methodological assistance to conduct current study to determine the relationship between rail passenger satisfaction and service attributes. Specifically multivariate technique, factor analysis, regression analysis and analysis of variance were used to estimate the interrelated dependency of attributes. In current study basically factor analysis and regression analysis used to draw the relationship between the satisfaction of service and service quality attributes of rail passengers.

Factor analysis introduced as very useful technique to summarize a large amount of data in manageable way. Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables (Lind, D. A. and Meson, R. D., 1994). Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. It may used to define a relationship among sets of many interrelated variables are examined and represented in terms of a few underlying factors (Malhotra, 2008). This technique is applicable to identify the underlying dimension or factors that explain the correlations among a set of variables (Eboli and Mazzulla, 2007). Factor analysis can be employed to determine the brand attributes that influence consumer choice (Malhotra, 2008).

OBJECTIVES OF THE STUDY
To analyze the attitude of the passengers towards facilities and convenience provided ensuring sophisticated service.
To identify the factors that influences the liking of the railway mode of the transport.
To suggest measures for improvement of the conditions of service in particular to the Coimbatore junction and Indian railways in general.

SAMPLING AND DATA COLLECTIONS
The present study analysis the attitude of the passengers. The study depended on primary data. The data was collected from the passengers who want to board or otherwise in Coimbatore junction. Coimbatore is an industrial city and an education hub and above all an upcoming IT centre. The data were obtained from the respondents by administering a questionnaire to elicit information on their socio-economic profile and their attitude towards the services provided by the Indian railways. The respondents include all sections of people who used railway service for personal purpose, official purpose or other purposes. The questionnaires are distributed to the respondents selected using convenient sampling by explaining the purpose of the study.
The collected data were statistically analyzed in order to ensure that the objectives of the study are achieved.

DATA COVERED
The issues covered in the study include the opinion recovery of rail passengers who on-board / off-board the trains are: profile of passengers, opinion of passengers on pantry car and catering facility provided by Southern railways, proper security arrangements given by the railway police force, passengers' comfort inside the compartments, excellent layout of platforms for restaurants, tea stalls, cool bars etc, amenities provided by the railways, concession given to various sections of the society, cleanliness of passengers waiting halls, platforms, compartments etc, arrangements of medical facilities for passengers provided by the railways, reservation facilities for passengers and approachability of railways staff including TTR. The data on these variables were collected using five point scale ranging from highly satisfied, satisfied, neutral, dissatisfied and highly dissatisfied.

FRAMEWORK OF ANALYSIS
In order to achieve the objectives of the study an analysis is made to understand the opinion of the passengers on various amenities. The statistical tools used are: Factor analysis and multiple regression.

I.   **Factor Analysis:** This helps to reduce the proposed factors into few, which represent a significant amount of the original one.
II.   **II. Multiple Regression:** This helps to identify the significant factors which determine the attitude towards railway customers'.

SURVEY RESULTS
The socio economic profiles of the respondents are shown in the following table:

TABLE 1 SOCIO ECONOMIC PROFILE OF THE RESPONDENTS

Variable	Profile	No. of Respondents	Percentage
Gender	Male	194	77.6
	Female	56	22.4
Age	Less than 20 years	3	1.2
	20-30 years	76	30.4
	30-40 years	100	40.0
	Above 40 years	71	28.4
Educational Qualification	Upto HSC	70	28.0
	Graduate	67	26.8
	Post Graduate	61	24.4
	Professional	36	14.4

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	Others	16	6.4
Occupation	Student	32	12.8
	Business	65	26.0
	Government	40	16.0
	Private	92	36.8
	Professionals	21	8.4
Monthly Salary	Below Rs. 5000	48	19.2
	Rs, 5001 – Rs. 10000	34	13.6
	Rs. 10001 – Rs. 15000	57	22.8
	Above Rs. 15000	111	44.4
Frequently Travel	Daily	19	7.6
	Weekly	27	10.8
	Fortnightly	29	11.6
	Monthly	53	21.2
	Others	122	48.8

It is observed from the above table that 77.6% of the respondents are male and the remaining 22.4% are female.

It is understood from the table that 40% of the respondents are belonging to the age group of 30-40 years, 30.4% of the respondents are in the age group of 20-30 years, 28.4% of the respondents are in the age group of above 40 years and others less than 20 years.

The above table shows that 44.4% of the respondents are earning a monthly income of above Rs.15000, 22.8% earn Rs.10000 to Rs.15000, 19% of them are earning between below Rs.5000 and the remaining respondents belong to the income group of Rs.5000 to Rs.10000.

Regarding the occupation of respondents is concerned, 36.8% of the respondents are working in private organizations, 26% are doing business, 16% are government employees, 12.8% are students and the remaining are professionals like doctors, lawyers etc.

It is observed regarding the frequency of travel, 48.8% of the respondents travel rarely, 21% of the respondents are traveling monthly once, 11.6% of the respondents travel once in fort night, 10.8% travel weekly once and others travel daily.

CUSTOMERS' ATTITUDE TOWARDS INDIAN RAILWAY

In the changing scenario, the competitive strength is to be constantly improved to enable a firm to provide product / service in the market with quality at cheaper price than the competitor. Hence, the passengers' attitude is analyzed and the results are given in table 2 below:

Table 2 Customers' Attitude towards of Indian Railway

Factors		Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied	Total
Pantry car and catering facility provided by southern railway **(S1)**	No.	3	43	62	91	51	**250**
	%	1.2	17.2	24.8	36.4	20.4	**100**
Proper security arrangements given by the Railway Police Force **(S2)**	No.	6	41	125	65	13	**250**
	%	2.4	16.4	50.0	26.0	5.2	**100**
Passenger's comfortness inside the Compartment **(S3)**	No.	-	8	44	142	56	**250**
	%	-	3.2	17.6	56.8	22.4	**100**
Excellent lay out of platforms for Restaurant, tea stalls, cools Bars etc **(S4)**	No.	9	53	116	55	17	**250**
	%	3.6	21.2	46.4	22.0	6.8	**100**
Amenities provided by the railways **(S5)**	No.	-	3	39	100	108	**250**
	%	-	1.2	15.6	40.0	43.2	**100**
Concession given to various sections of the society **(S6)**	No.	-	10	34	103	103	**250**
	%	-	4.0	13.6	41.2	41.2	**100**
Cleanliness of passengers waiting halls, platforms, compartments, etc **(S7)**	No.	-	7	54	122	67	**250**
	%	-	2.8	21.6	48.8	26.8	**100**
Arrangement of medical facilities for passenger provided by the railways **(S8)**	No.	14	56	123	49	8	**250**
	%	5.6	22.4	49.2	19.6	3.2	**100**
Reservation facilities for passengers **(S9)**	No.	5	35	70	123	17	**250**
	%	2.0	14.0	28.0	49.2	6.8	**100**
Approachability of railway staff including TTR **(S10)**	No.	6	8	36	129	71	**250**
	%	2.4	3.2	14.4	51.6	28.4	**100**

It is understood from the above table that 36.4% and 20.4% of the respondents are satisfied and highly satisfied to the pantry car and catering facilities provided by southern railway and 1.2% and 17.2% of the respondents are highly dissatisfied and dissatisfied with the facility.

As far as proper security arrangement given by the railway police force, 26% and 5.2% are satisfied and highly satisfied respectively and 16.4% and 2.4% are dissatisfied and highly dissatisfied.

56.8% and 22.4% of the respondents are satisfied and highly satisfied respectively to the fact that passengers are carryout inside the compartment and only 3.2% of the respondents dissatisfied to the fact.

Regarding excellent layout of platforms for restaurant, tea stalls, cool bars etc. 22% and 6.8% of the respondents are satisfied and highly satisfied and 21.2% and 3.6% of the respondents are dissatisfied and highly dissatisfied to the fact.

It is a telling fact that 40% and another 43.2% of the respondents have been satisfied and highly satisfied to the various amenities provided by the railways.

As far as the concession given to various sections of the society 41.2% each of the respondents have been satisfied and highly satisfied.

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48.8% and 26.8% of the respondents respectively satisfied and highly satisfied to the fact of cleanliness of the waiting halls, platforms, compartments etc 19.6% and 3.2% of the respondents are satisfied and highly satisfied to the variable the medical facilities provided by the railway and 22.4% and 5.6% of the passengers are dissatisfied and highly dissatisfied to the fact.

As far as reservation facilities are concerned, 49.2% and 6.8% of the respondents have satisfaction and high level of satisfaction with the facility. 51.6% and 28.4% of the respondents are satisfied and highly satisfied with approachability of the railway staff including TTR.

FACTOR ANALYSIS

The factor analysis is a powerful and useful statistical as an analytical approach to determine the underlying forces or factors among a large number of interdependent variable or measures. This method extracts common factor variables from a set of observations and groups the number of variables into a smaller set of uncorrelated factors which tell what variables belong together or which one virtually measure the same things.

This technique is used to identify the factors affecting passenger attitude towards southern railways from 250 respondents in the Coimbatore region. As a first step, the data are tested to know the whether it suits factor analysis. The following steps have been taken for the purpose:

The correlation matrices are computed and examined. It reveals that there are enough correlations to go ahead with factor analysis.

Anti-image correlations were computed. These showed that partial correlations were low, indicating that true factors existed in the data.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) for individual variables are studied from the diagonal of partial correlation matrix (Table 3). It is found to be sufficiently high for all variables. The measure can be interpreted with the following guidelines: 0.90 or above, marvelous: 0.80 or above, meritorious; 0.70 or above, middling; 0.60 or above, mediocre; 0.50 or above miserable, and below 0.50, unacceptable.

To test the sampling adequacy, Kaiser-Meyer-Olkin measure of sampling adequacy is computed, which is found to be 0.638. It is indicated that the sample is good enough for the study.

The overall significance of correlation matrix is tested with the Bartlett test of Sphericity for attitude of railway passenger (approx. chi-square = 264.830, which is significant at 0.000) as well as support for the validity of the factor analysis of the data set.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.638
Bartlett's Test of Sphericity	Approx. Chi-Square	264.830
	Df	45
	Sig.	0.000

Hence, all these standards indicated that the data is suitable for factor analysis. For extracting factors we have employed 'principal components analysis' and 'latent root criterion and rotation method- orthogonal rotation with Varimax' was also applied. As per the latent root criterion, only the factors having latent roots or Eigen values greater than 1 are considered significant; and all the other factors with latent roots less than 1 are considered insignificant and disregarded.

IDENTIFICATION OF FACTORS AFFECTING ATTITUDE OF RAILWAY PASSENGER

After the standards indicated that the data are suitable for factor analysis, principal components analysis was employed for extracting the data, which allowed determining the factors underlying the relationship between a number of variables. The total variable explained suggests that it extracts one factor accounts for 58.948 percent of the variance of the relationship between variables (Table 4).

Table 4: Extraction Method: Principal Component Analysis
Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.321	23.214	23.214	2.321	23.214	23.214	1.877	18.774	18.774
2	1.273	12.726	35.940	1.273	12.726	35.940	1.451	14.507	33.281
3	1.171	11.708	47.648	1.171	11.708	47.648	1.427	14.272	47.553
4	1.130	11.300	58.948	1.130	11.300	58.948	1.140	11.395	58.948
5	.926	9.265	68.212						
6	.786	7.856	76.069						
7	.747	7.467	83.536						
8	.666	6.659	90.195						
9	.516	5.161	95.356						

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Extraction Method: Principal Component Analysis.

Loading on factors can be positive or negative. A negative loading indicates that this variable has an inverse relationship with the rest of the functions. However, Comrey (1973: 1346) suggested that anything above 0.44 could be considered salient, with increased loading becoming more vital determining the factor. All the loading in the present research are positive (Table 5).

Table 5: Extraction Method: Principal Components Analysis

	Communalities	
	Initial	**Extraction**
S1	1.000	0.544
S 2	1.000	0.402
S 3	1.000	0.633
S 4	1.000	0.576
S 5	1.000	0.624
S 6	1.000	0.612
S 7	1.000	0.671
S 8	1.000	0.474
S 9	1.000	0.736
S10	1.000	0.625
Note: 'S' stands for Variables		

Rotation is necessary when extraction technique suggests that there are two or more function. The rotation of factors is designed to give an idea of how the factors unlimitedly extracted differ from each other and to provide a clear picture of which item loads on which factor.

There are only four factors, each having Eigen value exceeding one. The Eigen values for four factors were 2.321, 1.273, 1.171 and 1.130 respectively (Table 4). The percentage of total variance is used as an index to determine how well the total factor solution accounts for what. The variable together represent index for the present solution accounts for 58.948 percent of the total variations for choosing a passenger attitude. It is pretty good extraction as it can economies the number of factors (from ten it has reduced to four factors) while we have lost 41.052 percent information content. The percentage of variance explained by factor one to four factors affecting the attitude towards railways are 23.214, 12.726, 11.708 and 11.350 respectively (Table 4). The table 5 tells as that after four factors are extracted is retained, the communality is 0.544 for variable 1, 0.402 for variable 2, and so on. It means that 54 percent of the variance of variable 1 is being accepted by the four extracted factors together. The proportion of variance on any one of the original variables, which is being captured by the extracted factor, is known as communality (Nargudkar 2002).

Large communalities indicate that a large number of variance has been accounted for by the factor solution. Varimax rotated factor analytic results for factor determining the attitude of the passengers is shown in table 6.

The four factors extracted have been shown in table 6 below;

Table 6 NAME OF THE FACTORS

Naming of Factors	Name of the Dimensions	Label Loading	Name of the Problems	Factor Loading
F1		S2	Adequacy security arrangement	0.541
		S3	Passengers' comfort inside the train	0.653
		S4	Excellent lay out of platforms for Restaurant, tea stalls, cools Bars etc	0.539
	Amenities and Safety Measures	S8	Provisions of medical facilities	0.689
		S10	Approachability of railway staff	0.529
		S5	Amenities provided	0.511
F2	**Facility for Reservation**	S9	Adequacy of facilities for reservation	0.723
F3	**Cleanliness**	S7	Cleanliness for waiting halls, platforms, comportment, etc.	0.646
F4	**Concession and Catering Facility**	S1	Pantry car and catering facilities	0.587
		S6	Concession given to various sections of society	0.731

Factor 1: Amenities and Safety Measures
This factor describes the amenities and safety measures provided by railways. It is the most crucial factor which explains 23.214 of the variations and includes six variables S2, S3, S4, S8, S10 and S5.

Factor 2: Facilities for Reservation
It is the second important factor which covers adequacy of facilities for reservations.

Factor 3: Cleanliness
It is identified as cleanliness expected by the passengers in the waiting halls, platforms and compartments.

Factor 4: Concession and Catering Facility
It is last factor among the four factors identified and named as concession and catering facilities which includes pantry car and catering facilities and concession given to various relations of the society.

REGRESSION ANALYSIS
Multiple regressions are basically a predictive tool. The result is obtained by analyzing a set of independent variables to predict a dependent variable. The general equation for a multiple regression can be written as bellow:

$Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + ... + B_n X_n + E$, Where B_0 = A constant, the value of Y when all X values are zero. B_1 = The slope of the regression surface of the response surface, and B represents the regression coefficient associated with each X_1 and E = An error term, normally distributed about a mean 0. For the purpose of computation, E is assumed to be 0.

The regression coefficient can either be stated in raw score units (the actual X values) or as standardized coefficients. In either case, the value of regression coefficient states the amount that Y varies with each unit change of the associated X variables, when the effects of all other X variables are being held constant. When the regression coefficient are standardized, they are called beta weights (B), and their values indicate the relative importance of the associated X values, particularly are unrelated.

The above equation can be built either with all variables, specific combinations or a selected method that sequentially adds or removes variables. Forward selection starts with the constant and adds variables that results in the largest R square increase. Backward elimination begins with a model containing all independent variables and remove the variables changes R square the least. The independent variable that contributes the most in explaining the dependent variable is added first. Subsequent variables are included based on the incremental contribution over the first variables and whether they meet the criterion for entering the equation. Care should be taken to ensure that the independent variable must not be correlated among themselves, as it highly affects the overall result. This situation is called multicollinearty.

The factor analysis shows that some of the variables are highly correlated among each other. This leads to multicollinearity. The highlighted parameter under each factor is used to run the multiple regressions resulting that a all the parameters are statically significant at 5% and at 1% level.

The results are shown in the following table 7.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R^2
		B	Std. Error	Beta			
1	(Constant)	-0.285	0.224		-1.272	0.205**	0.296
	S3	0.356	0.060	0.342	5.897	0.000*	
	S7	0.135	0.054	0.138	2.530	0.012*	
	S2	0.139	0.051	0.154	2.710	0.007*	
	S6	0.148	0.050	0.160	2.944	0.004*	
	S4	0.130	0.046	0.158	2.828	0.005*	

a Dependent Variable: S5
            *: Significant at 5 %   **: significant at 1% level.
Here, using the B value of the unstandardized coefficients, the following regression equation is formed:
Attitude towards a particular variable = -0.285 +0.356 S3 + 0.135 S7 + 0.139 S2 + 0.148 S6 + 0.130 S4

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	152.187	14	10.871	9.862	.000*
Residual	534.605	485	1.102		
Total	686.792	499			

        Dependent Variable: S5

The analysis of variance of multiple regression model for S5 indicates the overall significance of the model. The coefficient of determination R^2 value shows that the six variables put together explains the variations of amenities is adequate (S5) to the extent of 20.5 %.

Thus, it is concluded that the step wise multiple regression analysis (Partial Model) for the variable Y, dependent variable the amenities is adequate is adequate (S5) has esteemed a functional relation between Y with the predictor variables S3, S7, S2, S6 and S4 and these five variables have significantly contributed to amenities is adequate is adequate (S5) to the extend of 29.6%. The model has excluded the other variables.

FINDINGS
The following are the findings based on the present study:
1.   The Indian Railways have to pay more attention towards Passengers' comfort inside the train, Cleanliness for waiting halls, platforms, comportment, etc., Adequacy security arrangement, Concession given to various sections of society, Excellent lay out of platforms for Restaurant, tea Stalls, cools Bars etc.
2.   Provision of adequate amenities is the factor which has great influence over the other factors selected for the study, so the railway administration may concentrate its attention towards it.

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CONCLUSION

In conclusions, protect their market share and viability, the railways have, different degrees, responded with a recognized management structure – that focuses on business and customers, improved asset and staff productivity, redefined service profiles to match changing customer requirements, targeting of higher – margin market segments and shedding of non-core activities. As per the present study the railways have to focus their attention towards the four factors like amenities and safety measurement, facilities for reservation, cleanliness and concession and catering facilities. Essentially, the railways have had to transform themselves to market-responsive entities in order to remain in business. The fundamental change has been that service is tailored to meet the specific needs of the customer, and pricing varies accordingly.

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MEASURING QUALITY OF WORK LIFE: AN INTEGRATION OF CONCEPTUAL RELATIONSHIP WITH PRODUCTIVITY

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ABSTRACT

This empirical study was done for Measuring Quality of Work life (QWL) in textile industry and examines the conceptual relationship with productivity. This study adopts the four dimensions, namely Welfare measures, Inter-personal relations, Work life balance and Growth & Security. The sample consists of employees specifically workers from the weaving mills. Several studies commonly correlates with job satisfaction but no study on QWL has associated with its productivity. The study is based on data obtained from primary sources. A well structured questionnaire was developed and personally administered to the respondents. Descriptive analysis was used to discuss a profile of the respondents. Factor analysis was used to reduce insignificant variables. An independent sample t-test and one way ANOVA were then conducted to compare the perception means groups with different demographic characteristics. This study identifies the determinant factors of QWL and its impact on productivity. The result indicates that among the above four dimensions of QWL, Welfare measures are the most influencing factor for higher productivity and organisational achievements.

KEY WORDS

Quality of Work life, Productivity, Welfare measures and Work life Balance.

INTRODUCTION

Economic downturn has hit industries, companies and functions within organisations. The most hit of all the functions appears to be human resource management, Employer hiring has been halted ,budget on training and development has been halted, budget on training and development has been hacked, employee have been hacked, employees have been laid off, salaries have been slashed. All these happenings are visible , talked of , and have hit headlines in newspapers and TV channels . Indian organisations have increased sizably in the last few years , However , the success rate is very low because of the mismatch and failure to manage the human resource properly. After the liberalization, Privatization and Globalization (LPG) process in the early 1995 , the organizations have come to understand the fact that the people are the centre of the whole system . For creating a performing organization and to sustain the performance , HR orientation needs to be top – down and should also involve the line managers to ensure sustainable peak performance . It is evident that most of the problems in an organization are human related , as human beings are dynamic and complex. Hence , to manage the human resource in any sector is a challenging job. Moreover, unless organizations learn to tune human resources, success will be elusive.

QUALITY OF WORK LIFE

"Quality of work life refers to programmes designed to create a workplace that enhances employee well-being" (Thomas S. Bateman and Scott A. Snell: 2003). Mirvis and Lawler (1984) suggested that Quality of working life was associated with satisfaction with wages, hours and working conditions, describing the "basic elements of a good quality of work life" as; safe work environment, equitable wages, equal employment opportunities and opportunities for advancement. Lawer (1982) defines, QWL in terms of job character tics and work conditions, highlights that the core dimension of the entire QWL in the organization is to improve employees well being and productivity.

Organisations, in past, gave mere importance on advanced technology for higher productivity surpassing the need and mental state of it employees. This crated a negative impact on the working environment among the employees. Thus it was realised that societal support goes hand in hand with technical innovations. This innovation can only be made through quality of work life programmes. Quality of work life denotes all the organisational inputs which aim at the employee's satisfaction and enhancing organisational effectiveness.QWL is the degree of excellence brought about work and working conditions which contribute to the overall satisfaction and performance, primarily at the individual level but finally at the organisational level. Quality of working life has assumed increasing interest and importance in both industrialised as well as developing countries of the world. In India, its scope seems to be mere broader than many labour legislation enacted to protect the workers. It more than a sheer work organisation movement which focuses on job security and economic growth to the employees.

LITERATURE REVIEW

Procedural justice concerns the fairness of the ways used to determine the distribution of resources among employees (Greenberg, 1990). Shore and Shore (1995) suggested that repeated instances of fairness in decisions concerning resource distribution should have a strong cumulative effect on POS by indicating a concern for employees' welfare. It is suggested that human resources practices showing recognition of

employee contributions should be positively related to POS. A variety of rewards and job conditions have been studied in relation to POS—for example, recognition, pay, promotions, job security, autonomy, role stressors, and training.

By autonomy, we mean employees' perceived control over how they carry out their job, including scheduling, work procedures, and task variety. Autonomy has traditionally been highly valued in Western culture (Geller, 1982; Hogan, 1975). Just as employees form global perceptions concerning their valuation by the organization, they develop general views concerning the degree to which supervisors value their contributions and care about their well-being (i.e., perceived supervisor support; Kottke & Sharafinski, 1988). Because supervisors act as agents of the organization, having responsibility for directing and evaluating subordinates' performance, employees view their supervisor's favorable or unfavorable orientation toward them as indicative of the organization's support (Eisenberger et al., 1986; Levinson, 1965).

In some studies, employees were asked to evaluate the fairness of their outcomes relative to a reference group (i.e., distributive justice; Greenberg, 1990). In other studies, in which employees were asked simply to evaluate the favorableness of outcomes without a specified reference group, they presumably made such comparisons implicitly.

METHODOLOGY

A number of attempts have been made to identify various dimensions of this concept. Keeping in view, this study was carried out in the Textile sector, more specifically in weaving mills in Tamilnadu. The target group were directly engaged with the weaving process of warping, sizing, drawing, looming and inspection activities.

The study is based on data obtained from primary sources. A well structured questionnaire was developed and personally administered to the respondents. The questionnaire consists of 25 Likert's 7 point scale items. Nearly half of the items are phrased positively and half negatively. A positively worded statement is one for which a very satisfied participant would select "strongly Agree", A negatively worded statement is one for which a very satisfied participant would check "strongly disagree", Stamps (1997). The present study examines the determinants of QWL in textile mills and Study the relationship between determinants of QWL and organisational productivity.

Figure: 1

Hypothetical Relationship Model for *QWL*
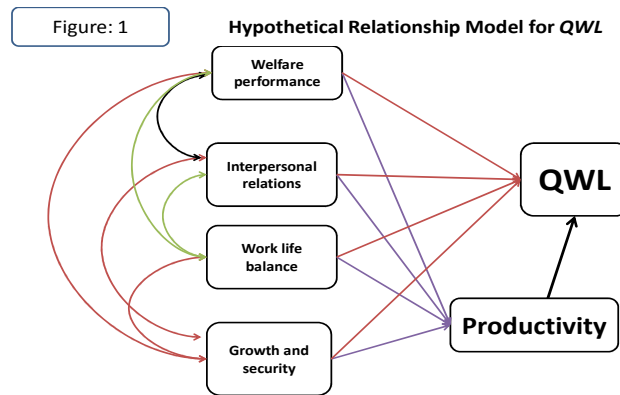
ANALYSIS AND DISCUSSIONS

Descriptive analysis was used to discuss a profile of the respondents. Factor analysis was used to reduce insignificant variables. An independent sample t-test and one way ANOVA were then conducted to compare the perception means groups with different demographic characteristics. More than half of the respondents were male. All respondents were under 55 years of age and the majority of them were in the age group of 18-25 years. The education level of the majority of the respondents was above schooling.

Table: 1   Respondents' profile

Factor	Items	Basis	Frequency	Percentage
D1	Gender	Male	104	53.30
		Female	091	46.70
D2	Age group	18 -25 years	57	29.20
		26 -35 years	97	49.70
		36 -35 years	36	18.50
		46 -55 years	05	02.60
D3	Educational level	Schooling	104	53.33
		Diploma/ ITI	043	22.05
		UG Graduates	025	12.83
		PG Graduates	023	11.79
D4	Marital status	Single	113	57.90
		Married	082	42.10

Source: Primary Data

Independent t-test and one way ANOVA were used to test the differences between groups in terms of D1,D2,D3, D4 and demographic characteristics of the sample . The findings showed that there was no significant difference in terms of gender, marital status, age group and income level. The test (Bonferronil showed that the Diploma and ITI (Technical) group had a significantly higher factor score on welfare measure than the other group. Principal component factor analysis with Varimax rotation was used on the 25 items that assessed determinants of QWL and its relationship on productivity,

Table : 2 Factor Mean score

Dimensions	Loading	Mean	Mean Average
Welfare Measures			
Fair & Equitable Compensation	0.821	5.58	
Safety and Healthy work place	0.826	5.63	
Extramural amenities	0.746	5.28	
Wage Balance/ Favourable job conditions	0.763	5.60	5.473
Social insurance	0.622	5.30	
Recreation facilities	0.561	5.45	
Interpersonal relations & Participation			
Freedom and Autonomy	0.568	5.42	
Inter departmental co-operation	0.650	5.20	
Supportive work culture	0.638	5.43	5.256
Good relationship with superior	0.790	5.01	
Proper communication system	0.621	5.22	
Work life balance			
Influence on family routine	0.714	4.68	
Leisure possibilities	0.701	5.19	4.935
Time of work & Rest	0.726	5.05	
Solitude	0.848	4.82	
Growth & Security			
Professional growth	0.862	4.03	
Constitutionalism	0.528	5.23	4.515
Security of employment	0.640	3.87	
Promotional prospects	0.638	4.93	

Source: Primary data

The Bartlett test of sphericity was significant (Bartlett's test of sphericity = 2148.562, significance = .000) and the Kaiser-Meyer – Olkin measure of sampling adequacy was larger than 0.6 (KMO = 0.887). This showed that the use of factor analysis was appropriate. Nineteen of the 25 items in the questionnaire were reduced to four factors with factor loadings greater than 1.0. These factors were used in the subsequent independent sample t-test, one way ANOVA and Multiple regression analysis. The resultant factor structure explained 63.36% of the variance. The four factor mean scores and the loadings of each item are listed in Table No.2. The overall reliability of the scale was satisfactory, since the Cronbach's alpha co-efficient was equal to 0.8126. In addition, all dimensions rendered standard co-efficient larger than 0.7 and the reliability co-efficient of each factor ranged from 0.724 to 0.882. Welfare measures, which was composed of six items (alpha = 0.876) accounted for 42.246% of the variance and it had the highest mean score (5.47) among the four dimensions. Interpersonal relations, which was composed of five items (alpha = -8815), accounted for 9.555% of the variance and held the second highest mean score (5.256) among the four dimensions. Work life Balance, which was include four items (alpha = .8011) and accounted for 6.862% of the variance and it had the Third position among the four dimension, (Mean score = 4.8935). Growth and Security, which was the fourth factor with four items (alpha = .7221) explaining 5.821% of the variance and having the lowest mean score (4.515).

Table No. 3

Relationship between four Dimensions and Quality of work life

Relationship between four Dimensions and Quality of work life			
Dimensions	**β**	**Beta**	**Sig. T**
Welfare measures	0.423	0.412	0.001
Interpersonal relations	6.547E-02	0.083	0.283
Work life Balance	0.176	0.181	0.008
Growth and Security	0.214	0.199	0.004

Source: Primary data

As per the results of Multiple regression model shown in the Table No:3, the relationship between four dimension and quality of work life are inter-related, the Welfare measures, Work life balance and Growth and Security were statistically significant (Sig. T < 0.05). In addition, Welfare measures had a greatest influence towards Quality of Work life.

Table No. 4

Relationship between four Dimensions and Productivity

| Relationship between four Dimensions and Productivity			
Dimensions	**β**	**Beta**	**Sig. T**

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Welfare measures	0.231	0.252	0.000
Interpersonal relations	0.292	0.298	0.001
Work life Balance	0.310	0.301	0.001
Growth and Security	-1.413E-02	-0.016	0.837

Source: Primary data

More over from the four dimensions, all dimensions except Growth and Security, showed statistically significance, (Sig. T < 0.05) (Table No.4). In addition, the strongest correlation was found with Welfare measures in this relationship analysis.

CONCLUSION

After analysing the relationship among QWL indicators, the following conclusions can be made. There is a positive correlation between QWL and some factors, such as Welfare Measures, Interpersonal relations & Participation, Work life balance and Growth & Security. The QWL indicators are potentially influence both QWL and productivity. This QWL and productivity relationship is diagrammatically presented in Figure:2.
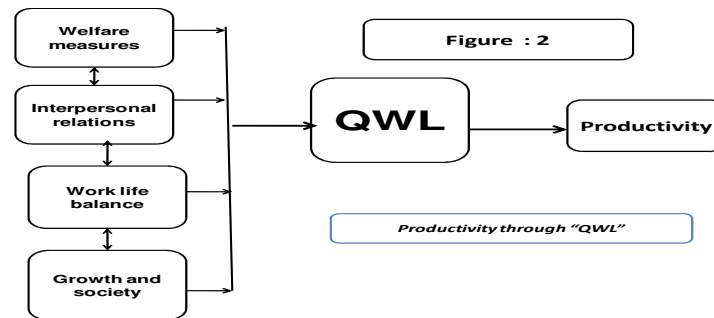
The interdependence between QWL and other common factors are not disturbed evenly when social cultural background is taken in to consideration. To conclude, QWL is viewed as a wide ranging concept which includes adequate welfare facilities, inter personal relationship, workers participation and social integration in the work organisation that enables an individual to develop and use all his capabilities towards knowledge based workforce. In an increasing competitive environment, it is difficult to separate Home and Work life. Employees today are more likely to express a strong desire to have a harmonious balance among carrier, family life and leisure activities. So that it is necessary for organisations to help employees to balance their work and non work demands (Lewis, 1977). To create a proper quality of work life, there has to be balance between organisation leadership, organisation structure and individual employee (Thomas S. Bateman and Scott . A..Snell, 2003). Quality of work life efforts assume that employees will add to an organisations success if they feel that their contributions are meaningful and important, (Wheelen and Hunger: 2000). Rather than using specific short term programmes, effective organisations secure employee involvement through adequate fair compensation, Safety and Healthy environment, Professional growth, Social integration, Solitude, Interpersonal relations and participation, Team building, suggestion systems and quality circles. Therefore organisations are required to adopt a strategy to improve the employees' quality of work life to satisfy both the organisational objective and employee needs in order to improve the productivity. Learning opportunities and skill discretion have also proven to have a positive effect on job satisfaction and reduced job stress that will lead to better QWL. An organisation need to promote and maintains a favourable work environment that results, excellence in Freedom and Autonomy, Solitude, Balancing of work and family life, Good relationship with superiors and Supportive work culture.

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E-BANKING MANAGEMENT: IMPACT, RISKS, SECURITY

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ABSTRACT

In its very basic form, E-banking can mean the provision of information about a bank and its services via a home page on the World Wide Web (WWW). E-banking is fast becoming a norm in the developed world, and is being implemented by many banks in developing economies around the globe. The main reason behind this success is the numerous benefits it can provide, both to the banks and to customers of financial services. For banks, it can provide a cost effective way of conducting business and enriching relationship with customers by offering superior services, and innovative products which may be customized to individual needs. For customers it can provide a greater choice in terms of the channels they can use to conduct their business, and convenience in terms of when and where they can use E-banking.

The evolution of electronic banking (E-banking) started with the use of automatic teller machines (ATMs) and has included telephone banking, direct bill payment, electronic fund transfer and online banking. According to some, the future direction of E-banking is the acceptance of mobile telephone (WAP-enabled) banking and interactive-TV banking. However, it has been forecast by many that online banking will continue to be the most popular method for future electronic financial transactions. Electronic funds transfer (EFT), refers to the computer-based systems used to perform financial transaction electronically. The term is used for a number of different concepts including electronic payments and cardholder-initiated transactions, where a cardholder makes use of a payment card such as a credit card or debit card. Card-based EFT transactions are often covered by the ISO 8583 series of standards.

KEYWORDS

E-banking, E-banks, E-commerce, E-marketing.

INTRODUCTION

In order for customers to use their banks online services they need to have a personal computer and Internet connection. Their personal computer becomes their virtual banker who will assist them in their banking errands. Examples of E-banking services that customers can get online are:

Attaining information about accounts and loans,

Conducting transfers amongst different accounts, even between external banks,

Paying bills,

Buying and selling stocks and bonds by depot,

Buying and selling fund shares39

These services that are offered by E-banking are changing and being improved because of the intense competition between the banks online. Banking industry must adapt to the electronics age, which in its turn is changing all the time. EFT transactions require authorization and a method to authenticate the card and the card holder. Whereas a merchant may manually verify the card holder's signature, EFT transactions require the card holder's PIN to be sent online in an encrypted form for validation by the card issuer. Other information may be included in the transaction, some of which is not visible to the card holder (for instance magnetic stripe data), and some of which may be requested from the card holder (for instance the card holder's address or the CVV2 security value printed on the card). EFT transactions are activated during E-banking procedures. Various methods of E-banking include:

Telephone banking

Online banking

Short Message Service (SMS) banking

Mobile banking

Interactive-TV banking.

Independent of location or time, you can execute your payments and stock market orders and you get detailed information on your accounts and custody accounts. What is E-banking?

In its very basic form, E-banking can mean the provision of information about a bank and its services via a home page on the World Wide Web (WWW). More sophisticated E-banking services provide customer access to accounts, the ability to move their money between different accounts, and making payments or applying for loans via e-Channels.

To understand the electronic distribution of goods and services, the work of Rayport and Sviokla (1994; 1995) is a good starting point. They highlight the differences between the physical market place and the virtual market place, which they describe as an information-defined arena. In the context of E-banking, electronic delivery of services means a customer conducting transactions using online electronic channels such as the Internet?

Many banks and other organizations are eager to use this channel to deliver their services because of its relatively lower delivery cost, higher sales and potential for offering greater convenience for customers. But this medium offers many more benefits, which will be discussed in the

next section. A large number of organizations from within and outside the financial sector are currently offering E-banking which includes delivering services using Wireless Application Protocol (WAP) phones and Interactive Television (iTV).

Many people see the development of E-banking as a revolutionary development, but, broadly speaking, E-banking could be seen as another step in banking evolution. Just like ATMs, it gives consumers another medium for conducting their banking. The fears that this channel will completely replace existing channels may not be realistic, and experience so far shows that the future is a mixture of "clicks (E-banking) and mortar (branches)". Although start up costs for an internet banking channel can be high, it can quickly become profitable once a critical mass is achieved.
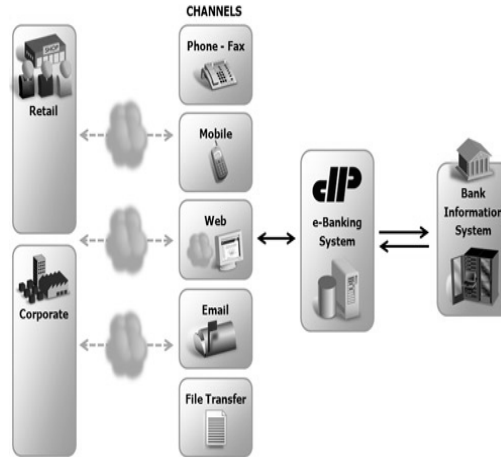
(Figure 1: E-banking System)

WHY IS E-BANKING IMPORTANT?

Understanding E-banking is important for several stakeholders, not least of which is management of banking related organizations, since it helps them to derive benefits from it. The Internet as a channel for services delivery is fundamentally different from other channels such as branch networks, telephone banking or Automated Teller Machines (ATMs). Therefore, it brings up unique types of challenges and requires innovative solutions. Many banks and other organizations have already implemented or are planning to implement E-banking because of the numerous potential benefits associated with it.

IMPACT OF E-BANKING ON TRADITIONAL SERVICES

One of the issues currently being addressed is the impact of E-banking on traditional banking players. After all, if there are risks inherent in going into E-banking there are other risks in not doing so. It is too early to have a firm view on this yet. Even to practitioners the future of E-banking and its implications are unclear. It might be convenient nevertheless to outline briefly two views that are prevalent in the market. The view that the Internet is a revolution that will sweep away the old order holds much sway. Arguments in favor are as follows:

o   E-banking transactions are much cheaper than branch or even phone transactions. This could turn yesterday's competitive advantage - a large branch network, into a comparative disadvantage, allowing e-banks to undercut bricks-and-mortar banks. This is commonly known as the "beached dinosaur" theory.

o   E-banks are easy to set up so lots of new entrants will arrive. 'Old-world' systems, cultures and structures will not encumber these new entrants. Instead, they will be adaptable and responsive. E-banking gives consumers much more choice. Consumers will be less inclined to remain loyal.

o   E-banking will lead to an erosion of the 'endowment effect' currently enjoyed by the major UK banks. Deposits will go elsewhere with the consequence that these banks will have to fight to regain and retain their customer base. This will increase their cost of funds, possibly making their business less viable. Lost revenue may even result in these banks taking more risks to breach the gap.

Portal providers are likely to attract the most significant share of banking profits. Indeed banks could become glorified marriage brokers. They would simply bring two parties together – e.g. buyer and seller, payer and payee.

The products will be provided by monoclines, experts in their field. Traditional banks may simply be left with payment and settlement business – even this could be cast into doubt. Traditional banks will find it difficult to evolve. Not only will they be unable to make acquisitions for cash as opposed to being able to offer shares, they will be unable to obtain additional capital from the stock market. This is in contrast to the situation for Internet firms for whom it seems relatively easy to attract investment. There is of course another view which sees E-banking more as an evolution than a revolution. E-banking is just banking offered via a new delivery channel. It simply gives consumers another service (just as ATMs did). Like ATMs, E-banking will impact on the nature of branches but will not remove their value.

Traditional banks are starting to fight back. The start-up costs of an e-bank are high. Establishing a trusted brand is very costly as it requires significant advertising expenditure in addition to the purchase of expensive technology (as security and privacy are key to gaining customer approval). E-banks have already found that retail banking only becomes profitable once a large critical mass is achieved. Consequently many e-banks are limiting themselves to providing a tailored service to the better off. Nobody really knows which of these versions will triumph. This is something that the market will determine. However, supervisors will need to pay close attention to the impact of E-banks on the traditional banks, for example by surveillance of:

o   Strategy
o   Customer levels
o   Earnings and costs

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o   Advertising spending
o   Margins
o   Funding costs
o   Merger opportunities and threats.
RISKS
Strategic Risk –
A financial institution's board and management should understand the risks associated with E-banking services and evaluate the resulting risk management costs against the potential return on investment prior to offering E-banking services. Poor E-banking planning and investment decisions can increase a financial institution's strategic risk. On strategic risk E-banking is relatively new and, as a result, there can be a lack of understanding among senior management about its potential and implications. People with technological, but not banking, skills can end up driving the initiatives. E-initiatives can spring up in an incoherent and piecemeal manner in firms. They can be expensive and can fail to recoup their cost. Furthermore, they are often positioned as loss leaders (to capture market share), but may not attract the types of customers that banks want or expect and may have unexpected implications on existing business lines.
Banks should respond to these risks by having a clear strategy driven from the top and should ensure that this strategy takes account of the effects of E-banking, wherever relevant. Such a strategy should be clearly disseminated across the business, and supported by a clear business plan with an effective means of monitoring performance against it.
Business risks –
Business risks are also significant. Given the newness of E-banking, nobody knows much about whether E-banking customers will have different characteristics from the traditional banking customers. They may well have different characteristics. This could render existing score card models inappropriate, this resulting in either higher rejection rates or inappropriate pricing to cover the risk. Banks may not be able to assess credit quality at a distance as effectively as they do in face to face circumstances. It could be more difficult to assess the nature and quality of collateral offered at a distance, especially if it is located in an area the bank is unfamiliar with (particularly if this is overseas). Furthermore as it is difficult to predict customer volumes and the stickiness of E-deposits (things which could lead either to rapid flows in or out of the bank) it could be very difficult to manage liquidity.
Of course, these are old risks with which banks and supervisors have considerable experience but they need to be watchful of old risks in new guises. In particular risk models and even processes designed for traditional banking may not be appropriate.
Transaction/operations risk –
Transaction/Operations risk arises from fraud, processing errors, system disruptions, or other unanticipated events resulting in the institution's inability to deliver products or services. This risk exists in each product and service offered. The level of transaction risk is affected by the structure of the institution's processing environment, including the types of services offered and the complexity of the processes and supporting technology.
In most instances, E-banking activities will increase the complexity of the institution's activities and the quantity of its transaction/operations risk, especially if the institution is offering innovative services that have not been standardized. Since customers expect E-banking services to be available 24 hours a day, 7 days a week, financial institutions should ensure their E-banking infrastructures contain sufficient capacity and redundancy to ensure reliable service availability. Even institutions that do not consider E-banking a critical financial service due to the availability of alternate processing channels, should carefully consider customer expectations and the potential impact of service disruptions on customer satisfaction and loyalty.
The key to controlling transaction risk lies in adapting effective polices, procedures, and controls to meet the new risk exposures introduced by E-banking. Basic internal controls including segregation of duties, dual controls, and reconcilements remain important. Information security controls, in particular, become more significant requiring additional processes, tools, expertise, and testing. Institutions should determine the appropriate level of security controls based on their assessment of the sensitivity of the information to the customer and to the institution and on the institution's established risk tolerance level.
Credit risk –
Generally, a financial institution's credit risk is not increased by the mere fact that a loan is originated through an E-banking channel. However, management should consider additional precautions when originating and approving loans electronically, including assuring management information systems effectively track the performance of portfolios originated through E-banking channels. The following aspects of on-line loan origination and approval tend to make risk management of the lending process more challenging. If not properly managed, these aspects can significantly increase credit risk.
Verifying the customer's identity for on-line credit applications and executing an enforceable contract;
Monitoring and controlling the growth, pricing, underwriting standards and ongoing credit quality of loans originated through E-banking channels;
Monitoring and oversight of third-parties doing business as agents or on behalf of the financial institution (for example, an Internet loan origination site or electronic payments processor);
Valuing collateral and perfecting liens over a potentially wider geographic area;
Collecting loans from individuals over a potentially wider geographic area;
Monitoring any increased volume of, and possible concentration in, out-of-area lending.
Liquidity, interest rate, price/market risks - Funding and investment-related risks could increase with an institution's E-banking initiatives depending on the volatility and pricing of the acquired deposits. The Internet provides institutions with the ability to market their products and services globally. Internet-based advertising programs can effectively match yield-focused investors with potentially high-yielding deposits. But Internet-originated deposits have the potential to attract customers who focus exclusively on rates and may provide a funding source with risk characteristics similar to brokered deposits. An institution can control this potential volatility and expanded geographic reach through its deposit contract and account opening practices, which might involve face-to-face meetings or the exchange of paper correspondence. The institution should modify its policies as necessary to address the following E-banking funding issues:
Potential increase in dependence on brokered funds or other highly rate-sensitive deposits;
Potential acquisition of funds from markets where the institution is not licensed to engage in banking, particularly if the institution does not establish, disclose, and enforce geographic restrictions;

Potential impact of loan or deposit growth from an expanded Internet market, including the impact of such growth on capital ratios;
Potential increase in volatility of funds should E-banking security problems negatively impact customer confidence or the market's perception of the institution.

Reputational risks –

This is considerably heightened for banks using the Internet. For example the Internet allows for the rapid dissemination of information which means that any incident, either good or bad, is common knowledge within a short space of time. The speed of the Internet considerably cuts the optimal response times for both banks and regulators to any incident.

Any problems encountered by one firm in this new environment may affect the business of another, as it may affect confidence in the Internet as a whole. There is therefore a risk that one rogue E-bank could cause significant problems for all banks providing services via the Internet. This is a new type of systemic risk and is causing concern to E-banking providers. Overall, the Internet puts an emphasis on reputational risks. Banks need to be sure that customer' rights and information needs are adequately safeguarded and provided for.

Security:

Security is one of the most discussed issues around E-banking.

E-banking increases security risks, potentially exposing hitherto isolated systems to open and risky environments.

Security breaches essentially fall into three categories; breaches with serious criminal intent (fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (genuine users seeing / being able to transact on other users' accounts). All of these threats have potentially serious financial, legal and reputational implications.

Many banks are finding that their systems are being probed for weaknesses hundreds of times a day but damage/losses arising from security breaches have so far tended to be minor. However some banks could develop more sensitive "burglar alarms", so that they are better aware of the nature and frequency of unsuccessful attempts to break into their system.

The most sensitive computer systems, such as those used for high value payments or those storing highly confidential information, tend to be the most comprehensively secured. One could therefore imply that the greater the potential loss to a bank the less likely it is to occur, and in general this is the case. However, while banks tend to have reasonable perimeter security, there is sometimes insufficient segregation between internal systems and poor internal security. It may be that someone could breach the lighter security around a low value system.

It is easy to overemphasize the security risks in E-banking. It must be remembered that the Internet could remove some errors introduced by manual processing (by increasing the degree of straight through processing from the customer through banks' systems). This reduces risks to the integrity of transaction data (although the risk of customer's incorrectly inputting data remains). As E-banking advances, focusing general attention on security risks, there could be large security gains.

Financial institutions need as a minimum to have:

•   A strategic approach to information security, building best practice security controls into systems and networks as they are developed

•   A proactive approach to information security, involving active testing of system security controls (e.g. penetration testing), rapid response to new threats and vulnerabilities and regular review of market place developments.

•   sufficient staff with information security expertise

•   Active use of system based security management and monitoring tools.

•   Strong business information security controls.

These are the issues line supervisors will be raising with their banks as part of their on-going supervision.

E-MARKETING

E-marketing in the financial services sector (which is covered later) was made possible by the arrival of E-banking. E-marketing builds on the E-channel's ability to provide detailed data about customers' financial profiles and purchasing behavior. Detailed understanding of customers enables customized advertising, customized products and enrichment of the relationship with customers through such activities as cross selling. Other potential benefits of E-banking to organizations may include: improved use of IT resources and business processes; better relationships with suppliers/ customers; quick delivery of products and services; and a reduction in data entry and customer services related errors.

It is important to note that e-channels do not automatically bring these benefits, as other organizational issues also have been dealt with. There are only a few examples reported in the literature where E-banking is realizing its promised potential. One such example is the Royal Bank of Canada, where its number of online relationships was 340,000 and was growing at a rate of almost 700 new enrolments a day during year 2002-2003. Another example of realizations of the above benefits is the Woolwich Building Society in the UK, which is described in Chapter VIII? The number of its online customer was growing so fast that it was cited as one of the main reason for its takeover by a much bigger bank, Barclays. Not only did the number of its online customer grow very quickly, but the new customer base was also very profitable. According to Woolwich's own figures, its online customers bought four financial products each - much higher than its 'branch banking only' customers.

CONCLUSION

This paper introduced the main theme, E-banking, covered in the paper. It has set the background, defined E-banking, and briefly discussed its evolution and importance to the banking industry and customers worldwide.

In conclusion E-banking creates issues for banks and regulators alike. For their part, banks should:

Have a clear and widely disseminated strategy that is driven from the top and takes into account the effects of E-banking, together with an effective process for measuring performance against it.

Take into account the effect that e-provision will have upon their business risk exposures and manage these accordingly.

Undertake market research, adopt systems with adequate capacity and scalability, undertake proportional advertising campaigns and ensure that they have adequate staff coverage and a suitable business continuity plan.

Ensure they have adequate management information in a clear and comprehensible format.

Take a strategic and proactive approach to information security, maintaining adequate staff expertise, building in best practice controls and testing and updating these as the market develops. Make active use of system based security management and monitoring tools.

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Ensure that crisis management processes are able to cope with Internet related incidents.

One of the benefits that banks experience when using E-banking is increased customer satisfaction. This due to that customers may access their accounts whenever, from anywhere, and they get involved more, this creating relationships with banks.

Banks should provide their customers with convenience, meaning offering service through several distribution channels (ATM, Internet, physical branches) and have more functions available online. Other benefits are expanded product offerings and extended geographic reach. This means that banks can offer a wider range and newer services online to even more customers than possible before.

The benefit which is driving most of the banks toward E-banking is the reduction of overall costs. With E-banking banks can reduce their overall costs in two ways: cost of processing transactions is minimized and the numbers of branches that are required to service an equivalent number of customers are reduced.

With all these benefits banks can obtain success on the financial market. But E-banking is a difficult business and banks face a lot of challenges.

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THE INDIAN RURAL MARKET – AN UNTAMED TIGER

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ABSTRACT
In recent years, rural markets of India have acquired significance, as the overall growth of the Indian economy has resulted into substantial increase in the purchasing power of the rural communities. On account of green revolution, the rural areas are consuming a large quantity of industrial and urban manufactured products. In this context, a special marketing strategy, namely, rural marketing has emerged. Rural India with its traditional perception has grown over the years, not only in terms of income, but also in terms of thinking. The rural markets are growing at above two time's faster pace than urban markets; not surprisingly, rural India accounts for more than 50% of the total national demand. Today, rural market occupies a larger part of our economy and it is expected to grow at least four times the existing size. Another contributing factor for rural push was growing saturation in urban markets.

KEY WORDS
Rural Market, Consumer, Competition, Saturation.

INTRODUCTION
The Indian Rural Market has always been an area of darkness for the Indian entrepreneur's. It is a huge area and every organization knows about it but its sheer size and unstructured distinction making its detailing very difficult for any plan. Rural India, which in itself is an economy and presents an enormous potential market, accounting for 64% of country's total consumer base.

India is a country where 794.5 million of the total population of 1,100 million people which is almost 72% (according to the 2001 census) living in the villages. There are almost 593,731 inhabited villages in the country spread across its length and breadth. Different kinds of occupation in Indian villages reflect the base of their socio-economic culture. Since the ancient period, the Indian villagers have been involved in various activities which is still being followed of which agriculture has been the primary activity, whereas the secondary activities comprise of animal husbandry, fisheries and forestry, pottery, carpentry, etc. The country's per capita income has risen to less than $810 or approximate Rs. 38000[i] as against the per capita of 2006-2007 of $ 697[ii] or Rs 31605 approximately. The village people are poorer than the city folk with an monthly average income of Rs 2115[iii] or Rs 25380 p.a. If we talk about the contribution of agriculture to the GDP, it stands at around 17%[iv] as of in 2007-2008 from the entire amount of $ 1.209[v] however this is the best part of because though the contribution in the year 2005-06 was on the higher side of around 19%[4] the share of agriculture in absolute terms from the GDP in 2008 which grew from $1.09 trillion stood at a lower amount. This way though Agriculture's share of the GDP was lower but in relative terms there was an increase in the income of a farmer due to better cultivation techniques, better input material and proper pricing of products.

IMPORTANCE OF RURAL MARKET
The first half of the twentieth century, the rural population was more into traditional approach of consumption where it was very difficult to change the mindsets as certain practices had been imbibed in the daily lifestyle of the people. For them the product their grandparents used was the only product they should use. But with the rapid change of time, rural India has now started to demand and adopt newer products due to increase in income and education. Earlier they used products like neem/ Indian Lilac or babul tree twitch for oral care but today they have switched to better refined products like tooth powder or tooth paste. Children are asking for chocolate candies. Face cream have replaced basal (chickpea flour) as face cleansers.

Some data to highlight the prospects of Rural Market
☞   Government Expectations and Steps being taken[vi]
The rural consumer market, which grew 25 per cent in 2008, is expected to reach US$ 425 billion in 2010-11 with 720-790 million customers, according to a white paper prepared by CII-Technopak, in November 2009. The figures are expected to double the 2004-05 market size of US$ 220 billion.

The number of rural households earning less than US$760 a year is down from 65% to 24% since 1993, while those with an income of US$1,525 have more than doubled from 22% to 46%.[vii]

The Union Budget for 2010-11 has hiked the allocation under the National Rural Employment Guarantee Act (NREGA) to US$ 8.71 billion in 2010-11, giving a boost to the rural economy.

All villages to be broadband-enabled by 2012[viii].

A study by the Chennai-based Francis Kanoi Marketing Planning Services says that the rural market for FMCG is worth $14.4 billion, far ahead of the market for tractors and agri-inputs which is estimated at $10 billion. Rural India also accounts for sales of $1.7 billion for cars, scooters and bikes and over one billion dollars of durables. In total, that represents a market worth a whopping $27 billion. It is no wonder that even MNCs have cottoned on to the idea of a resurgent rural India waiting to happen.[ix]

☞   Urban v/s Rural demand
In shampoos, rural demand grew by 10.7 per cent in value terms, while in urban markets, it rose by 6.8 per cent.

Toothpaste sales grew by 9.1 per cent in rural India and by 4.4 per cent in urban markets.

Maruti Suzuki's share of rural sales has increased from 3.5 per cent to 17 per cent in the last three years.

Mahindra & Mahindra (M&M) is now selling more Scorpios in rural and semi-urban markets. Scorpio sales have increased from 35 per cent to 50 per cent in the last two years.

In 2005 Coke ventured into the hinterland. In 2009, Coke's rural growth of 37 per cent far outstrips its urban growth of 24 per cent.[x]

Appreciating the size and business potential of the rural market, major companies including are ready with special strategy specifically targeting rural markets[xi].

Several fast moving consumer goods (FMCG) companies such as Godrej Consumer Products, Dabur, Marico and Hindustan Unilever (HUL) have increased their hiring in rural India and small towns in order to establish a local connect and increase visibility.

Toyota Kirloskar Motor (TKM), in which Japan's Toyota Motor Corp holds an 89 per cent controlling stake, is planning at selling 40 per cent of its cars in rural markets in India.

Hero Honda, the two wheeler market leader, is planning to cover 1 lakh out of the six lakh villages by end of this financial year under a campaign called Har Gaon, Har Aangan (Every Village, every Household)[xii]. Yamaha is also planning a major initiative in rural India by launching more models in the affordable price range in 2010.

Tata Motors is also making efforts to sell its pick up truck Ace in rural markets. It has already opened 600 small outlets for the Ace in rural and semi-urban markets. It has also tied up with 117 public sector banks, gramin (rural) banks and co-operative banks to help small entrepreneurs buy the vehicle.

Castrol India is pushing its rural sales by building up a distribution infrastructure to reach out to all villages.

Direct selling firm Tupperware India, known for its storage containers plans to foray into the rural markets in the next two-three years.

Swiss FMCG giant, Nestle plans to make further inroads into the rural markets. The company has asked its sales team to deliver 6,000 new sales points every month in rural areas.

FACTORS THAT WORK IN FAVOR OF RURAL MARKET

- #### VIRGIN MARKET
It offers a great chance for different branded goods as well as services for large number of customers. It is estimated by HLL that out of 5 lakh villages in India , only 1 lakh has been taped so far, which goes on to indicate the market potentials of the rural market . Above all the rural household form about 72% of total household constituting a huge market for any product by any standard.

- #### INCREASING INCOME
Different programs undertaken by the Government of India like passing of the act 'Mahatma Gandhi National Rural Employment Guarantee Act' under which 100 days of employment guarantee[xiii] has helped in improving the economic situation of the rural areas. The increase in income is seen in both absolute values as well as in the increase in average number of days of occupation in a year.

- #### SPREAD OF TELEVISION AND DTH SERVICE
Spread of television to nook and corner of the country and with advent of regional language channels, has changed the scope and extent of viewing with rural and small towns constituting 60 percent of TV sets holders in the country. This has lead to a quicker spread of news and information to the fragmented market leading to easier access to a prospective market to the marketer. Today with the advent of Direct to Home (DTH) networks it has become easier for government as well as companies to spread message to their targeted audience. Many companies in DTH and entertainment channels[xiv] also share the idea of Government of India that DTH can be a dependable source. According to the new DTH service providers, including Airtel Digital TV, Videocon D2H and Reliance Big TV, around 65% of their new subscribers are from rural and semi-urban areas. Also, 40% of the DTH subscribers are first time viewers of cable and satellite services.[xv]

- #### SPREAD OF COMMUNICATION NETWORK
Mobile market penetration is projected to increase from 38.7% in 2009 to 63.5 % in 2013. India had 109.7 million rural mobile subscribers at the end of the first quarter of 2009, up by 18 percent from 93.2 million users in the fourth quarter of 2008. Gartner says this growth is primarily attributed to the operators increasing their focus on the rural market, local consumer durable and electronic companies entering the domestic mobile handset segment, and lower handset prices. Thomson Reuters has been updating over one lakh farmers in the country with the latest market trends, weather forecast, and crop information via its SMS-based service. The subscription can be bought for a period of three, six or 12 months at a price of Rs 60 per month. The content is available in local languages such as Marathi and Punjabi. Thomson Reuters now plans to extend this mobile service to nine more states.[xvi]

- #### EDUCATION
The rate of growth of literacy in the decade ending 2001 has been higher in the rural areas, at 14.75 per cent as compared to the 7.2 per cent increase in urban areas. Despite these improvements literacy in urban areas was 80.3 per cent and that in rural areas 59.4 per cent.[xvii] This shows that the rural areas which were traditionally a market that bought goods without verifying with the quality now through education is slowly but surely acquiring the power to judge between the good and the bad quality.

- #### SATURATION URBAN MARKET
The urban market is getting saturated and thus is enable to provide the much needed market to many companies and in search of greener pastures many of these companies are now targeting the rural market.

MAJOR HURDLES IN THE RURAL MARKET

- #### Seasonal Demand
Demand for goods in rural markets depends upon agricultural situation, as agriculture is the main source of income. Agriculture to a large extent depends upon monsoon and, therefore, the demand or buying capacity is not stable or regular.

- #### Transportation
Many rural areas are not connected by rail transport.

- #### Distribution
An effective distribution system requires village-level shopkeeper, Mandal / Taluka - level wholesaler or preferred dealer, distributor or stockiest at district level and company-owned depot or consignment distribution at state level. The presence of too many tiers in the distribution system increases the cost of distribution.

- #### Media for Promotions

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Television has made a great impact and large audience has been exposed to this medium. Radio reaches large population in rural areas at a relatively low cost. However, reach of formal media is low in rural households; therefore, the market has to undertake specific sales promotion activities in rural areas like participating in melas or fairs.

- Cultural Factors

Culture is a system of shared values, beliefs and perceptions that influence the behavior of consumers. There are different groups based on religion, caste, occupation, income, age, education and politics and each group exerts influence on the behavior of people in villages. There is a belief among rural people that experience is more important than formal education and they respect salespersons who can offer practical solutions to their problems. Therefore, it is desirable that sales persons, especially those who have been brought up in cities are given a thorough training consisting of both theory and practical aspects of village life. The training will help these sales persons to align themselves with the market realities and settle down smoothly in their jobs. Rural market has a tremendous potential that is yet to be tapped. A small increase in rural income, results in an exponential increase in buying power.

CONCLUSION

Companies and marketers will have to understand the needs and demands rural customers before they can make inroads in to rural makers. The size of the rural market is fast expanding. Arvind mills decision on marketing its Ruff & Tuff brand in the rural market was met with astounding success. In the first two months itself the demand had crossed a million pieces. Britannia too ventured with its basic product, biscuits with brand called Tiger. This brand is statically gaining market share and is also creating new markets. Coca Cola, the market leader in the urban areas developed a completely new bottle priced at Rs 5 which was specifically targeted to compete with the products like tea and coffee in the rural area and it had even designed advertisement promo's and signed Aamir Khan the brand ambassador as his movie 'Lagaan' had just released which had rural background so people will be able to associate him better. ITC's e-chaupal initiative to equip the rural farmers, HLL's project Shakti to empower rural human consumers through income generation project are some the examples, which have opened new vistas in rural marketing.

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