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RESEARCH PAPERS

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Chief Editor Message

As SUMEDHA Journal of Management Twenty first issue, We look forward to the momentous growth of our Journal, increasing in their appeal, readership and relevance to the fast-changing world of Business Management. During these six years journey our journal has been critically evaluated by various institutions with similar line of interest and faculty fraternity. We have been consistently seeking advice from experts to continuously improve the quality of the journal. Our journal has got Impact Factor from Index Copernicus value 5.20, ISRA Journal Factor 2.318, Global Impact factor - 0.787. On behalf of the Management, Editorial Board and Editorial Team, I express my profound gratitude to all our authors, reviewers, readers and patrons for offering their overwhelming support and I anticipate a continued and lively partnership for years to come.

All of us recognize the necessity for change, which results in progress. It gives way to new ideas and perspectives reflecting the current and emerging environment, which builds on the solid foundations of the past.

Last but not least valuable would be your response and suggestions on this issue. Kindly send us your views so that we can keep on upgrading our journal.

Thanking you

Dr. A Kotishwar
Chief Editor

Banking Inclusion-A Gateway to Financial Inclusion

– Sibi. M. S*
– Dr. A. A. Ananth**

Abstract

Financial inclusion is the road that India needs to travel towards becoming a global player. Financial access will attract global market players to our country and that will result in increasing employment and business opportunities.Banking industry has shown tremendous growth in volume of operations, efficiency and use of technology to provide financial services during the last few decades.Measurement of Financial Inclusion implies to evaluate the extent of accessibility, availability and usage of financial services like saving, credit, insurance, and remittance facilities, among many other such services.Access to basic banking services provides congenial conditions for growth of individuals, households and private institutions. Also, social factors like unemployment and illiteracy are closely connected to the success of financial inclusion. Thus, a sustainable social development can be simultaneously achieved alongside Financial Inclusion.Finance has become an essential part of an economy for development of the society as well as economy of the nation. For this purpose a strong financial system is required not only in underdeveloped countries and developing countries, but also in developed countries for sustainable growth.A major business opportunity is for the banks in developing a stable, retail deposit base and in curbing volatility in earnings with the help of a diversified portfolio. The recent crisis has, in fact, underscored the need for reducing banks' reliance on wholesale deposits and borrowed funds and cultivating a retail portfolio of asset and liabilities for financial stability. This study is based on secondary data; it is measure the factors influencing financial inclusion in Tamilnadu. Principal Component Analysis has used to co-coordinate the data.

Keywords:Financial Inclusion, Banking Inclusion, Principal Component Analysis, Micro Financial Institutions, NGOs and Banking Stability.?

Introduction

The goals of financial inclusion can be met largely by the initiative of banking sector to cut across various strata of society, regions, gender and income and encourage the public to embrace banking habit. Also, Reserve Bank of India, as the chief regulator has intervened for the success of financial inclusion by various enactments, financial literacy drives, leveraging technology, etc.

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Importance of financial inclusion can be summarized as below:

If an individual is financially educated, he will make better financial choices, for example what kind of financial products can fulfill his individual needs? It will help in improving the overall growth of the country. Access to financial services at an affordable cost will improve the life of the poor. Financial inclusion is a long term strategy, but to achieve its objectives we need to keep in mind the key areas it should address:

- It should provide access to basic financial services like banking etc.
- The usage of financial services should address the needs of the poor.
- The financial product should be affordable.
- Quality of product and services must be enhanced.

Recent development plays an important role in improving financial inclusion because of the following reasons:

- It helps to reduce cost of the product.
- Reduces transaction cost.
- Improves quality of the product.
- Helps in increasing choices and flexibility to customer.

All of the above reasons contribute to increasing the utility of the financial product.

Statement of the Problem

One of the most discussed topics in the current competitive economy is financial Inclusion; it can be consummated a better financial system. Financial Inclusion leads to social safety and ensuring timely adequate credit where needed by society or individual.The center for Financial Inclusion, through Financial Inclusion 2020 project, has been working to frame a vision for Financial Inclusion that is shaped by the recognition that access to suitable financial services is a critical enabler of quality-of-life improvements and economic developments. Generating sustainable and equitable socio-economic growth through increased Financial Inclusion has become the central mantra for regulators and policy makers across the globe. In this direction Financial Inclusion has emerged as a policy imperative for inclusive growth. For this Inclusive growth Government of India and RBI introduced different financial services through Banks, Micro Financial Institutions, SHGs, and NGOs, etc. But still a section of people is financially excluded.

The externality of symmetric information between Financial Inclusion and the population may be the main cause of this exclusion, besides the unavailability of financial services like Bank accounts, Immediate Credit, Saving products, Remittances and Payment services, financial advisory services,

etc. Unfamiliar about the services are available, paucity of income and collateral assets are the possible causes of financial exclusion. On the other hand unavailability of transportation facilities, economic viability of the extension branch, etc. are the common problems facing financial inclusion in extending financial services to the people. Many researches point out that majority of Financial Inclusion business targets have not reached the people. The main reason is supply side agenda fails to access. This research is an attempt to find out the accessibility of financial services through banking inclusion in Tamilnadu.

Need for the Study

Finance is very essential for every economic activity. Without adequate finance no activity can be undertaken. Finance is required for every section of the society. Access to finance by all the section of individuals is very difficult. This is due to various reasons such as lack of financial services, banking facilities, unawareness about the banking services, lack of substantial income, etc. Financial inclusion is one of the best ways to access the financial services to the society and individuals. Financial inclusion can develop economic activities. For the past five decades the GOI and RBI have been motivating or taking some initiatives for the development of financial inclusion. It can help to develop the society.

The need of the FI is not only to the individuals but also to the policy makers, GOI and RBI. So this study will enable in understanding the Financial Inclusion penetration and innovative practices which can give direction to future efforts. The objective of the research is primarily to find out the present scenario of financial inclusion in Tamilnadu. Financial inclusion is new exemplar of economic growth which plays a major role in driving away the poverty.

Research Gap

Financial inclusion is required to uplift the society by providing them the customized financial products and services. This leads to inclusive growth in encompassing the deprived and marginal sections. This research intends to look at the changes occurred in conditions of Tamilnadu by considering the appropriate variable to test.

Back in the 1980's, the Prime Minister late Shri Rajeev Gandhi stated that of every one rupee spent on development only 15 paise reach the poor. Reserve bank of India set up the Khan commission in 2004 to look into financial inclusion and the recommendations of the commission were incorporated into the mid-term review of the policy (2005-2006) and urged banks to review their existing practices to align them with objective of Financial Inclusion in 2005, the planning commission found that for every rupee the government spends on the targeted public distribution system only 27 paisa reaches the poor. However, the progress is far from satisfactory as evidenced by the World Findex Survey (2012).According to the survey findings, only 35 percent of Indian adults had access to a formal bank account and 8 percent borrowed formally. Only 2 percent of adults used an account to receive money

from a family member living in another area and 4 percent used an account to receive payment from the government.

The present study attempts to assess financial Inclusion in Tamilnadu and analyses the trends and patterns of economic inequality across Tamilnadu districts. The basic objective here is to understand the dynamics of growth in the country, which results in regional imbalance and proper measuring for alleviating the problem.

Review of Literature

The essence of Financial Inclusion is in trying to ensure that a range of appropriate financial services is available to every individual, enabling them to understand and access those services. Financial Inclusion does not require that everyone who is eligible uses each of these services but they should be able to choose them if they desire to use them (Bluebook, 2006). Financial Inclusion is an inclusive development and Poverty Reduction strategy that manifests itself as part of the emerging FI-PR-MDG nexus. However, given the current global crises, the need to scale-up Financial Inclusion is now perhaps more important as a complementary and incremental approach to work towards meeting the MDGs than at any other time in recent history (Michael Chibba, 2009).The role of financial institutions in a developing country is vital in promoting financial inclusion. The efforts of the government to promote financial inclusion and deepening can be further enhanced by the pro-activeness on the part of capital market players including financial institutions. Financial institutions have a very crucial and a wider role to play in fostering financial inclusion. National and international forum have recognized this and efforts are seen on domestic and global levels to encourage the financial institutions to take up larger responsibilities in including the financially excluded lot (Joseph Massey, et al., 2010).

Banking industry in India has undergone dramatic changes. Previously the banks would target the rich customers. As a result, the have-nots or the bottom-line customers of the pyramid were ignored. They belonged to low-income group and had to take resort of moneylenders or informal lenders for taking advance/loan at exorbitant rate of interest. This situation cannot uplift the poor people and will make them destitute in the long run. Access to finance, especially by the poor and vulnerable groups, is an essential requisite for employment, economic growth, poverty alleviation and social upliftment. Here lies the importance of financial inclusion. Financial inclusion or inclusive financing is the delivery of financial services at affordable costs to sections of disadvantaged and low-income segments of the society. The Government of India has taken a number of initiatives so that the banks can serve the poor in a hassle-free manner. In this article, an attempt has been made to highlight the pros and cons of financial inclusion in India. The majority of people living in rural areas remain excluded from the purview of the financial institutions even after 64 years of independence. Reaching out to the hither-to unreached segment of population and providing basic financial services is the need of the hour. India's fastest growing economies have become possible through financial inclusion. In spite of that, still there are large segments of the society outside the financial system (Swapan Kumar Roy, 2012).

The initiatives taken by India through RBI in achieving FI and the efforts made by the banks and other organizations in India for offering financial services and financial products as envisaged under the financial inclusion scheme, on the basis of the objectives, data derived from the RBI reports and other empirical studies **(Gandhi, 2013)**. FI is the delivery of financial services at affordable costs to the society. The researcher pointed that financial services is essential that availability of banking and payment services to the entire population without discrimination is the prime objective of the public policy. And there is more need to educate and create new instruments for daily wage earners and also make them a part of FI **(Hema Divya, 2013)**.

That financial inclusion is a fundamental issue for governments and policymakers around the world. It is estimated that, at the beginning of 2000s, half of the world's adult population had no account at a formal financial institution, and three quarters of poor people were unbanked.Financial inclusion can be measured along several main dimensions. One dimension refers to accessibility and corresponds to the range of financial services that are available to, or that can be mobilized by, peoples. A second dimension measures usage, i.e. the extent to and ways in which people actually make use of the services they can access. A third dimension refers to the quality of the services, i.e. how well they fit with the needs of people. Yet another, fourth dimension assesses how financial inclusion can actually influence the decisions of economic agents and increase economic well-being **(IFC bulletin, 2015).**

Objective of the study

- To measure the factors influencing financial inclusion in Tamilnadu.

Research methodology

The present study is analytical in nature and data has collected from Tamil Nadu State Level Bankers Committee Member (Indian Overseas Bank).Principal Component Analysis has used to measure the data. The sample period is for 5 years which extends from 2012 to 2015. XLSTAT-2016 Statistical software package has been used for coordinating the data and undertaking the statistical analysis.

Results and Discussion

Principal component Analysis used in this thesis to find out the new components of financial inclusion and reduce the dimensions of a financial Inclusion. PCA fix the size of correlation, club together the variables with loadings in excess of the criteria and search for a concept that unifies them, with greater attention to variables having higher loadings. Variables has ordered and grouped by the size of loadings to facilitate interpretation.

Total Variance withinBranch Inclusion, Credit Inclusion, Deposit inclusion and information inclusion

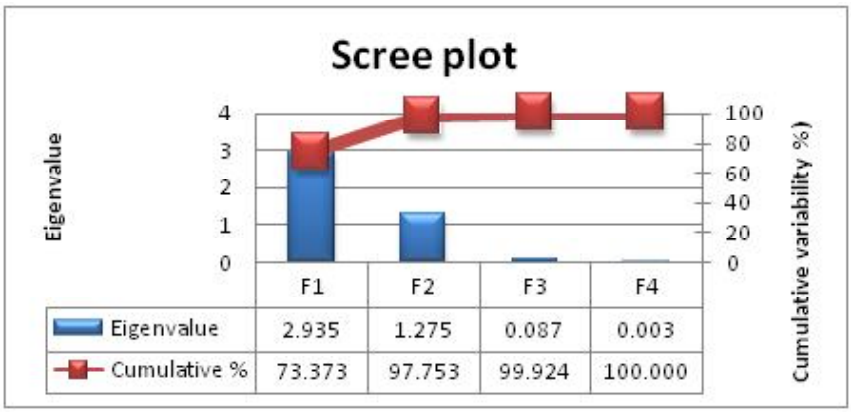
Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.935	**73.373**	73.373	2.935	**73.373**	73.373	2.935	71.843	71.843
2	1.275	**24.380**	**97.753**	1.275	**24.380**	97.753	1.275	25.710	97.553
3	0.087	2.171	99.924						
4	0.003	0.076	100.000						

The above table discloses the output of Principal Component Analysis the Eigen values, Percentage of variance and Cumulative percentage. The competencies having Eigen values of 1 or more than 1 are extracted. It is noticed from the cumulative percentage column that, the two factors extracted together account for 97.735% of total variance. This is pretty good bargain, as we lost only 2.247% of information content.

It is clearly shows that, 2 components contain 97.753% of the variation of the 4 original variables. Note that there are as many components as original input variables. Component 1 explains 73.373% of the variation, component 2 explains 24.380%. The remaining 2 components explain only 2.247%.

The below mentioned screen plot clearly shows about Eigenvalue and cumulative variability of the components and it is a visual aid of appropriate number of principal components. The screen plot graphs the Eigen value against the component number. The component number is taken to be the point at which the remaining Eigen values are relatively small and all about the same.

Screen Plot of Eigenvalue and cumulative variability of Branch Inclusion, Credit Inclusion, Deposit inclusion and information inclusion



The below table shows the competencies branch inclusion, Credit Inclusion, deposit inclusion and Information Inclusion have loadings of 0.959, 0.982 and 0.992 on component 1 which is a

combination of 3 original variables viz., branch inclusion, Credit Inclusion and deposit inclusion. Thus the component 1 could be named as "Banking Stability". Component 2 it can be found that the competency variable Information Inclusion. This indicates that the component 2 is a combination of one variable and it could be named as "Financial Advice".

Rotated Component Matrix of Branch Inclusion, Credit Inclusion, Deposit inclusion and information inclusion

Sl No	Variables	Factor loaded			
		Component 1	Component 2	Component 3	Component 4
1	branch inclusion	**0.959**	0.017	0.284	0.007
2	Credit Inclusion	**0.982**	-0.147	-0.111	0.038
3	deposit inclusion	**0.992**	-0.117	-0.040	-0.040
4	Information Inclusion	-0.084	**0.996**	0.008	0.000

Extraction : Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 2 iterations.

The above Table shows the results of the Principal Component analysis. Name of all the 4 variables and their respective loadings in all the two factors are given in the table. A positive loading indicates that greater the value of the variable greater is the contribution to the factor. On the other hand, a negative loading implies that greater the value, lesser its contribution to the factor or vice versa. Correlation matrix clubs together the variables with loadings and variables have been ordered and grouped by the size of loadings.

The principal component analysis with varimax rotation was used to find out the percentage of variance of each factor, which can be grouped together from the total pool of 4 variables considered in the study. The results are given in Table shows Branch Inclusion, Deposit inclusion and Credit Inclusion loaded in "Banking Stability" and Information inclusion has loaded in "Financial Advice".

Banking Stability

The first Principal Component strongly correlated with three of original variables. That means Banking Stability increases with increasing Branch Inclusion, Credit inclusion and Deposit Inclusion scores. This suggests that these three criteria vary together. If one increases, then the remaining ones tend to as well. Banking Stability can be viewed as a measure of quality ofBranch Inclusion, Credit inclusion and Deposit Inclusion. And the Banking Stability correlates most strongly with deposit inclusion. Based on the correlation value (0.992) it has shows that Banking Stability primarily a measure of Deposit inclusion.

Financial Advice

Financial Advice increases with only one of the values, increasing information inclusion. Financial Advice can be viewed as a measure of how information inclusion the location is in terms of available information facilities. Highest Component Loading in Rotated Component Matrix

Banking Stability (Branch Inclusion, Credit Inclusion and Deposit inclusion -score 0.959,0.982, 0.992) -these three variables are highly influencing and value added.

Financial Advice (Information Inclusion- score 0.996) - only one variable is influencing and other three variables are not influencing (raw) and has no value added.

The components are arranged based on the Eigen value viz

F1 (Eigen value 2.935)

F2 (Eigen value 1.275)

F3 (Eigen value 0.087)

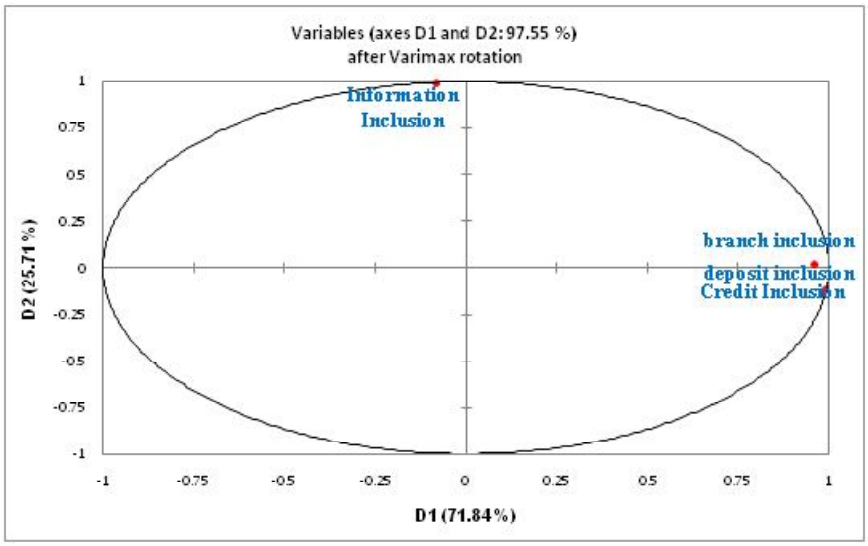
F4 (Eigen value 0.003)

These two components are described as "Financial Inclusion". This model has a strong statistical support and the Kaiser-Maya-Olkin (KMO) test of sampling adequacy concurs that the sample taken to process the principal component analysis is statistically sufficient (KMO value = 0.597).

Kaiser-Meyer-Olkin measure of sampling adequacy:	
branch inclusion	0.649
Credit Inclusion	0.593
deposit inclusion	0.562
Information Inclusion	0.578
KMO	0.597

This loading plot shows relationship of original variables and subspace dimensions. This clearly shows plotting the second component against first component.

Relationship of Branch Inclusion, Credit Inclusion, Deposit inclusion and information inclusion withBanking Stability and Financial Advice



Branch Inclusion, Credit Inclusion, Deposit inclusion and information inclusion scores after Varimax rotation:

Factor scores				
Observation	F1	F2	F3	F4
Kanchipuram	0.538	1.133	1.926	-4.029
Tiruvallur	0.110	0.759	0.667	-1.604
Cuddalore	-0.107	1.087	-0.592	-0.219
Villupuram	0.077	3.217	-1.238	1.085
Vellore(vr)	-0.051	0.264	0.942	0.200
Tiruvannamalai	-0.133	1.884	-1.175	0.296
Salem	0.032	0.692	0.530	1.051
Namakkal	-0.277	-0.446	0.011	0.662
Dharmapuri	-0.455	-0.378	-0.975	-0.113
Erode	-0.097	-0.390	0.830	1.113
Coimbatore	0.890	-0.063	2.885	1.106
The Nilgiris	-0.599	-1.619	-0.633	-1.090
Thanjavur	-0.028	1.116	-0.055	0.225
Nagapattinam	-0.309	0.338	-0.784	-0.508
Tiruvarur	-0.389	0.045	-0.885	-0.468

Factor scores				
Observation	F1	F2	F3	F4
Tiruchirappalli	0.036	-0.120	1.067	-0.270
Karur	-0.495	-1.145	-0.477	-0.182
Perambalur	-0.608	-1.357	-0.930	-0.593
Pudukkottai	-0.370	-0.398	-0.157	0.403
Madurai	0.108	0.131	1.225	0.284
Theni	-0.535	-1.576	-0.198	0.173
Dindigul	-0.267	-0.407	0.368	0.833
Ramanathapuram	-0.402	-0.045	-0.868	-0.281
Virudhunagar	-0.206	0.150	-0.156	0.265
Sivagangai	-0.352	-0.708	0.263	0.088
Tirunelveli	-0.005	0.390	1.087	0.513
Thoothukkudi	-0.232	0.093	-0.164	-0.404
Kanyakumari	-0.316	-1.332	0.743	0.295
Chennai	5.289	-0.952	-1.377	0.022
Krishnagiri	-0.265	0.487	-0.857	0.076
Ariyalur	-0.561	-0.615	-1.500	-0.775
Tiruppur	-0.021	-0.236	0.476	1.845

The above table indicatesFactor scores after Varimax rotation : it determine that Chennai ,Coimbatore and kanchipuram districts has high branch inclusion and deposit,credit and Information inclusion less in this districts.Kanchipuram,,Tiruvallur,Cuddalore,Villupuram,Tiruvannamalai,Salem and Thanjavur districts has high Credit Inclusion.Kanchipuram,Tiruvallur Vellore (vr), Salem, Erode, Coimbatore, Tiruchirappalli, Madurai, Tirunelveli and Kanyakumari districts has high deposit Inclusion and Villupuram, Salem, Namakkal, Erode, Coimbatore, Dindigul, Tirunelveli and Tiruppur districts has high information Inclusion. From this analysis it finds out that there is no districts are full included with Branch, Credit, Deposit and Information Inclusion.

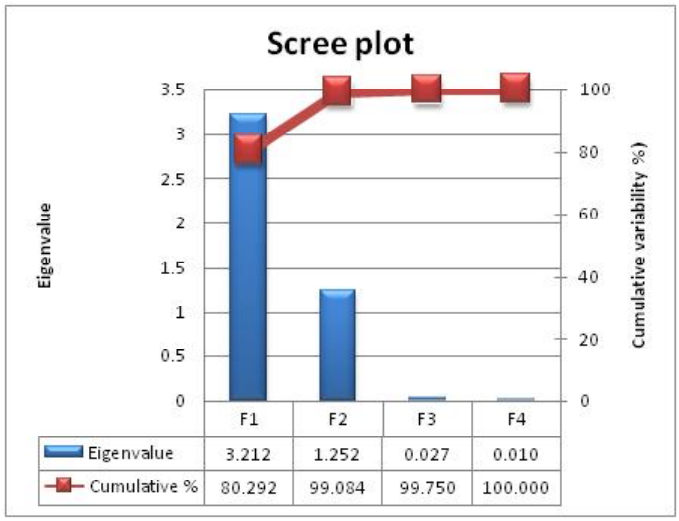
Total Variance of Branch Inclusion, Mobile Banking, NEFT and RTGS

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	3.212	**80.292**	**80.292**	3.212	80.292	80.292	3.212	55.792	42.679
2	1.252	**18.792**	**99.084**	1.252	18.792	99.084	1.252	42.679	98.471
3	0.027	0.666	99.750						
4	0.010	0.250	100.000						

As per the above table principle component analysis suggest that only two components are extracted among 4 components for used to conducting analysis and these components are extracted based on the Eigen value was greater than the recommended level of 1. The result clearly shows that, 2 components contain 99.87% of the variation of the 4 original variables. Component 1 explains 80.292% of the variation, component 2 explains 18.792%. The remaining 2 components explain only 0.916%.In rotation loading component 1 has 55.792% of variation and component 2 explains 42.679% variation.

The below mentioned screen plot clearly shows about Eigenvalue and cumulative variability of the components and it is a visual aid of appropriate number of principal components. The screen plot graphs the Eigen value against the component number. The component number is taken to be the point at which the remaining Eigen values are relatively small and all about the same.

Screen Plot of Eigen Value and Cumulative Variability of Branch Inclusion, Mobile Banking, NEFT and RTGS



The belowtable provides a detailed presentation of factor loadings of each variables of financialinclusionname with variables Branch inclusion, Mobile banking,NEFT and RTGS loadings of have loadings of0.982, 0.983, 0.912 and 0.748. Mobile banking andNEFT has loaded in component 1 which is a combination of 2 original variables. Thus the component 1 could be named as "Technological Advancement". Component 2 it can be found that the competency variable Branch inclusion and RTGS. This indicates that the component 2 is a combination of twovariables and it could be named as "Banking Advancement".

Rotated Component Matrix of Branch Inclusion, Mobile Banking, NEFT and RTGS

Sl No	Variables	Factor loaded			
		Component 1	Component 2	Component 3	Component 4
1	Branch inclusion	0.190	0.982	-0.011	0.015
2	Mobile banking	0.983	0.178	-0.003	-0.053
3	NEFT	0.912	0.390	0.096	0.080
4	RTGS	0.631	0.748	0.204	-0.028

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 2 iterations.

Principal component analysis result indicates in the above table. Name of all the 4 variables (Branch inclusion, Mobile banking, NEFT, RTGS) and their respective loadings in all the two factors are given in the table. A positive loading indicates that greater the value of the variable greater is the contribution to the factor. On the other hand, a negative loading implies that greater the value, lesser its contribution to the factor or vice versa. The principal component analysis with varimax rotation was used to find out the percentage of variance of each factor, which can be grouped together from the total pool of 4 variables considered in the study. The results are given in Table shows, Mobile banking and NEFT loaded in Technological Advancement, Branch Inclusion and RTGS has loaded in Banking Advancement.

Technological Advancement

Technological Advancement strongly correlated with two of original variables. Technological Advancement increases with increasing Mobile banking and NEFT scores. This suggests that these two criteria vary together. If one increases, then the remaining ones tend to as well. This component can be viewed as a measure of quality of Mobile banking and NEFT. And Technological Advancement strongly correlates with Mobile banking and NEFT. Based on the correlation value 0.983, this principal component is primarily a measure ofMobile banking.

Banking Advancement

Banking Advancement increases with two of the values,increasing Branch inclusion and RTGS. This component can be viewed as a measure of how Branch inclusion and RTGS the location is in terms of available Banking Advancement..

The components are arranged based on the Eigen value viz

F1 (Eigen value 3.212)
F2 (Eigen value 1.252)
F3 (Eigen value 0.027)
F4 (Eigen value 0.010)

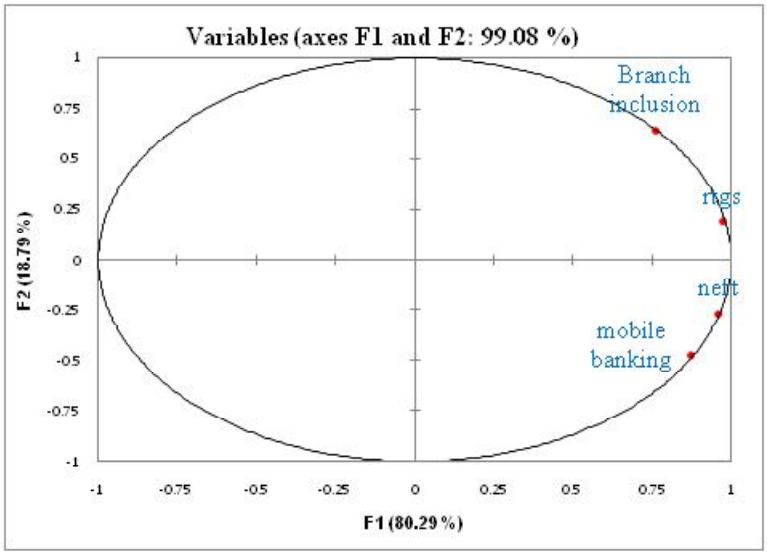
These four components are described as "Banking Inclusion" which one leads to Financial Inclusion. This model has a strong statistical support and the Kaiser-Maya-Olkin (KMO) test of sampling adequacy concurs that the sample taken to process the factor analysis is statistically sufficient (KMO value = 0.638).

Kaiser-Meyer-Olkin measure of sampling adequacy of Branch Inclusion, Mobile Banking, NEFT and RTGS

Kaiser-Meyer-Olkin measure of sampling adequacy:	
Branch inclusion	0.601
Mobile banking	0.646
NEFT	0.635
RTGS	0.657
KMO	0.638

This loading plot shows relationship between original variables and subspace dimensions. This clearly shows plotting the second component against first component.

Relationship of Branch Inclusion, Mobile Banking, NEFT and RTGS with Technological Advancement and Banking Advancement



Branch Inclusion, Mobile Banking, NEFT and RTGS scores after Varimax rotation

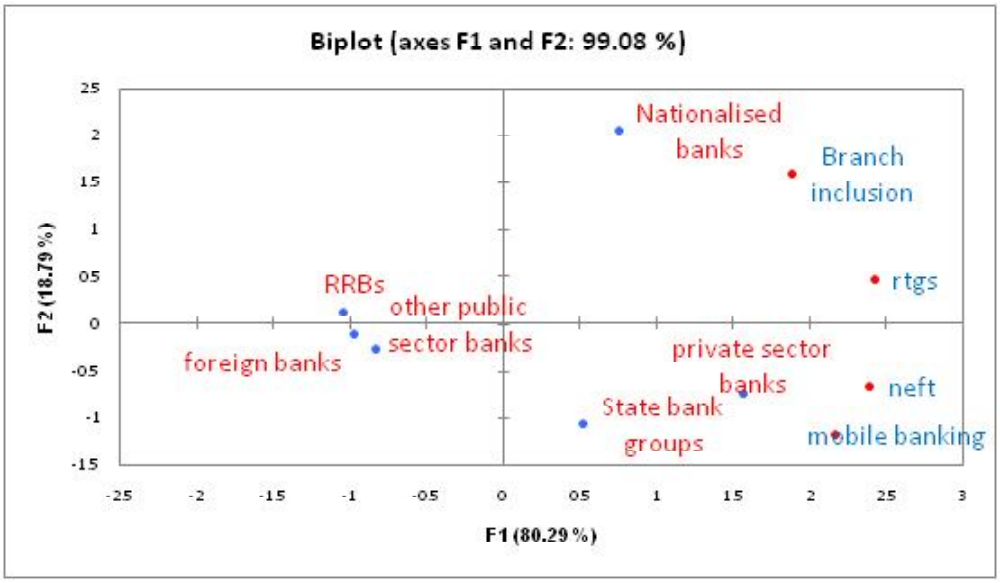
Factor scores:				
Observation	F1	F2	F3	F4
State bank groups	**0.931**	-0.927	-0.225	0.124
Nationalised banks	**1.351**	**1.778**	-0.026	0.043
other public sector banks	-1.737	-0.089	0.087	-0.046
private sector banks	**2.806**	-0.649	0.133	-0.112
RRBs	-1.865	0.108	-0.187	-0.123
foreign banks	-1.486	-0.222	0.220	0.113

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization Rotation converged in 2 iterations.

From this analysis it interprets factor scores after varimax rotation: it determines that State bank groups, Nationalised banks and private sector banks have high branch inclusion. Nationalised banks customers are using mobile banking compare to other bank groups. Other public sector banks, RRBs and foreign banks has very less branch inclusion, Mobile banking, NEFT and RTGS.

Bi-Plot of loadings and scores of Branch Inclusion, Mobile Banking, NEFT and RTGS with different bank groups in Tamilnadu



Principle component analysis is clearly indicated that Branch inclusion is closely related with credit inclusion and Deposit inclusion.

Findings

Principle ComponentAnalysis notices two important dimensions from the 4 banking inclusion: they are identified as "Banking Stability" and "Financial Advice".Branch inclusion, Credit inclusion and Deposit inclusion are influencing "Banking stability". The result of the study shows that Information inclusion influences the "Financial Advice". Chennai, Coimbatore and Kanchipuram districts have high branch inclusion and deposit, credit, and Information inclusion is less in these districts. Kanchipuram, Tiruvallur, Vellore(vr), Salem, Erode, Coimbatore, Tiruchirappalli, Madurai, Tirunelveli and Kanyakumari districts have high deposit Inclusion and Villupuram, Salem, Namakkal, Erode, Coimbatore, Dindigul, Tirunelveli and Tiruppur districts have high information Inclusion. Mobile banking and NEFT influence each other; it has influence on the "Technological Advancement". And the result indicates Branch Inclusion and RTGS influencing the "Banking Advancement". State Bank groups, Nationalised banks and private sector banks have high branch inclusion. Nationalised banks' customers are using mobile banking compared to other bank groups. Other public sector banks, RRBs and foreign banks have very less branch inclusion, Mobile banking, NEFT and RTGS.

Suggestions

Accessibility of ECS, NEFT, and RTGS is necessary in RRBs, private sector banks and nationalized banks. People need to be continuously educated and motivated to change their payment habits by promoting the benefits of the use of e-payments. Promotional activities and change management programmes should be put in place and continuously improved to increase public awareness and acceptance.

Conclusion

In the Indian context, Reserve bank has always sought to balance the risk of partnerships and product innovations with the ability to achieve greater penetration in a safe, secured and prudentially sound manner.The underlying belief is that only sound and strong institutions can promote financial inclusion in a sustainable manner and, towards this end, prudent regulations have to be in place to achieve inclusion while protecting financial stability and consumer interest. Reserve bank has been emphasizing that the bankability of the poor holds Basic financial literacy programs can help achieve better results in poverty alleviation.

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Sectoral Analysis of NPAs of Select Private and Public Sector Banks

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Abstract

Banking industry plays very crucial role in the socio-economic development of a country like India. Nationalization of the banks has obligated the banks to lend money to certain sectors which are deprived socially and economically. Agriculture, small scale industries and weaker sections in the society are collectively called as priority sector. There are some doubts on lending to priority sector with the background of mounting of Non-performing assets (NPAs) in the balance sheets of the banks. In this juncture, the present paper investigates the tendency of NPAs in selected private and public sector banks with reference to priority sector and non-priority sector and activity-wise. To reach out the objectives of the study exclusively secondary data have been used. Simple percentages, ratios and coefficient of correlation techniques were used to analyse the data. The study concludes that the proportion of priority sector in total NPAs is higher in public sector.Of the two private sector banks, the trend is better in the DB Ltd as compared to ICICI Bank Ltd. Further, of the four sample banks, the mean ratio of NPAs to priority sector was the highest in the SBI followed by CBI,DB Ltd andICICI Bank Ltd.

Keywords: SCBs, NPAs, Priority Sector, Non-priority sector, SBI, ICICI Bank Ltd.

JEL: G21, G, 24, G33,

Introduction

The concept of the Non-performing assets (NPAs) is emerged in the light of financial sector reforms took place during 1990s. As per the language of accounting, the amount of assets held by an organisation should equalto liabilities of the organisation. As long as an asset creates positive cash flows to the organisation it would be good whereas if it fails to do so, it throws negative impact on the overall performance of the organisation. All loans/ advances do not yield income due to several factors. If any bank fails to collect the loan/ advance given to borrower it is said to be NPA (Gowri and Malepati, 2013). High magnitude of NPAs is always a matter of concern as they hampered the profitability of the bank. It is known fact that banks not only raise resources from its resources but also they create

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credit. As NPAs needs higher provisioning, a large part of the profits are blocked in form of provisions for expected bad debts. Hence, the problem of NPAs is not only the concern of lenders but also of policy makers. Nationalization of commercial bank in India has obligated banks to lend priority sector more generously. In recent days, the level of NPAs is escalating at rapid rate in Indian banking sector comparatively other nations. The intensity of NPAs is much higher in public sector banks due to their directional credit to priority sector in order to achieve socio-economic objectives of the state. And it is believed that the degree of NPAs is lower comparatively that of public sector banks. Against this backdrop, an earnest attempt is made an investigation on sectoral analysis of NPAs in selected private and public sector banks.

Literature Review

A huge volume of research has been carried out on public sector commercial banks. A brief review of these studies is highlighted in the following paragraphs in order to reach out the importance of the present study.

Kohli (1997) has examined the priority sector lending. The author has found that there is a significant linkage between credit operations and investment in both agriculture and industries. Despite effective direct credit programme for lending to priority sector positive support to small units is required. Thingalaya (1999)described the history of delinquency of agricultural loans. Poor recovery of loans was caused by natural factors, deficiencies of credit delivery mechanism and human indiscretion. Taking a cue from the success stories of these regional rural banks, successful credit management steps, such as realistic pre-sanction appraisal, analysis of viability of the scheme and assessment of credibility of borrowers were suggested. Since higher recoveries were possible, loan waivers should not be allowed. He reiterated that the level of NPAs was very high because of misdirected credit. It was felt that just because lending is directed it need not necessarily result in NPAs. Medium and large industries were also found to contribute to NPAs. Munippan (2002) was concerned over the high level of NPAs and poor loan asset quality in banks and financial institutions. He stated that the recovery of NPAs under priority sector advances particularly agriculture, small-scale sector industries was hampered by externalities. This study reiterated the conclusions arrived at by the internal study of RBI.RBI(2005) draft technical paper of internal working group identified the issues to relating to priority sector lending. The working group recommended the need for prescriptions to priority sector lending.Uppal (2009) concluded that NPAs were more in public sector bank group while the least in foreign bank group. This is so because advances by public sector bank group to the priority sector were also high. NPAs in the public and private sector bank groups were high mainly due to increase in NPAs in the agricultural sector. Selvarajan and Vadivalagan (2013)have studied the advances to priority sector in terms of agriculture, small-scale industries and others. Further, advances to weaker sections, which form part of Priority sector, were also studied. They have advocated that special attention should be paid to contain NPAs. The addition to NPAs needs to be arrested. Appropriate efforts should be initiated to recover from the existing NPAs. Timely action is the need of the hour to ensure future

growth of bank.Amrita Patel (2015) stated that rural development agencies and Government should put pressure on banks to sanction loans to the priority sector. These loans suffer from weaknesses like lack of proper planning, inadequate manpower and so on to implement and monitor the schemes properly.

Need of the Study

On the basis of the existing literature in the area of study, it is understood that there are many studies on NPAs in recent years. These studies have broadly covered causes, management, prudential norms, guidelines and recovery management. Further, most of the studies have focused on macro level of the economy. Hardly, there were a few studies, which analyze NPAs at sectoral-wise, bank-wise and priority-wise. Further, it is felt that priority sector lending is the main cause of mounting of NPAs in SCBs and this problem is to be addressed. Furthermore, it will be a nightmare to bankers unless the policy makers find an appropriate solution to this problem. Therefore, the proposed study is believed to be worth full in the light of aforesaid reasons. Further, correlation of coefficient has been used to know the

Objectives of the Study

The primary objective of the study is to analyse the NPAs in selected private and public sector banks. The specific objective of the study is to assess the magnitude of NPAs of outstanding advances in priority sector, NPAs in priority and non-priority sector, and activity-wise.

Methodology of the Study

To reach out the predefined objective of the study, the secondary data has been used exclusively. The required data is collected from respective websites of the banks, annual reports published by the banks, journals, magazines, policy papers of regulatory bodies, Reserve Bank of India, published and unpublished research work. It is known that SCBs can be categorized broadly into public and private sector banks. Four sample banks have been selected for his study, two from each sector. The sample is based on the profits of banks for the year 2013. From each group the highest profit earned and the lowest earned banks have been selected for the purpose of study. Therefore, two banks, namely, State Bank of India (SBI), Central Bank of India (CBI) from public sector and ICICI Bank Limited, Dhanalakshmi Bank Limited from private sector banks were selected. The data of these banks for 10 years has been collected, i.e. from 2004 to 2013.The collected data is tabulated and processed carefully to achieve the end results. The researcher has used descriptive and inferential statistics like percentages and ratios. Further, Karl Pearson's coefficient of correlation has been used to know the correlation between selected variables of the study.

Scope and Limitations of the Study

The scope of the present study is confined to four selected private and public sector banks

leaving other sectors and banks. The researcher felt that inclusion of foreign banks in the study may deviate from the objectives of the study, otherwise these banks also might have included in the study. Further, only study of two banks from each sector of private and public may not represent the entire banking industry. These may be some of the limitations of the study.

Discussion

The following paragraphs describe the results arrived on the stated objectives.

NPAs to outstanding advances in priority sector

The percentage of NPAs in the advances to priority sector in the sample banks is described here. It can be observed from the Table 1 that, the proportion of NPAsin the advances to priority sector in the SBI was 8.94 per cent in 2004 as against 6.65 per cent in 2013. In the meanwhile, there are ups and downs. The year 2008 has recorded the lowest at 4.88 per cent and 2004, the highest. On an average, per year, the ratio was 6.40 per cent. The correlation coefficient between the advances and NPAs in the priority sector is positive. It is significant at one per cent level. It means there is a direct positive relationship between advances and NPAs in the priority sector of SBI. It may be concluded that the proportion of NPAs in theoutstanding advances to priority sector in the SBI has declined during the period. This is a welcome trend as it indicates a recycling of funds in SBI.

Table 1: Total NPAs to Total Advances ratio in Priority Sector in SBI during 2004-13 (Rs. crores)

Year	Priority sector		% of col (2) to col (3)
	NPAs	Advances	
1	2	3	4
2004	5,605	62,673	8.94
2005	5,906	82,895	7.13
2006	5,810	1,02,016	5.70
2007	7,561	1,19,231	6.34
2008	7,010	1,43,638	4.88
2009	9,073	1,70,568	5.32
2010	13,275	2,31,598	5.73
2011	16,491	2,50,177	6.59
2012	17,777	2,64,314	6.73
2013	18,686	2,80,820	6.65
Mean	**10,719**	**170,793**	**6.40**
'r'		**0.969***	

Notes: Figures in brackets indicate the percentage to total
** Indicates significant at one per cent level*
Source: Compiled from the relevant Annual Reports of SBI

The relative share of NPAs in advances to priority sector in the CBI is depicted in the Table 2. A look at the Table reveals that the share of NPAs in the advances outstanding was 11.11 per cent in 2004 vis-à-vis 2.58 per cent in 2013. There is a substantial decline in the ratio. This reflects efforts put in by the CBI to recover the loans made available to priority sector. On an average, per year, the percentage of NPAs to outstanding advances to priority sector was 5.65 per cent. There is a negative correlation coefficient betweenthe advances to priority sector and NPAs of priority sector in the CBI, which is not significant. It may be said that there is a substantial decline in the share of NPAs in the advances to prioritysector in CBI during the period. The mean ratio of CBI can be favourably compared with the mean ratio of SBI. In this respect, CBI scores over the SBI. Further, a negative correlation prevails between advances and NPAs of priority sector in CBI. In other words, the advances and NPAs of priority sector do not move in the same direction.

Table 2: Total NPAs to Total Advances Ratio in Priority Sector in CBI during 2004-13 (Rs.crores)

Year	Priority sector		% of col (2) to col (3)
	NPAs	Advances	
1	2	3	4
2004	1,585	14,272	11.11
2005	1,598	17,897	8.93
2006	1,599	22,457	7.12
2007	1,651	25,442	6.49
2008	1,588	29,270	5.43
2009	1,658	35,393	4.68
2010	1,331	41,949	3.17
2011	1,497	40,259	3.72
2012	1,689	51,259	3.30
2013	1,774	68,652	2.58
Mean	**1,597**	**34,685**	**5.65**
'r'		**0.273** ^{NS}	

Notes: NS- *Not significant*
Figures in brackets indicate the percentage to total
Source: *Compiled from the relevant Annual Reports of CBI*

The proportion of NPAs in the advances to priority sector in the ICICI Bank Ltd is presented in the Table 3. A perusal of the Table reveals that the ratio has increased from 0.71 per cent in 2004 to 3.30 per cent in 2013. Meanwhile, there are ups and downs. The year 2005 registered the lowest at 0.22 per cent and 2009, the highest at 3.61 per cent. The mean ratio during the period was 2.43 per cent. It may be inferred that the proportionof NPAs in the advances to priority sector has increased in the ICICI Bank Ltd. This is a matterof concern for the ICICI Bank Ltd. The correlation coefficient between the advances to priority sector and NPAs of priority sector is significant at one per cent level. It means that the advances and NPAs in the priority sector move in the same direction.

Table 3: Total NPAs to Total Advances Ratio in the Priority Sector in ICICI Bank Ltd during 2004-13 (Rs.crores)

Year	Priority sector		% of col (2) to col (3)
	NPAs	Advances	
1	2	3	4
2004	136	19,107	0.71
2005	94	43,316	0.22
2006	984	55,277	1.78
2007	1,359	59,732	2.28
2008	1,449	62,051	2.34
2009	1,946	53,977	3.61
2010	1,808	53,402	3.39
2011	1,959	59,286	3.30
2012	2,032	59,794	3.40
2013	2,130	64,552	3.30
Mean	**1,390**	**53,049**	**2.43**
'r'		**0.788***	

Notes: Figures in brackets indicate the percentage to total
** Indicates significant at one per cent level*
Source: Compiled from the relevant Annual Reports of ICICI Bank Ltd

The account of NPAs in the advances to priority sector in the DB Ltd is exhibited in the Table 4. The ratio has remarkably declined from 11.41 per cent in 2004 to 1.43 per cent in 2013 with to and fro changes. The year 2010 registered the lowest at 1.37 per cent. The mean ratio was 3.66 per cent. A positive correlation can be found between the advances and the NPAs of priority sector in the DB Ltd, which is not significant. It may be summed up that the NPAs in the advances to priority sector in the DB Ltd have substantially declined during the period under reference. Of the two private sector banks, the trend is better in the DB Ltd as compared to ICICI Bank Ltd. Further, this is an increase in the ratio in 2013 over 2004 in the ICICI Bank Ltd. A converse situation emerges in the DB Ltd. However, the mean ratio is higher in the DB Ltd as compared ICICI Bank Ltd. Of the four sample banks, the mean ratio was the highest in the SBI followed by CBI,DB Ltd andICICI Bank Ltd. Thus, the private sector banks can be favourably compared to the public sector banks since the ratio is the lowest in the former category.

Table 4: Total NPAs to Total Advances Ratio in the Priority Sector in DB Ltd during 2004-13 (Rs.crores)

Year	Priority sector		% of col (2) to col (3)
	NPAs	Advances	
1	2	3	4
2004	48	422	11.41
2005	21	512	4.05
2006	52	708	7.30
2007	26	909	2.85
2008	30	1,148	2.61
2009	36	1,409	2.55
2010	35	2,586	1.37
2011	39	2,810	1.40
2012	41	2,573	1.59
2013	42	2,934	1.43
Mean	**37**	**1,601**	**3.66**
'*r*'		**0.149** ^{NS}	

Notes: Figures in brackets indicate the percentage to total
NS- Notsignificant
Source: Compiled from the relevant Annual Reports of DB Ltd

Priority and non-priority sector-wise NPAs of SBI

In the case of SBI, the NPAs of priority sector have increased from Rs. 5605 crores in 2004 to 18,686 crores in 2013 (see Table 5). During the period, these have declined in two years, namely, 2006 and 2008. The NPAs in non-priority sector were Rs. 5,952 crores in 2004 vis-à-vis Rs. 13,785 crores in 2013. On an average, per year, the NPAs of priority and non-priority sectors were Rs 10,719 crores and Rs. 8,221 crores respectively. When both are put together, these were Rs.11,557 crores in 2004 whereas Rs. 32,471 crores in 2013. The share of priority sector in the total NPAs was 48.50 per cent in 2004 whereas 57.55 per cent in 2013. In the meanwhile, there are ups and downs. The rest are accounted for by non-priority sector. In average terms, per year priority sector accounts for nearly 56 per cent in the total NPAs of SBI. The Karl Pearson's coefficient of correlation between NPAs of priority and non-priority sector is positive and significant at one per cent level.It may be concluded that the priority sector dominates the non-priority sector in the total NPAs of SBI during the period except 2004 and 2008. The reason may be that more advances might have been disbursed under priority sector relative to non-priority sector. Hence, the share of priority sector is relatively high.

Table 5 to be inserted here

Year	Priority	Non-priority	Total	% of col (2) to col (4)
1	2	3	4	5
2004	5,605	5,952	11,557	48.50
2005	5,906	4,330	10,236	57.70
2006	5,810	3,912	9,722	59.77
2007	7,561	4,924	12,485	60.56
2008	7,010	7,932	14,942	46.91
2009	9,073	8,529	17,602	51.55
2010	13,275	9,799	23,074	57.53
2011	16,491	10,254	26,745	61.66
2012	17,777	12,789	30,566	58.16
2013	18,686	13,785	32,471	57.55
Mean	**10,719**	**8,221**	**18,940**	**55.99**
'r'		**0.935***		

*Note: *Indicates significant at one per cent level*
Source: Compiled from the relevant Annual Reports of SBI

A look at the Table 6 reveals the classification of NPAs in the CBI into priority and non-priority sectors during 2004-13. It can be observed from the Table that the NPAs of priority sector were Rs. 1,585 crores in 2004 as compared to Rs. 1,774 crores in 2013. There is a gradual increase except in 2008 and 2010. On an average, per year, these were found to be Rs. 5,997 crores. The NPAs of non-priority sector were Rs. 1,023 crores in 2004 as compared to Rs. 1,054 crores in 2013. In the intervening period,there are to and fro changes. The mean NPAs in the non-priority sector stood at Rs. 957 crores. The proportion of NPAs of non-priority sector was in the order of 55.58-70.30 per cent during the period. In terms of average, these have constituted 62.70 per cent. The correlation of coefficient between NPAs of priority and non-priority sectors of CBI is negative but not significant. It may be concluded that the priority sector accounts for a lion's share in the total NPAs of CBI. Between the two sample public sector banks, the share of NPAs of priority sector CBI is greater than that of their proportion of SBI.

Table 6: Classification of NPAs of CBI into Priority and Non-priority Sectors during 2004-13 (Rs. crores)

Year	Priority	Non-priority	Total	% of col (2) to col (4)
1	2	3	4	5
2004	1,585	1,023	2,609	60.78
2005	1,598	1,080	2,678	59.67
2006	1,599	963	2,562	62.41
2007	1,651	698	2,349	70.30
2008	1,588	675	2,263	70.17
2009	1,658	792	2,450	67.67
2010	1,331	1,064	2,394	55.58
2011	1,497	1,124	2,621	57.12
2012	1,689	1,101	2,790	60.54
2013	1,774	1,054	2,828	62.73
Mean	**1,597**	**957**	**2,554**	**62.70**
'r'		**(0.201)** ^{NS}		

Note: NS- Not significant
Source: Compiled from the relevant Annual Reports of CBI

The NPAs in ICICI Bank Ltd were segregated into priority and non-priority sectors and the results are shown in the Table 7. The NPAs of priority sector were Rs. 136 crores in 2004 whilst they were Rs. 2,130 crores in 2013. There is almost a progressive increase in them. On an average, per year, these have stood at Rs. 1,390 crores. The NPAs of non-priority sector have increased from Rs. 2,600 crores in 2004 to Rs. 8,654 crores in 2013. There is a gradual increase in them except for a decrease in 2009 and 2013. The mean NPAs were Rs. 6,297 crores. The percentage of priority sector, in the total NPAs, was 4.97 per cent in 2004 as compared to 19.75 per cent in 2013. The year 2005 reported the least at 4.24 per cent and the following year, the highest at 23.84 per cent. On an average, per year, priority sector has formed 16.38 per cent in the total NPAs of ICICI Bank Ltd. There is a positive correlation in the NPAs between priority and non-priority sectors, which is significant at one per cent level. It may be concluded that the share of priority sector in the total NPAsis less than onefourth. This is quite different from the two public sector banks already discussed. The reason may be that the private sector banks might not have sanctioned that quantum of loans to priority sector as sanctioned by the public sector banks or else the recovery in priority sectoral loans in the ICICI Bank Ltd may be remarkably greater than in the non-priority sector.

Table 7: Categorization of NPAs of ICICI Bank Ltd into Priority and Non-priority Sectors during 2004-13

Year	Priority	Non-priority	Total	% of col (2) to col (4)
1	2	3	4	5
2004	136	2,600	2,736	4.97
2005	94	2,128	2,223	4.24
2006	984	3,142	4,126	23.84
2007	1,359	6,211	7,570	17.96
2008	1,449	8,116	9,565	15.15
2009	1,946	7,321	9,267	21.00
2010	1,808	8,008	9,816	18.42
2011	1,959	8,045	10,004	19.58
2012	2,032	8,745	10,777	18.85
2013	2,130	8,654	10,784	19.75
Mean	**1,390**	**6,297**	**7,687**	**16.38**
'r'		**0.942***		

*Note: * Indicates significant at one per cent level.*
Source: Compiled from the relevant Annual Reports of ICICI Bank Ltd

The NPAs in DB Ltd are divided into priority and non-priority sectors and furnished in the Table 8. A perusal of the Table reveals that, of the total NPAs, the loans to priority sector are at Rs. 48 crores in 2004 and declined to Rs. 42 crores in 2013with to and fro changes. The NPAs of non-priority sector were Rs. 77 crores in 2004 while Rs. 49 crores in 2013. Out of the total NPAs, the share of priority sector was 38.39 per cent in 2004 vis-à-vis 46.15 per cent in 2013. These have registered more than half in two years such as 2006 and 2010 only. In terms of mean, the priority sector accounts for 43.24 per cent. There is a negative correlation in the NPAs between priority and non-priority sectors of DB Ltd, which is not significant. It may be said that the NPAs of non-priority sector have accounted for a lion's share.

Table 8: Segregation in NPAs of DB Ltd into Priority and Non-priority Sectors during 2004-13

Year	Priority	Non-priority	Total	% of col. (2) to col. (4)
1	2	3	4	5
2004	48	77	126	38.39
2005	21	91	111	18.63
2006	52	45	96	53.64
2007	26	37	63	40.93
2008	30	35	65	46.15
2009	36	42	78	46.15
2010	35	32	67	52.76
2011	39	48	87	44.99
2012	41	51	92	44.57
2013	42	49	91	46.15
Mean	**37**	**51**	**88**	**43.24**
'r'		**(0.09)** ^{NS}		

Note: NS- Not significant
Source: Compiled from the relevant Annual Reports of DB Ltd

A comparative analysis reveals that, the proportion of priority sector in total NPAs is higher in public sector. A converse trend prevails in the private sector. On an overall basis, it may be said that, of the NPAs, priority sector accounts for a larger share in public sector banks whereas it accounts for a relatively smaller proportion in private sector banks. In the public sector, the share of priority sector in CBI is greater than that of SBI. Among the private sector banks, it is comparatively more in the DB Ltd.

Activity-wise NPAs of priority sector of SBI

Activity-wise, NPAs in the priority sector of SBI are presented in Table 9. It can be observed from the Table that, the share of agriculture in the total NPAs of priority sector of SBI was in the range of 25.52-39.56 per cent during the period. The proportion of small scale industries was in the order of 16.67-24.42 per cent in the reference period. The account of otherswas in the order of 39.30-50.51 per cent. Further, share of agriculture has risen in 2013 over 2004. A converse situation emerges in the proportion of small scale industries and others. On an average, per year, agriculture constituted 35.40 per cent, small scale industries 21.69 per cent and others 42.91 per cent. Itmay be concluded that others ranked first in the total NPAs of priority sector in the SBI.

Table 9: Activity-wise Segregation of NPAs in Priority Sector of SBI during 2004-13 (Rs. crores)

Year	Agriculture	Small scale industries	Others	Total
2004	1,913 (34.13)	1,372 (24.48)	2,320 (41.39)	5,605 (100)
2005	1,929 (32.66)	1,239 (20.98)	2,738 (46.36)	5,906 (100)
2006	1,977 (34.03)	1,075 (18.50)	2,758 (47.47)	5,810 (100)
2007	2,915 (38.55)	1,260 (16.67)	3,386 (44.78)	7,561 (100)
2008	1,789 (25.52)	1,712 (24.42)	3,509 (50.06)	7,010 (100)
2009	2,322 (25.59)	2,168 (23.90)	4,583 (50.51)	9,073 (100)
2010	4,518 (34.04)	3,138 (23.64)	5,618 (42.32)	13,275 (100)
2011	6,524 (39.56)	3,425 (20.77)	6,542 (39.67)	16,491 (100)
2012	6,945 (39.07)	3,845 (21.63)	6,987 (39.30)	17,777 (100)
2013	7,125 (38.13)	4,017 (21.50)	7,544 (40.37)	18,686 (100)
Mean	2,014 (35.40)	1,234 (21.69)	2,441 (42.91)	5,689 (100)

Note: Figures in brackets indicate the percentage to total
Source: Compiled from the relevant Annual Reports of SBI

The NPAs in the priority sector of CBI are classified on the basis of activity. Out of the activities, in the total NPAs of priority sector, the share of agriculture has varied between 22.48-32.45 per cent (see Table 10). The account of small scale industries was in the order of 32.49- 55.61 per cent. The others have formed between 16.63 per cent and 39.32 per cent. There is a rise in the proportion of agriculture and small scale industries as against a decline in the share of others in 2013 over 2004. On an average, per year, small scale industries came first (45.16 per cent) followed by agriculture (27.73 per cent) and others (27.11 per cent). It may be summed up that there is a substantial decline in the proportion of others as against an increase in the proportion of agriculture and small scale industries. Small scale industries occupied the first place among the activities. A comparative analysis shows that, on an average, per year, in the NPAs of priority sector, others ranked first in the SBI whilst small scale industries occupied first place in the CBI.

Table 10: Activity-wise Classification of NPAs in Priority Sector of CBI during 2004-13 (Rs. crores)

Year	Agriculture	Small scale industries	Others	Total
2004	356	628	602	1,585
	(22.48)	(39.58)	(37.94)	(100)
2005	413	607	577	1,598
	(25.87)	(38.02)	(36.10)	(100)
2006	451	519	629	1,599
	(28.19)	(32.49)	(39.32)	(100)
2007	536	636	479	1,651
	(32.45)	(38.53)	(29.02)	(100)
2008	417	659	512	1,588
	(26.26)	(41.50)	(32.24)	(100)
2009	421	922	315	1,658
	(25.39)	(55.61)	(19.00)	(100)
2010	418	687	226	1,331
	(31.43)	(51.62)	(16.95)	(100)
2011	411	785	301	1,497
	(27.45)	(52.44)	(20.11)	(100)
2012	454	850	385	1,689
	(26.88)	(50.33)	(22.79)	(100)
2013	554	925	295	1,774
	(31.23)	(52.14)	(16.63)	(100)
Mean	246	401	241	888
	(27.73)	(45.16)	(27.11)	(100)

Note: Figures in brackets indicate the percentage to total
Source: Compiled from the relevant Annual Reports of CBI

NPAs in the priority sector of ICICI Bank Ltd are depicted in the Table 11. In the total NPAs of priority sector of ICICI Bank Ltd, agriculture has accounted for 60.50 per cent in 2004 while for 66.24per cent in 2013. The variation was in the range of 41.05-66.96 per cent. On an average, per year, it worked out to 63.10 per cent. The share of others has varied between 2.20 per cent and 58.85 per cent during the period. The mean proportion of others in the total NPAs was 33.09 per cent. The share of small scale industries, in the aggregate NPAs of priority sector, was in the order of 0.11-37.73 per cent. On an average, per year, the share of small scale industries was 3.81 per cent. It may be inferred that, out of the activities of priority sector, agriculture has ranked first followed by others and small scale industries.

Table 11: Activity-wise Categorization of NPAs in the Priority Sector in ICICI Bank Ltd during 2004-13 (Rs. crores)

Year	Agriculture	Small scale industries	Others	Total
2004	82	51	3	136
	(60.50)	(37.30)	(2.20)	(100)
2005	46	36	13	94
	(48.41)	(37.73)	(13.85)	(100)
2006	404	1	579	984
	(41.05)	(0.11)	(58.85)	(100)
2007	982	23	354	1,359
	(72.23)	(1.72)	(26.05)	(100)
2008	874	15	560	1,449
	(60.32)	(1.04)	(38.65)	(100)
2009	1,303	50	593	1,946
	(66.96)	(2.57)	(30.47)	(100)
2010	1,116	89	603	1,808
	(61.74)	(4.90)	(33.36)	(100)
2011	1,254	91	614	1,959
	(64.01)	(4.65)	(31.34)	(100)
2012	1,325	82	625	2,032
	(65.21)	(4.04)	(30.76)	(100)
2013	1,411	32	687	2,130
	(66.24)	(1.50)	(32.25)	(100)
Mean	491	30	258	779
	(63.10)	(3.81)	(33.09)	(100)

Note: Figures in brackets indicate the percentage to total
Source: Compiled from the relevant Annual Reports of ICICI Bank Ltd

The NPAs in the priority sector of DB Ltd are classified activity-wise and shown in the Table 12. Of the total NPAs of priority sector, the share of agriculture and others has risen as against a decline in the proportion of small scale industries in 2013 over 2004. The share of agriculture in the total NPAs of priority sector of DB Ltd was in the range of 1.99-16.35 per cent during the study period. The account of small scale industries varied between 11.90 per cent and 93.83 per cent. The share of others has varied in the range of 4.0-73.81 per cent. In terms of mean, others have constituted 57.53 per cent, small scale industries 33.54 per cent and agriculture 8.93 per cent. It may be summed up that, of the activities of priority sector, agriculture came last while others occupied the first place. It reflects on the quantum of funds disbursed to agriculture. When ICICI Bank Ltd is compared with the DB Ltd, in the total NPAs of priority sector, agriculture ranked first in theICICI Bank Ltd while others in the DB Ltd. It means that, in the ICICI Bank Ltd, more funds are made available to agriculture as compared to DB Ltd or recovery of agricultural loans may be relatively higher in the DB Ltd compared to ICICI Bank Ltd.

Table 12: Activity-wise Distribution of NPAs in Priority Sector of DB Ltd during 2004-13 (Rs. crores)

Year	Agriculture	Small scale industries	Others	Total
2004	1 (1.99)	24 (49.19)	24 (48.82)	48 (100)
2005	0.45 (2.17)	19.47 (93.83)	0.83 (4.00)	20.75 (100)
2006	3 (5.56)	14 (27.47)	35 (66.97)	52 (100)
2007	3 (10.78)	8 (31.89)	15 (57.33)	26 (100)
2008	4 (13.33)	6 (20.00)	20 (66.67)	30 (100)
2009	4 (11.11)	6 (16.67)	26 (72.22)	36 (100)
2010	6 (16.35)	6 (17.69)	23 (65.97)	35 (100)
2011	3 (8.28)	12 (30.57)	24 (61.15)	39 (100)
2012	4 (9.76)	11 (26.83)	26 (63.41)	41 (100)
2013	6 (14.29)	5 (11.90)	31 (73.81)	42 (100)
Mean	6 (8.93)	22 (33.54)	38 (57.53)	67 (100)

Note: Figures in brackets indicate the percentage to total
Source: Compiled from the relevant Annual Reports of DB Ltd

Summary and Conclusions

It is observed from the above discussion that the NPAs in the advances to priority sector in the DB Ltd have substantially declined during the period under reference. Of the two private sector banks, the trend is better in the DB Ltd as compared to ICICI Bank Ltd. Of the four sample banks, the mean ratio was the highest in the SBI followed by CBI,DB Ltd andICICI Bank Ltd. Thus, the private sector banks can be favourably compared to the public sector banks since the ratio is the lowest in the former category.The proportion of NPAs in the outstanding advances to priority sector in the SBI has declined during the period. This is a welcome trend as it indicates a recycling of funds in SBI. The proportion of priority sector in total NPAs is higher in public sector.In the public sector, the share of priority sector in CBI is greater than that of SBI. Among the private sector banks, it is comparatively more in the DB Ltd. In the total NPAs of priority sector, agriculture ranked first in theICICI Bank Ltd whiles

others in the DB Ltd. It means that, in the ICICI Bank Ltd, more funds are made available to agriculture as compared to DB Ltd or recovery of agricultural loans may be relatively higher in the DB Ltd compared to ICICI Bank Ltd. Further, a negative correlation prevails between advances and NPAs of priority sector in CBI. In other words, the advances and NPAs of priority sector do not move in the same direction. It may conclude that the policy makers should take the due care while sanctioning loans and advances under priority sector. As a public sector commercial bank there is no scope to escape from the social banking in terms of sanctioning loans and advances to the downtrodden and poor in order to uplift their socio-economic condition. However, bankers should take enough care while sanctioning loans to priority section.

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A Study on Occupational Safety and Health (OSH) Impact on Employee Loyalty in Leather Company, Tamilnadu

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Abstract

Recent occupational accidents urged enterprises to put more significance on occupational health and safetypractices. The apprehension by both the public authority, business and social environment has played a significantrole in it. The present study investigated occupational health and safety (OHS) practices in two dimensions, i.e.safety procedures and health. Further researcher identified factors in safety such as injuries, work place precautions and awareness. In health factors such as ill health, insurance and preventive actions.A survey form was developed in order to investigate theeffect of OHS practices on all above said variables and how it will have effect on employee loyalty especially those who are working in tanning industry. The data set obtained from private sector enterprise was analyzed by using descriptive statistics and to know relationship between independent and dependent variables researcher used Pearson correlation tests. The findings of the study has revealed that Occupational Safety and Health (OSH) practices in leather manufacturing company is not influencing Loyalty of Employee, However, the other factors like Family Income, Employment Opportunities etc. may be effecting Employee Loyalty

Keywords:Occupational Safety and Health, Employee Loyalty, Tanning Industry.

Introduction

Enhancing representative efficiency and occupational health and safety (OHS) have been a critical field of enthusiasm of industry particularly in creating nations. Some basic qualities of such businesses incorporate improper work environment outline, not well organized employments, bungle between occupation requests and specialist's capacities, unfriendly situations, poor human-machine framework plan, and unseemly administration programs. These variables prompt to work environment risks, poor worker wellbeing, mechanical equipment wounds, and inabilities, which diminish the laborer efficiency and work/item quality and increment the cost (Shikdar and Sawaqed, 2003). Recognizing the reasons of the high rate of mishaps and poor modern wellbeing track records is pivotal in creating nations. The absence of experience from built up nations' innovation and hardware is cited as a cause. As per Takala (2005), the executive of the ILO's protected work program, one of the suspects of the

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high evaluated occurrences is expressed the absence of preparing and abilities in creating countries. A great many people in these economies have never worked in overwhelming industry and just some of them have little involvement on perils like power (Perez-Floriano and Gonzalez, 2007).

McLain and Jarrell (2007) proposed that the apparent similarity of security and generation requests positively affects safe work conduct and decreased the obstruction of wellbeing risks performing different assignments. This is an extra advantage in the event of similarity with safe working conduct. Thusly, such discoveries demonstrated that chiefs ought to focus on similarity of security and work as a necessary piece of occupation outline. As indicated by the social trade hypothesis, laborers exhibit responsibility and perform to the degree they trust that they are profited from association exercises. The apparent hierarchical support has been characterized as "representatives' observation about how much the association values their commitments and thinks about their prosperity and representative's inclination that exercises impacting the specialists have been intentionally performed by the association." as it were, hierarchical support is the circumstance, in which the association values mind the prosperity of laborers and are described by such qualities that expansion the joy of laborers. Seen instead of gave hierarchical bolster impact the states of mind of laborers towards the work and the endeavor. Along these lines, the acknowledgment, portrayed as "the method of get-together, affiliation, and comprehension of information spilling out of the earth towards the individual", should be made decidedly (Turunç and Çelik, 2010).Hierarchical support as saw in accordance with the rule of correspondence will guarantee that representatives work to the event of the association. Acting with a sentiment appreciation, the laborers will build their endeavors for the undertaking. Another perception is that the relationship between saw hierarchical support and execution was more prominent in laborers who are in more noteworthy need of regard, endorsement, and acknowledgment (Rhoades et al., 2001). In like manner, speculations made for wellbeing rehearses in view of social trade hypothesis and the guideline of correspondence result in worker wellbeing and prosperity, which thus, close with representative fascination and duty to the association (Mearns et al., 2010; Huang et al., 2006).

As to feelings of laborers and furnishing them with support as respects the work or out-of-work issues will enhance their execution. People may feel that they were not associated or that mental significance in light of work connection may vanish on the off chance that the proposals and grievances of specialists are not listened to or overlooked. Such cases may disturb the authoritative bolster recognition and as needs be abatement hierarchical responsibility (Ozdevecioglu, 2003).

Discoveries of Michael et al. (2005) are predictable with the authoritative bolster hypothesis. As per the said hypothesis, timework representatives consider association's dedication for security as a sort of saw hierarchical support, and the throughputs of the prior is like that of the apparent authoritative support (POS). Laborers with steady discernment respond this with proficiency and profitability. At the end of the day, such specialists disguise authoritative qualities and standards with more prominent full of feeling responsibility, interest, and devotion (Gyekye and Salminen, 2007). In accordance with the authoritative bolster hypothesis, "POS might be urged by representative's inclination to credit

humanlike qualities to the association" (Eisenberger et al., 1986 as refered to in Rhoades, 2001). "Representatives create worldwide convictions concerning the degree to which the association values their commitments and thinks about their prosperity" as a byproduct of their commitment and intrigue (Makanjee et al., 2006). Thusly, POS can be viewed as a measure for an association's dedication for its laborers.

Barling and Hutchinson (2000) found in their review that dedication based wellbeing hones enhanced trust and hierarchical duty and in a roundabout way and straightforwardly affected the security atmosphere. Another review by Parker et al. (2001) underscored the significance of hierarchical responsibility in enhancing the wellbeing execution. So, hierarchical intrigue was appeared by acts in support of working environment wellbeing and security. Work environment wellbeing and security is relied upon to impact authoritative responsibility (DeJoy et al., 2010).

Wachter and Yorio (2014) recommended that when associations put resources into a wellbeing administration framework they drew closer towards enhancing the execution of mishap lessening/ counteractive action and the word related security. Such associations expressed that they likewise administered to winning the hearts and psyches of their specialists on account of human execution frameworks in view of wellbeing administration with a specific end goal to create and enhance authoritative responsibility in laborers. As wellbeing execution diminishes the mischance rate, staff wounds and material harm decline and working conditions improve at the same time coming about with higher representative inspiration and decreased truancy. (Fernández-Muniz et al., 2009). In the interim non-appearance, characterized as periodic or purposeful nonattendance of worker's from work, majorly affects organization methodologies. Businesses seek certain number of lacking workdays from representatives in a period interim since additional unlucky deficiencies can diminish efficiency (Cucchiella et al., 2014).

Authoritative security bolster covering all wellbeing and wellbeing arrangements could give counteractants to the issue of (work estrangement) weakness experienced by representatives. Katou and Budhwar (2010) express that HR administration arrangements, for example, wellbeing and security, correspondence, interest, contribution, and work configuration can fabricate a pretty and safe workplace consolidating with the representatives who have opportunity in joining basic leadership handle. This is recognized as diminished worker turnover and non-appearance. Whenorganizations don't bolster their representatives adequately, this could diminish unwaveringness and dependability however increment work distance (Byrne and Hochwarter, 2008).

Westgaard and Winkel (2011) call attention to a constructive outcome of comprehensive administration practices, (for example, sympathy toward laborers, straightforwardness, exchange and objective clarity) on wellbeing and hazard variables. A blended review likewise demonstrates that accentuation on human concerns is identified with positive result on inspiration, correspondence, and enthusiasm for employment. Hence, in correspondence with the writing, the examination discoveries show that human concern gives representatives not to isolate their work.

Word related wellbeing and security frameworks are for the most part in light of orders distributed by national and worldwide associations and foundations, (for example, BS 8800 NZS 4801/AS, OHSAS 18001 or ILO-ISG-2001). OccupationalHealth and Safety Assessment Series(OHSAS) 18001 has turned into a critical standard to survey security administration forms at organization level (Granerud and Rocha, 2011).

Abad et al. (2013) proposed that reception of OHSAS 18001 was emphatically clarified by target wellbeing parameters. These demonstrated supervisors ought to have utilized the prior system as an instrument keeping in mind the end goal to enhance wellbeing conditions in the work environment. Vital discoveries of their review incorporated the way that endeavors that embraced OHSAS 18001 accomplished huge upgrades in wellbeing, execution, and workforce profitability. These observational information bolstered that security particular data and experience as obtained by organizations had been a critical source in enhancing wellbeing conditions and work execution.

Chestnut (1996) and Pagell et al. (2013) contended that wellbeing ought to be viewed as an imperative operational need notwithstanding cost, quality, adaptability, conveyance, and development. Moreover, security is not a need of a couple quantities of enormous organizations however it is a request of governments and larger part of natives as an essential human right. Working environment wellbeing is an issue of national and universal significance. OHS can not be left only to the obligation of wellbeing units yet ought to end up distinctly an action of the whole associations. Operation administration writing accentuates laborers' security as a predecessor of operational incredibleness as opposed to recommending that supervisors ought to organize wellbeing or creation.

The above circumstance empowers us in engaging the subject of the exploration: What might be the impacts of OHS, which is viewed as an operational need, in spite of the fact that the same is in reality of key significance for associations today, on worker practices?

Authoritative duty is still essential for directors, logical analysts, and contemporary organizations (Banai et al., 2004; Morrow, 2011; Neininger et al., 2010). There are two methodologies in the writing towards a meaning of hierarchical comm

Review of Literature

Occupational Health and Safety Management

Occupational Health and Safety Management Systems(OHSMShave been portrayed by Gallagher (2001) as "…a mix of the arranging and survey, the administration authoritative courses of action, the consultative plans, and the particular program components that cooperate in an incorporated approach to enhance wellbeing and security execution."

Proficient utilization of correspondence and data organizes in undertakings both assists with lessening number of mishaps and enhances the impression of laborers as respects administration's dedication for OHS (Gyekye et al., 2012).

Wellbeing administration frameworks are incorporated instruments intended to control the dangers that may influence specialist wellbeing and security in associations and in the meantime to guarantee that the organization agrees to the directions. A decent security administration framework ought to be totally coordinated with the organization and with restricting force; a strong arrangement of approaches, techniques and strategies gives consistency and harmonization (Fernández-Muniz et al., 2009).

Wellbeing and security arrangement and systems are a piece of proficient wellbeing and wellbeing administration structure. General wellbeing and security arrangements exhibit the administration's eagerness to furnish the laborers with a sound and safe working environment (Christian et al., 2009).

Hazard administration is a method that has been utilized progressively as a part of associations and open area with a specific end goal to enhance security and dependability and minimize misfortunes. It incorporates characterizing, surveying, and controlling the dangers (Cox and Tait, 1998).

Additionally, word related wellbeing danger administration is likewise portrayed as a three-stage prepare. In the first place, the perils in the working environment are characterized. Second, the perils basic the hazard are evaluated. At long last, proper controls are set up for in like manner characterized dangers (Lingard and Holmes, 2001). Understanding and dealing with all dangers that would likely influence the association will render better execution and upper hand.

A survey of word related mischance's and medical issues connected with work gives that those accomplished mishaps at power, gas, steam, water, and sewage framework fields and those accomplished word related mishaps in the development division rank the primary (TUIK, 2015). Albert and Hallowell (2013) recommended in their review that utilization of security related techniques, taking after guidelines, cutting of electrical cables, and halting operation of hardware trying to avoid wounds were a cost-wasteful procedure yet exceptionally compelling as respects averting wounds. The discoveries of the review underscored that the advantage of applying damage counteractive action procedures were low contrasted with different areas (e.g. development segment). Thus, interest in wellbeing mediations may not counterbalance financial returns yet makes esteem as non-money related advantages (e.g. diminished laborer turnovers) and abatements social expenses (e.g. social foul play) connected with wounds.

De Koster et al. (2011) exhibited that concentrating on security assisted with lessening mischances. In this setting direct expenses incorporate first mediation, rescue vehicle and clinic costs, installments for transitory or lasting inadequacy for work or passing, financial and non-monetary harms payable to the laborer or specialist's relatives, and harms payable to protection, where circuitous cost things incorporate loss of notoriety, long haul effectiveness, and lawful costs. When all is said in done, organizations ought to put resources into works on decreasing word related mischances keeping in mind the end goal to enhance their wellbeing exhibitions. This thought is bolstered by the way that such organizations that concentrate on security in their every day operations and working techniques as Scania, Goodbye Steel, Boston Logical, and Nissan encounter lesser number of mishaps and diminishing pertinent expenses.

Operation of security atmosphere depends on the impression of laborers and that wellbeing atmosphere as made by the alleged imparted view of specialists is related to arrangements, techniques, and practices connected with the esteem and significance of security inside the association (Griffin and Neal, 2000).

Zohar (1980) recommended that the most predictable calculate that contributed the wellbeing atmosphere was solid responsibility of administration for security. Security responsibility is shown by a progression of contrasts: (a) senior administration frequently takes an interest in wellbeing exercises, (b) wellbeing officer holds higher rank and status in the association, (c) wellbeing preparing is accentuated, (d) open correspondence and close contact amongst administration and laborers, (e) stable workforce (e.g. less turnovers), and (f) advancement of wellbeing by means of direction and advising instead of by means of compulsion and advice and so on. Notwithstanding, the pith of conceptualization of wellbeing atmosphere in an organization is the way that security is an organized issue for undertakings. Administrative support for wellbeing and significance of wellbeing in the association are viewed as the premise of security atmosphere.

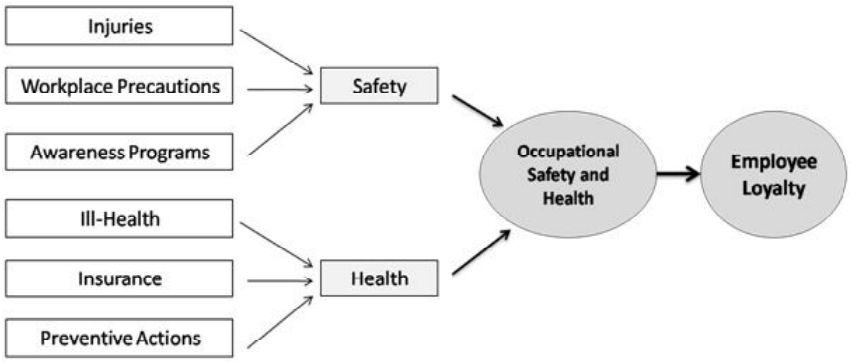
Kabanoff et al. (1995) characterized the foundation of convictions as respects what was critical for people and the whole association. View of authoritative qualities is vital since it impacts the way specialists decipher arrangements, methodology, and practices. As indicated by Griffin and Neal (2000), for example, security atmosphere observation was the degree the laborers have confidence in the estimation of their security and prosperity in the association.

Thought is how much a pioneer indicates concern and regard for devotees, pays special mind to their welfare, and communicates gratefulness and support (Bass, 1990). Chiaburu et al. (2014) characterized that individual thought was found to impart a negative relationship to estrangement.

Research Objectives

- To study the occupational safety and health (OSH) practices of Leather Company in Tamilnadu.
- To analyze the impact of the occupational safety and health (OSH) on Employee Loyalty of Leather Company in Tamilnadu.

Conceptual Framework



Research Methodology

Methodology Elements	Methodology Description
Research Nature	Descriptive Study
Location	Vellore, Tamilnadu
Total Population	400 Employees in Organization
Sample Size Determination	Glenn Sample size Table (1992)
Sample Size	60 Employees
Source of Data	Primary Sources
Sample Selection Technique	Convenient Sample (Non – Probability)
Data Collection Techniques	Structured Questionnaire & Direct Contact
Measuring Scale	Likert 5-point rating scale
Data Analysis Techniques	Descriptive Statistics, Cronbach's Alpha and Pearson Correlation Test (SPSS-23v)

Reliability Test		
Latent Variable	No of Items	Cronbach's Alpha
Injuries	3	.919
Workplace Precautions	3	.939
Awareness Programs	3	.877
ill Health	3	.795
Health Insurance	3	.710
Preventive Actions	3	.775
Employee Loyalty	3	.816

Reliability of Scale: From the above table, It reveals cronbach's alpha values and reliability of seven constructs namely Injuries (91.9%), Workplace Precautions (93.9%), Awareness Programs (87.7%), Ill health (79.5%), Health Insurance (71%), Preventive Actions (77.5%) and Employee Loyalty (81.6%)

Hypothesis

H0: There is no significant relationship between Occupational Safety and Health (OHS) on Employee Loyalty

H1: There is a significant relationship between Occupational Safety and Health (OHS) on Employee Loyalty

Results and Disccusion

A. Sample Frequency Table:

Table-1

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	44	73.3	73.3	73.3
	Male	16	26.7	26.7	100.0
	Total	60	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10	46	76.7	76.7	76.7
	Above 10	14	23.3	23.3	100.0
	Total	60	100.0	100.0	

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 6000	38	63.3	63.3	63.3
	Above 6000	22	36.7	36.7	100.0
	Total	60	100.0	100.0	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5 years	26	43.3	43.3	43.3
	Above 5 years	34	56.7	56.7	100.0
	Total	60	100.0	100.0	

The above table-1 explains the frequencies of the sample taken from the study. It reveals Gender, Education, Income and Job Experience classification in the sample. 73.3% of sample is from female employees, 46 respondents fall under below 10th standard, Income level below Rs.6,000/- are 38 respondents and Job experience below five years are 26 respondents out of 60

B. Analysis of Descriptive Statistical Table:

Table-2

Descriptive Statistics

	N	Sum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Injuries	60	167.33	2.78	1.14	.274	.309	-.940	.608
Workplace Precautions	60	161.33	2.68	1.16	.451	.309	-.936	.608
Awareness Programs	60	144.00	2.40	.99	.975	.309	.321	.608
ill Health	60	147.67	2.46	.94	1.035	.309	.520	.608
Health Insurance	60	136.33	2.27	.69	1.640	.309	5.325	.608
Preventive Actions	60	122.33	2.04	.63	2.190	.309	8.502	.608
Valid N (listwise)	60							

The above table- 2 explains about descriptive statistics of the sample taken from the study.It reveals the mean values of six factors. Out of 6 factors highest mean value is 2.78 for Injuries, followed by 2.68 for Workplace Precautions, 2.46 for Ill Health, 2.40 for Awareness Programs, 2.27 for Health Insurance and 2.04 for Preventive Actions.Basing on the mean values, Researchers identified

that the Preventive actions, Health Insurance are not taken into consideration by the top level management in the tanning industry. Those who are working in tanning industry, especially female employees are prone to injuries and ill health during work, but at a standstill management is not conducting awareness programs effectively.

C. H0: There is no significant relationship between Occupational Safety and Health (OHS) on Employee Loyalty :

Table-3

Descriptive Statistics

	Mean	Std. Deviation	N
Occupational Safety and Health	1.6278	.22953	60
Employee Loyalty	2.1833	.88176	60

Correlations

		Occupational Safety and Health	Employee Loyalty
Occupational Safety and Health	Pearson Correlation	1	.069
	Sig. (2-tailed)		.602
	N	60	60
Employee Loyalty	Pearson Correlation	.069	1
	Sig. (2-tailed)	.602	
	N	60	60

The above table-3, It reveals that the calculated p - value0.602 is greater than significant value 0.05. Therefore, Null Hypothesis is accepted. Hence it is proved that there is no significant relationship is existing between Occupational Safety Health (OHS) on Employee Loyalty in the tanning industry. The positive correlation 0.069 is existing between OSH and Employee Loyalty.

Conclusion

Enhancing representative efficiency and occupational health and safety (OHS) have been a critical field of enthusiasm of industry particularly in creating nations. Female are playing important role for developing family and countries economy. Their contribution is more in every industry, but especially even more participation is taking place in the tanning industry. If an organization wants to grow in each and every aspect it is more depends on 5M's such as Men, Money, Machine, Material and Management. Human Resources play a vital role in the development of company, industry and country economy. Each and every company or industry has to focus on employee health and safety, especially tanning industry has to focus more on OSH, because in India, employees are working more than 10 years continuously and they incurred more health related problems. The study focused on employee safety and health related issues of a tanning industry and their loyalty towards the company. Researcher found through the study that the tanning companies are not giving at most important to employee safety measures and health related issues. Researchers identified that the Preventive actions, Health Insurance are not taken into consideration by the management in the tanning industry. Those who are working in tanning industry, especially female employees are prone to injuries and ill health during work, but at a standstill management is not conducting awareness programs effectively and also it revealed that Occupational Safety and Health (OSH) practices in leather manufacturing company is not influencing loyalty of employee, However, the other factors like Low Family Income, less employment opportunities etc. may be effecting employee loyalty to work in the organization longer period of time.

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Determinants of Employee Motivation in Assam Carbon Products Limited: A Case Study

– Sampurna Bhuyan*
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Abstract

Employee motivation is one of the major issues faced by every organization. It is the major task of every manager to motivate his subordinates or to create the 'will to work' among the subordinates.Rensis Likert has called motivation as the core of management. Understanding what motivated employees and how they were motivated was the focus of many researchers following the publication of the Hawthorne study results (Terpstra, 1979) . The factors that motivate the employees may change with change in time because the needs of employees too change with change in time. The present study on employee motivation helps to get clear picture about the factors which motivates the employees. In this context, one of the best theories that providethe intellectual basis for most of motivation thinking is by behavioral scientists, A.H Maslow. Objective of the present study is to examine the factors motivating the workers of an organization on the realm of Maslow's Hierarchy of Needs theory. Descriptive research design is followed. Primary data is collected from workers of Assam Carbon Products Ltd. (ACPL)Guwahati. Method of correlation analysis and Ordered Probit Regression were applied to get the findings. Findings suggested that high salaried employees are motivated to work in comparison to their counterpart. Along with the income component non financial factors are also responsible to motivate the workers.

Keywords: Correlation analysis, Maslow's Hierarchy of Needs theory, Motivation, Ordered Probit Regression

Introduction

In today's dynamic business environment performance of any organization and its continuity in the race of business depends on their key assets, employees, as well as the capabilities of the managers to be able to create a motivating environment for their people. Most importantly it is a challenge for the managers to keep their people and employees motivated and satisfied. Thus why every manager has to be aware about the needs and requirements their employee and what they are looking for. The main objective and concern of most of the organizations is to make the benefit from people who are feeling

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positively toward the work and motivate unsatisfied employees in order to end up with a win-win situation for both the company and workers.

It is the major task of every manager to motivate his subordinates or to create the 'will to work' among the subordinates. Rensis Likert has called motivation as the core of management. Understanding what motivated employees and how they were motivated was the focus of many researchers following the publication of the Hawthorne study results (Terpstra, 1979). In order to motivate workers to work for the organizational goals, the managers must determine the motives or needs of the workers and provide an environment in which appropriate incentives are available for their satisfaction.If the management is successful in doing so; it will also be successful in increasing the willingness of the workers to work. This will increase efficiency and effectiveness of the organization. There will be better utilization of resources and workers abilities and capacities. The present study on employee motivation helps to get clear picture about the factors which motivates the employees. This in turn helps the management to formulate suitable policy to motivate the employees. Hence, the motivational level of the employees may also change. In this context, one of the best theories that provide the intellectual basis for most of motivation thinking is by behavioral scientists, A.H Maslow. Objective of the present study is to examine the factors motivating the workers of an organization on the realm of Maslow's Hierarchy of Needs theory .

Review of Literature

Urichuck (2002) evaluated that set of motivated employee will increase the capability of the organization to achieve its goal, missions and objectives. Motivated employees are assets to the organization. Also, motivated employees will feel as having a strategic partnership because of sense of belongingness with the organization and their commitments and loyalty will increase from day to day (Anne, 1994). Also, Buttner and Moore (1997), based on their research about "Happy Employees Make Productive Employees" found that when employee attitudes improved by 5%, customer satisfaction jumped by 1.3%, and the revenue increased by 5%. So, motivated employees usually produce more than others and hence the customer satisfaction increases. Motivated employees can impact a company's bottom line and make the workplace somewhere employees look forward to interact with instead of just a place to "pick up a paycheck" (Nandanwar , Surnis, Nandanwar 2010). Furthermore, a well-motivated organization for sure will have more motivated employees and hence they will be more productive and this will lead to extreme cost savings (Urichuck, 2002). In addition, satisfied employees positively impact corporate culture, resulting in many intangible but equally important returns (Yongsun, Barbara, Christy, 2002). They also sees that people, who were motivated by sending them to foreign Page 16 countries in order to live and work, are seen as valuable resource as they give more than usual when they return. On the other hand, Deci and Ryan (1985), definite that an organization whose employees have low motivation is completely vulnerable to both internal and external challenges because its employees are not going the extra mile to maintain the organization's stability. An unstable organization ultimately underperforms. Firm's needs to motivate their people and keep them motivated

in order to obtain the productivity gains and to insure their competitiveness. Sometimes people who are given responsibilities feel motivated and do their best and work hard accordingly (Ludivine, 2011). Mansoor (2008) also sees that motivation is about creating the environment where employees will be motivated and hence work with their full effort. So, organizations should motivate their employees to enhance competitive advantages and reach the firms vision and mission (Philip, Yu-Fang, Liang-Chih, 2007). Researchers have recommended that employee's commitment toward their organizations will enhance their satisfaction and which will benefit the firm (Morris &Sherma, 1981). Moreover, researchers have stressed that satisfied and encouraged employees are crucial to the organization effectiveness (Rachel, Yee, Yeung, Edwin, 2010). Also, business and company's succession depends on motivated employee; they can make all the difference in the company's ability not to just survive but also to succeed (Hislop, 2003). Although some experts argue that companies who spend money on motivating their employees is waste of money but most of them agreed that the wasted money is achieved in a very short time by the motivated employees (Khodov, 2003). In addition, performers and experienced employees are actually who produce the results of the business and they are the backbone of any company and the reason of the business growth and gain (Meyer, Becker, Vandenberghe, 2004). According to Jonathan, Christine and Yvonne (2002), motivated people and their commitment are vital to the productivity of the work as they will perform with their full potential and with high quality and Michael and Crispen (2009) stated that having a motivated workforce provides Page 17 the competitive advantage that the organization seeks and better employee performance helps the organization achieve higher productivity. Jonathan, Christine and Yvonne (2002), identified that greater motivation will have a direct effect in improving productivity through greater effort and possibly innovation. They also stated that motivation leads to a productive with high performance employee who does the best at work, saves time and effort and also volunteers to do more than what is required. Such employee will be a great resource to the business and a great model to be followed by others. "If employees are motivated and happy they will do to the work to the best of their ability instead of just doing it because they have to" (Ryan, &Deci, 2000)

Objective of the Study

The primary objective of the study is to observe the important factors which are needed to motivate the employees. Along with this the study also tries to found out the effect of monetary and non-monetary benefits provided by the organization on the employee's performance.

Hypothesis

The first hypothesis deals with the satisfaction level of the employees with the human resource policy of the ACPL and motivation level. The hypothesis is

1. Motivation level of the workers does not depend on HR policy of the organization

The second hypothesis deals with the variable age and motivation level. The null hypothesis is

2. With growing age workers are not motivated to work in the organization.

The third hypothesis is about salary/income of the respondent and motivation level. The hypothesis is

3. Motivation level does not depend on income.

Methodology:

Research design considered here is of descriptive in nature. Primary data were collected by using standard questionnaire method and method of simple random sampling technique is used to get 30 respondents out of 120 lower level employees of ACPL. Likert scale is used to collect the information for different variables and some statistical techniques like average;correlation analysis is used to get the findings. To evaluate the hypothesis we have used ordered Probit Model since the dependent variable, satisfaction with the HR policies of the organization (sat_r) is of ordered in character taking 1 to 5 values assigned as weight (Stata 11software is used).

To calculate the motivation level of the employees we have found out the factor score which is termed as sum_ r and one range is developed .

Analysis & Findings

The very first analysis is done with respect to the motivation level and satisfaction with the HR policies of the organization. As stated in the methodology of the work sum_r is calculated on the basis of the following statements(table1.1) and table 1.2 ; the range is developed in table 1.3. According to factor score it is seen that most of theemployees of ACPL are not so motivated. The support from HR department is very bad in terms of formulating dearer plans and policies for the worker and hence it is found that employees were less motivated.As our study is based on black collared employees, for them only financial incentives are more motivating.Employees would also get motivated if the company recognizes their work and give financial incentives accordingly.There has to be a good policy of salary increase which would motivate the employees.Management should also involve everyone in decision making.Higher level management is not at all approachable,hence many a times the black collared employees are not able to solve their problems.

Table1.1 Opinion of the Workers Regarding Motivation in ACP Ltd, Guwahati

Statements related to motivation	Observation
1. The type of incentives motivates you more – financial/non –financial incentives.	1. 90% say financial incentives motivate them.
2. The company's eagerness in recognizing and acknowledging employee's work is a motivator.	2. 44% strongly agree to this & only 6.6% strongly disagree to this statement.
3. Periodical increase in salary is helpful to get motivated.	3. 60% strongly agree to this and meager 3.3% disagree.
4. Performance appraisal activities are helpful to get motivated.	4. Almost 70% strongly agree and 20% shows neutral attitude to this.
5. Support from the co-worker is helpful to get motivated.	5. 45% agree and 20% strongly agree to this statement.

Source: Survey Data, 2016

Table: 1.2 Distributions of Employees of ACPC Ltd. According to Motivating Factors

Sl No	Particular	Number of Respondents	Percentage
1	Salary increase	13	43.33
2	Promotion	9	30
3	Leave	2	6.7
4	Motivational talk	3	10
5	Recognition	3	10
	Total	30	100

Source: Survey Data, 2016

Table: 1.3 Distribution of Motivated Workers (in percentage)

No. of Employees	No. of Employee	Factor Score
0	Highly Motivated	>= 95%
5	Motivated	=80%-95%
25	Least Motivated	<=79%

Source: Survey Data, 2016

To test the hypotheses we have conducted correlation and ordered Probit Regression. The dependent variable is motivation (sum_r)which is of ordered in character. Independent variables are income, age, satisfaction with HR policy denoted bysat_hr.

Correlation between satisfaction with HR policies (sat_hr) and Motivation (sum_r) has been performed; no significant relationship is observed and we cannot reject the hypothesis (table1.4). It can be interpreted that motivationdoes not rest on satisfaction with HR policyfor thelower class employees. Correlation between motivation level and age has been performed; no significant relationship is observed and we cannot reject the hypothesis.It can be interpreted that motivational level does not rest on age and experience for the employees/workers of ACP Ltd. Only income of the respondents is significant and positive denoting the fact that respondents having more amount of income/salary are highly motivated (table1.5). The inference can also be concluded with reference to Maslow's Need Hierarchy wherein money is the first need to satisfy the physiological requirements like cloth, shelter, food etc. and until and unless this need is satisfies respondents were not interested to work.

It is apparent from the observations made in this study that only lower order needs of the Maslow's Need Hierarchy Model has been fulfilled to some extent. To be more specific this study gives a clear picture about the satisfaction of only Physiological and safety needs of the black colored employees keeping aside all the other higher order needs.

Table1.4: Correlation Analysis

Correlation Matrixi

	sat_r	sum_r
sat_r	1.0000	
sum_r	0.2734	1.0000

Correlation Matricx Ii

	age	sum_r
age	1.0000	
sum_r	0.4927	1.0000

Source: Survey Data 2016

Table 1.5: Ordered Probit Analysis

Number of Observation: 30LR Chi2 (3):8.63

Prob> Chi2: 0.0348 Pseudo R2: 0.139

Sum_R (Motivation)	Coefficient	Std. Error	Z
Age	.0026367	.0295758	0.09
Hhincome	.0000683**	.00003	2.28
Sumr	-.0964382	.0751633	-1.28

Source: Survey Data 2016

Conclusion

The study concludes that, the motivational program procedure in Assam Carbon Products Limited is not at all effective. This study on employee motivation has highlighted so many factors which will help to motivate the employees. The performance appraisal activities really play a major role in motivating the employees of the organization. It is a major factor that makes an employee to feel good about his work place. Every organization can concentrate on specific areas which are evolved from this study in order to make the motivational programs more effective. Steps should be taken to improve the motivational programs procedure in the future.Along with the improvement in income/ salary of the workers othernon financial incentive plans should also be implemented; better carrier development opportunities should be given to the employees for their improvement which can improve the productivity level of the employees. Organization should give importance to communication between employees and gain co-ordination through it. Skills of the employees should be appreciated.The present study on employee motivation helps to get clear picture about the factors which motivates the employees. This in turn helps the management to formulate suitable policy to motivate the employees.

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Impact of Investments in Indian Equity Market on Bank Savings- A Study

– Dr. G. Sabitha*

Abstract

Investment in capital market are influenced by the bank interest rates .in the recent times global markets got influenced by the Fed interest rate change because of flow of funds are largely depends on the risk level of investment. The present study has been emphasized on monetary policy key rates and inflation influence on bank deposits and equity market movement .in this analysis data has been considered from 2000 to 2015.

Bivariate correlation result indicates that liquidity, deposits and equity market are having negative correlation with inflation. Weight least square model proved that interest rates are not influencing on liquidity and bank deposits. Granger causality test has been applied and result reveals that inflation is granger causing the repo rate but it is failed to influence the equity markets. The T-test hypothesis has been rejected and proved that the interest rate influence on bank deposits and equity market capitalisation.VAR model predicted that bank deposits are expected to move upside in near future. This analysis is useful to capital market investors, mutualfunds, pension funds and foreign investors.

Various research thesis and article were focused on banking deposits impact on economy. No research has analysed how savings bank deposits will have influence on equity market investments in India. Investors normally will be attracted by the higher interest rates offered by the banks, but how the market capital is fluctuating with the ups and downs of interest rate changes. My study will be emphasized to measure the structural movement's equity capital when the interest rates are getting changed.

Keywords: Bank Savings, Equity, Investment,

Introduction

Equity market or share market is the major source through which companies raise capital from the public. It is highly organized which offers issue and redemption of securities.Majority of Indian retail investors' still find traditional investment avenues like Banks, Post office, insurance, etc. as better avenues of investment.

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Our spending decisions are guided by the interest burden that we would be bearing. Many of us will prefer to deposit money in banks than in stock. Because, we have the opportunity to earn higher returns at very low risk. As a result, funds move out of stock market affecting the stock market adversely.

- Interest rates and stock market are inversely related. As the interest rates go up, stock market activities tend to come down. The following points are also worth taking note-
- Capital intensive industries would be most affected by high interest rates but when the interest rates are lower they would be gaining the most. It is better to avoid investments in sectors such as real estate, automobiles etc when the interest rates are rising.
- Companies with a high amount of loans in their balance sheets would be affected very seriously. Interest cost on existing debt would go up affecting their EPS and ultimately the stock prices. But during low interest rate these companies would stand to gain.
- Sectors like Pharma and IT are less affected by interest rates. The IT sector is more influenced by factors such as currency rate fluctuations, rising attrition level, visa restrictions, competition from the large global players and margin pressures. Certainly, IT sectors are not interest rate-sensitive. Pharma is considered as the defensive sector and investors can invest here during uncertain and volatile market conditions.
- In a high interest rate scenario, companies with zero or near zero debts in their balance sheets would be kings. FMCG or fast moving consumer goods is one sector that's considered as a defensive sector due to its low debt nature.
- Banking sector is likely to benefit most due to high interest rates. The Net Interest Margins (It is the difference between the interest they earn on the money they lend and the interest they pay to the depositors) for banks is likely to increase leading to growth in profits & the stock prices.

A bank is a financial institution that accepts deposits from the public and creates credit. Lending activities can be performed either directly or indirectly through capital markets. Due to their importance in the financial system and influence on national economies, banks are highly regulated in most countries. Most nations have institutionalized a system known as fractional reserve banking under which banks hold liquid assets equal to only a portion of their current liabilities. In addition to other regulations intended to ensure liquidity, banks are generally subject to minimum capital requirements based on an international set of capital standards, known as the Basel Accords.

Bank deposits consist of money placed into a banking institution for safekeeping. Bank deposits are made to deposit accounts at a banking institution, such as savings accounts, checking accounts and money market accounts. The account holder has the right to withdraw any deposited funds, as set forth in the terms and conditions of the account. The "deposit" itself is a liability owed by the bank to the depositor (the person or entity that made the deposit), and refers to this liability rather than to the actual funds that are deposited.

A savings account is a deposit account held at a bank or other financial institution that provides principal security and a modest interest rate. Depending on the specific type of savings account, the account holder may not be able to write checks from the account (without incurring extra fees or expenses) and the account is likely to have a limited number of free transfers/transactions. Savings account funds are considered one of the most liquid investments outside of demand accounts and cash. In contrast to savings accounts, checking accounts allow you to write checks and use electronic debit to access your funds inside the account. Savings accounts are generally for money that you don't intend to use for daily expenses. To open a savings account, simply go down to your local bank with proper identification and ask to open an account.

A stock market, equity market or share market is the aggregation of buyers and sellers (a loose network of economic transactions, not a physical facility or discrete entity) of stocks (also called shares); these may include securities listed on a stock exchange as well as those only traded privately.

The stock market is one of the most important ways for companies to raise money, along with debt markets which are generally more imposing but do not trade publicly.This allows businesses to be publicly traded, and raise additional financial capital for expansion by selling shares of ownership of the company in a public market. The liquidity that an exchange affords the investors enables their holders to quickly and easily sell securities. This is an attractive feature of investing in stocks, compared to other less liquid investments such as property and other immoveable assets. Some companies actively increase liquidity by trading in their own shares.

History has shown that the price of stocks and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood. An economy where the stock market is on the rise is considered to be an up-and-coming economy. The stock market is often considered the primary indicator of a country's economic strength and development.

Rising share prices, for instance, tend to be associated with increased business investment and vice versa. Share prices also affect the wealth of households and their consumption. Therefore, central banks tend to keep an eye on the control and behaviour of the stock market and, in general, on the smooth operation of financial system functions. Financial stability is the raison d'être of central banks.

Exchanges also act as the clearinghouse for each transaction, meaning that they collect and deliver the shares, and guarantee payment to the seller of a security. This eliminates the risk to an individual buyer or seller that the counterparty could default on the transaction.

The smooth functioning of all these activities facilitates economic growth in that lower costs and enterprise risks promote the production of goods and services as well as possibly employment. In this way the financial system is assumed to contribute to increased prosperity, although some controversy exists as to whether the optimal financial system is bank-based or market-based.

Recent events such as the Global Financial Crisis have prompted a heightened degree of scrutiny of the impact of the structure of stock markets (called market microstructure), in particular to the stability of the financial system and the transmission of systemic risk

Market Participant

Market participants include individual retail investors, institutional investors such as mutual funds, banks, insurance companies and hedge funds, and also publicly traded corporations trading in their own shares. Some studies have suggested that institutional investors and corporations trading in their own shares generally receive higher risk-adjusted returns than retail investors.

A few decades ago, worldwide, buyers and sellers were individual investors, such as wealthy businessmen, usually with long family histories to particular corporations. Over time, markets have become more "institutionalized"; buyers and sellers are largely institutions (e.g., pension funds, insurance companies, mutual funds, index funds, exchange-traded funds, hedge funds, investor groups, banks and various other financial institutions).

The rise of the institutional investor has brought with it some improvements in market operations. There has been a gradual tendency for "fixed" (and exorbitant) fees being reduced for all investors, partly from falling administration costs but also assisted by large institutions challenging brokers' oligopolistic approach to setting standardised fees

Stock market index

The movements of the prices in a market or section of a market are captured in price indices called stock market indices, of which there are many, e.g., the S&P, the FTSE and the Euronext indices. Such indices are usually market capitalization weighted, with the weights reflecting the contribution of the stock to the index. The constituents of the index are reviewed frequently to include/ exclude stocks in order to reflect the changing business environment.

Objectives of the Study

1) To measure the relationship of Repo Rate with liquidity, deposits, equity market capitalization along with inflation.
2) To study the interest rate influence on liquidity and bank deposits.
3) To measure the inflation impact on interest rates and equity market capitalization growth.
4) To measure the interest rate fluctuation influence on bank deposits and equity market capital growth rate
5) To forecast the future momentum of bank deposits and equity market capital based on repo rate

Hypothesis:

- Null Hypothesis - Ho - Repo rate will not influence the liquidity.
- Null Hypothesis - Ho - Repo rate will not influence the bank deposits.
- Null Hypothesis - Ho - Inflation will not influence the equity market capital

Need for the Study:

In Indian 75% of the citizens are saving their money in banking sector and only 25% of money is going to other investment segments. Many research papers have done critical research in this area but no topic is has been found how saving bank deposits are having impact on Indian equity markets growth and its market capital appreciation. The need of this study "A Bank savings deposit impact on equity investment market" is intended to know the investment decisions based on behavior of the equity markets. To know the monetary policy influence on bank deposits and the impact of bank deposits on equity market. And also how the monetary policy key rates are useful to retail investors, mutual fund investors etc.

Scope of the Study

The present study has been emphasised to measure the impact of bank saving interest rates on capital markets. The data has been considered for the following variables from 2000 to 2015.

- Repo rate
- Liquidity in the system
- Deposits with the bank
- Equity market capitalization
- Inflation
- Gold price
- GDP
- Nifty data

Limitations

1. In the study bank deposits were consider only commercial banks data.
2. Equity market capital data has been considered from NSE India.

Research Methodology

This analysis has been done on secondary data by using descriptive statistical tools. The following formulas were considered for the analysis.

1) **Correlation:** A correlation study is a research writing that attempts to relate an event to another events or sets of causality which precipitate the event. Bivariate Correlation tests whether the relationship between two variables is linear (as one variable increases, the other also increases or as one variable increases, the other variable decreases)

$$r = \frac{\Sigma fuv - \frac{(\Sigma fu)(\Sigma fv)}{n}}{\sqrt{\Sigma fu^2 - \frac{(\Sigma fu)^2}{n}} \times \sqrt{\Sigma fv^2 - \frac{(\Sigma fv)^2}{n}}}$$

2) **Weight least square:** Weighted least squares (WLS) regression is useful for estimating the values of model parameters when the response values have differing degrees of variability over the combinations of the predictor values. As suggested by the name, parameter estimation by the method of weighted least squares is closely related to parameter estimation by "ordinary", "regular", "unweighted" or "equally-weighted" least squares.

The Weighted Least Squares Method

$$E(\omega) = H(\omega) - \hat{H}(\omega)$$

$$H(\omega) = \sum_{n=1}^{M} a_n \text{ trig } (\omega, n)$$

$$E(\omega) = \sum_{n=1}^{M} a_n \text{ trig } (\omega, n) - \hat{H}(\omega).$$

- $H(\omega)$ actual frequency response
- $\hat{H}(\omega)$ desired frequency response
- trig (ω, n) appropriate trigonometrical function
- a_n impulse response of the filter

3) **Johansen Co-integration:** Co-integration is a statistical property of time series variables. Two or more time series are co-integrated if they share a common stochastic drift. If two time series x and y are co-integrated, a liner combination of them must be stationary. Y - Bx = u, Where u is stationary

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{g} \ln(1 - \hat{\lambda}_i)$$

4) **Granger causality test:** Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another. A time series X is said to Granger-cause

Y if it can be shown, usually through a series of t-tests and F-tests on lagged values of X that those X values provide statistically significant information about future values of Y.

$$y_t = \beta_{1,0} + \sum_{i=1}^{p} \beta_{1,i} y_{t-i} + \sum_{j=1}^{p} \beta_{1,p+j} x_{t-i} + e_{1t} \quad (1)$$

$$x_t = \beta_{2,0} + \sum_{i=1}^{p} \beta_{2,i} y_{t-i} + \sum_{j=1}^{p} \beta_{2,p+j} x_{t-i} + e_{2t} \quad (2)$$

5) **T-test:** A t-test's statistical significance indicates whether or not the difference between two groups' averages most likely reflects a "real" difference in the population from which the groups were sampled.

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

6) **Jarquebara test :** In statistics, the Jarque-Bera test is a goodness-of-fit test of whether sample data have the skewness and kurtosis matching a normal distribution.

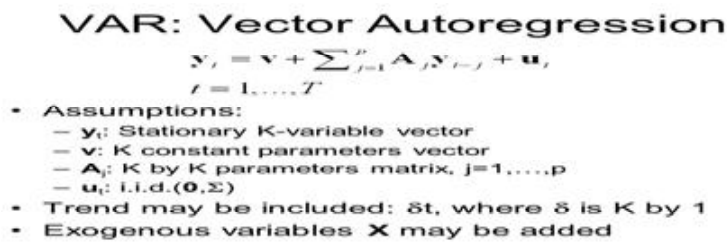
$$JB = n\left[\frac{skewness^2}{6} + \frac{(kurtosis-3)^2}{24}\right]$$

where

$$skewness = \frac{\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^3}{\left(\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^2\right)^{3/2}}$$

$$kurtosis = \frac{\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^4}{\left(\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^2\right)^2}$$

7) **Vector auto regression:** The vector auto regression (VAR) is an econometric model used to capture the linear interdependencies among multiple time series. VAR models generalize the univariate autoregressive model (AR model) by allowing for more than one evolving variable. All variables in a VAR are treated symmetrically in a structural sense (although the estimated quantitative response coefficients will not in general be the same); each variable has an equation explaining its evolution based on its own lags and the lags of the other model variables.



Data Analysis and Interpretation:

1. To measure the relationship of Repo rate with Liquidity, Deposits, Equity market capitalisation along with Inflation.

Correlation

		Repo	Liquidity	Deposits	Equity Market cap	Inflation
Repo	Pearson Correlation	1	-0.05	-0.009	-0.068	-0.313
	Sig. (2-tailed)		0.786	0.96	0.713	0.081
	N	32	32	32	32	32
Liquidity	Pearson Correlation	-0.05	1	.574**	.542**	.465**
	Sig. (2-tailed)	0.786		0.001	0.001	0.007
	N	32	32	32	32	32
Deposits	Pearson Correlation	-0.009	.574**	1	.958**	.376*
	Sig. (2-tailed)	0.96	0.001		0	0.034
	N	32	32	32	32	32
EquityMa	Pearson Correlation	-0.068	.542**	.958**	1	.420*
	Sig. (2-tailed)	0.713	0.001	0		0.017
	N	32	32	32	32	32
Inflation	Pearson Correlation	-0.313	.465**	.376*	.420*	1
	Sig. (2-tailed)	0.081	0.007	0.034	0.017	
	N	32	32	32	32	32

Interpretation: The above table depicts the relationship of repo rate with select variables. The analysis results reveals that the liquidity, deposits, equity and inflation are slightly negative correlation with inflation. The 2 tail significant probability is observed to inflation with repo rate.

2. To study the interest rate influence on liquidity and bank deposits:

Weighted Least Squares Analysis

	Sum of Squares	df	Mean Square	F	Sig.
Regressio	16.178	2	8.089	0.131	0.878
Residual	1791.459	29	61.774		
Total	1807.637	31			

Coefficients

	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	Beta	Std. Error	Beta	Std. Error		
(Constant)	7.73	0.357			21.653	0
Liquidity	-1.74E-06	0	-0.008	0.238	-0.034	0.973
Deposits	-3.43E-06	0	-0.089	0.238	-0.376	0.71

ANOVA

				Sum of Squares	df	Mean Square	F	Sig.
Liquidity	Between Groups	(Combined)		6.16E+08	25	2.46E+07	3.329	0.069
		Linear Term	Weighted	1653836.499	1	1653836.499	0.224	0.653
			Deviation	6.14E+08	24	2.56E+07	3.458	0.064
	Within Groups			4.44E+07	6	7395610.238		
	Total			6.60E+08	31			
Deposits	Between Groups	(Combined)		1.97E+10	25	7.88E+08	4.47	0.035
		Linear Term	Weighted	1806027.919	1	1806027.919	0.01	0.923
			Deviation	1.97E+10	24	8.21E+08	4.656	0.032
	Within Groups			1.06E+09	6	1.76E+08		
	Total			2.08E+10	31			

Interpretation: The above analysis of weight least square analysis indicates that the repo rate failed to influence the liquidity and deposits. The analysis of variance under regression probability is observed non-significant i.e.,0.878>0.05. The coefficient of liquidity and deposits are also observed non-significant. Both the probability values are fallen in non-significant region.

3. To measure the inflation impact on interest rate and equity market capitalisation growth.

Johensen co-integration test:

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	2	2	3	2	3
Max-Eig	2	2	3	2	3

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
	Log Likelihood by Rank (rows) and Model (columns)				
0	-458.0249	-458.0249	-457.8652	-457.8652	-457.7190
1	-445.5211	-443.9268	-443.7694	-442.8013	-442.6786
2	-433.9268	-431.4238	-431.2700	-430.2479	-430.2367
3	-433.4932	-427.6048	-427.6048	-426.5827	-426.5827
	Akaike Information Criteria by Rank (rows) and Model (columns)				
0	33.35892	33.35892	33.56180	33.56180	33.76564
1	32.89436	32.85191	32.98353	32.98580	33.11990
2	32.49477	32.45884*	32.51928	32.58913	32.65976
3	32.89237	32.68606	32.68606	32.82734	32.82734

Schwarz Criteria by Rank (rows) and Model (columns)					
0	33.78713	33.78713	34.13274	34.13274	34.47932
1	33.60804	33.61317	33.83995	33.88980	34.11906
2	33.49393*	33.55315	33.66117	33.82618	33.94439
3	34.17700	34.11342	34.11342	34.39743	34.39743

Interpretation: The above analysis of Johansen co-integration has been applied on inflation, interest rate and equity market capitalisation. The log likelihood rank values in both non-linear and linear quadratic intercept trend observed in decreasing mode. Hence the data is stated to co integrated among the analysed variables during the study period.

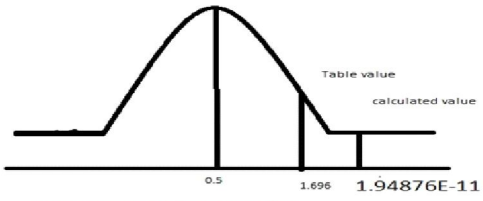
Pairwise granger causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
REPO does not Granger Cause DINFLATION	29	2.46919	0.1059
DINFLATION does not Granger Cause REPO		0.97525	0.3915
DEQUITY does not Granger Cause DINFLATION	28	1.74640	0.1967
DINFLATION does not Granger Cause DEQUITY		4.10572	0.0299

Interpretation: The above analysis of granger causality test null hypothesis HO has been rejected to inflation with repo rate and accepted the alternative hypothesis H1. The probability value is observed non-significant which is greater than 0.05 i.e.,0.3915

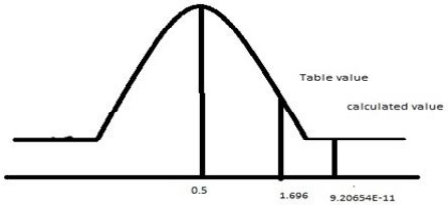
The granger null hypothesis to equity has been accepted and rejects the alternative hypothesis H1 because the calculated probability value is found to be less than 0.05 i.e., 0.0299

4. To measure the interest rate fluctuations influence on bank deposits and equity market capital growth:



REPO RATE AND DEPOSITS

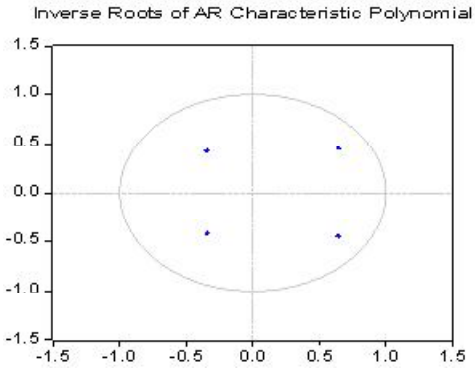
Interpretation: The above T-test result reveals that the null hypothesis has been rejected to repo rate with bank deposits and accepts the alternative hypothesis H1.The T-test calculated value is observed greater than the table value i.e, 1.9487>1.696.



REPO RATE AND EQUITY

Interpretation: The above T-test result reveals that the null hypothesis has been rejected the repo rate with equity and accepts the alternative hypothesis H1.The T-test calculated value is observed greater than the table value i.e., 9.2065>1.696.

5) To forecast the future momentum of bank deposits and equity market capital based on repo rate:



Interpretation: The above graph of polynominal indicates that the inverse roots were fallen inside the circle which indicates that the data is stated to be normally distributed among the dependent and independent variables.

Component	Skewness	Chi-sq	df	Prob.
1	-1.761607	14.48187	1	0.0001
2	-0.293997	0.403359	1	0.5254
Joint		14.88523	2	0.0006

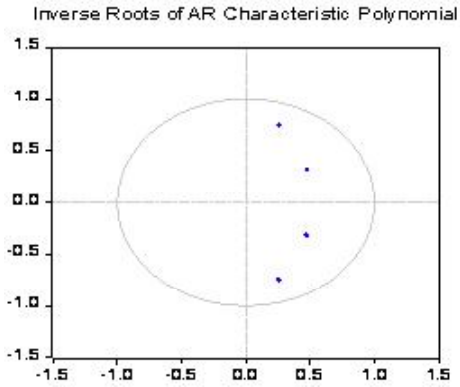
Component	Kurtosis	Chi-sq	df	Prob.
1	8.226490	31.86890	1	0.0000
2	3.426765	0.212483	1	0.6448
Joint		32.08138	2	0.0000

Component	Jarque-Bera	df	Prob.
1	46.35077	2	0.0000
2	0.615842	2	0.7350
Joint	46.96661	4	0.0000

Interpretation: The above table of Jarque Bera ,skewness and kurtosis probability values are observed significant which indicates that the data is normally distributed among the selected variables.

	REPO	DDDEPOSITS
REPO(-1)	1.098614	161.5062
	(0.17882)	(123.878)
	[6.14353]	[1.30375]
REPO(-2)	-0.438247	-223.9443
	(0.17165)	(118.907)
	[-2.55318]	[-1.88336]
DDDEPOSITS(-1)	0.000655	-0.487765
	(0.00028)	(0.19511)
	[2.32698]	[-2.49989]
DDDEPOSITS(-2)	0.000352	-0.241135
	(0.00029)	(0.20020)
	[1.21709]	[-1.20449]
C	2.242932	666.1426
	(0.84599)	(586.047)
	[2.65126]	[1.13667]
R-squared	0.699751	0.323193
Adj. R-squared	0.647534	0.205488
Sum sq. resids	9.140759	4386503.
S.E. equation	0.630416	436.7122
F-statistic	13.40077	2.745777
Log likelihood	-24.05782	-207.1960
Akaike AIC	2.075559	15.15686
Schwarz SC	2.313452	15.39475
Mean dependent	7.022024	122.9246
S.D. dependent	1.061863	489.9423
Determinant resid covariance (dof adj.)		67086.40
Determinant resid covariance		45266.21
Log likelihood		-229.5450
Akaike information criterion		17.11036
Schwarz criterion		17.58614

Interpretation: The above table of vector auto regression result indicate that bank deposits are expected to move along with the repo rate.



Interpretation: The above graph of polynominal indicates that the inverse roots were fallen inside the circle which indicates that the data is stated to be normally distributed among the dependent and independent variables.

Component	Skewness	Chi-sq	df	Prob.
1	-0.912229	3.883420	1	0.0488
2	0.791095	2.920547	1	0.0875
Joint		6.803967	2	0.0333

Component	Kurtosis	Chi-sq	df	Prob.
1	5.118186	5.234497	1	0.0221
2	3.119334	0.016614	1	0.8974
Joint		5.251111	2	0.0724

Component	Jarque-Bera	df	Prob.
1	9.117916	2	0.0105
2	2.937161	2	0.2303
Joint	12.05508	4	0.0169

Interpretation: The above table of Jarque Bera ,skewness and kurtosis probability values are observed significant which indicates that the data is normally distributed among the selected variables.

	REPO	DEQUITY
REPO(-1)	1.077282	77582.88
	(0.20035)	(174921.)
	[5.37704]	[0.44353]
REPO(-2)	-0.421471	-198629.8
	(0.19494)	(170201.)
	[-2.16202]	[-1.16703]
DEQUITY(-1)	2.16E-07	0.396387
	(2.0E-07)	(0.17808)
	[1.05839]	[2.22592]
DEQUITY(-2)	-2.76E-07	-0.613322
	(2.2E-07)	(0.19490)
	[-1.23776]	[-3.14690]
C	2.398524	1220868.
	(0.90258)	(788025.)
	[2.65742]	[1.54928]

R-squared	0.660257	0.406798
Adj. R-squared	0.601172	0.303633
Sum sq. resids	10.34309	7.88E+12
S.E. equation	0.670597	585486.1
F-statistic	11.17458	3.943159
Log likelihood	-25.78788	-408.8219
Akaike AIC	2.199135	29.55871
Schwarz SC	2.437028	29.79660
Mean dependent	7.022024	331714.1
S.D. dependent	1.061863	701612.6
Determinant resid covariance (dof adj.)		1.53E+11
Determinant resid covariance		1.03E+11
Log likelihood		-434.5198
Akaike information criterion		31.75142
Schwarz criterion		32.22720

Interpretation: The above table of vector auto regression result indicate that equity is expected to move along with the repo rate.

Findings

1. This study found that liquidity, bankdeposits and equity market are having correlation with inflation.
2. This analysis proves that repo rate failed to influence the liquidity in the system and bank deposits.
3. Inflation had influenced interest rate bur during the same period inflation failed to influence equity market benchmarks.
4. The analysis had proved that bank deposits and equity markets got influenced by interest rate fluctuations
5. The future momentum of bank deposits is expected to move upside based on repo rate growth.
6. Equity markets are expected to move along with repo rate because the VAR model has shown neutral effect.

Suggestions

1. Investors are suggested to divert their investments towards equity segments when repo rate is going upside.
2. Study suggests that growth of equity market capital will force the bank deposits to go downwards, but at the same time period nifty is expected to move upwards.
3. Raise of Inflation is forcing repo and reverse repo up side by the RBI; equity investors are advised to be cautious when repo and reverse repo moving upwards.

4. Many countries central banks are offering interest rates on CRR but in India RBI is not offering interest rate but banks are paying interest to the deposit holders. The study suggest to offer interest rate to the banks on CRR.

Conclusion

I conclude the analysis title "Bank savings deposits impact on the equity market investment" for the period 2000 to 2015. The analysis result indicates that inflation is having influence on interest rates directly and interest rates are having influence on bank deposits and equity market momentum. This study found that inflation is not having direct impact on bank deposits and market movements. Hence there is a future scope to do research in this area by considering various micro economic factors which are influenced by the inflation, so that equity markets and bank deposits direction cab be identified.

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Causes of Opting VRS by Employees in Selected Steel Manufacturing Organizations in India- A Comparative Study

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– Dr. Syeda Shumaela Naeem**

Abstract

In the post independence era, due to the socialistic approach of Indian policy makers, non existence of advanced technology and several other socio-economic and political considerations resulted in employment of huge manpower in the industrial organizations in general and steel industry in particular. The Indian corporate strategy of "employ more and produce more" subsequently proved to be ineffective because of the outdated technology, closed economy policy of government and several other factors which resulted in a huge budgetary deficit. It so happened that in 1991, the then government had no other option but to go for structural reforms of Indian economy and there was emergence of New Economic Policy (NEP). As a result, it necessitated the Indian companies to adopt cost reduction strategy and quality improvement practices to face the challenges of global competition. Indian Steel Industry which used to employ huge manpower adopted VRS as one of the important cost cutting mechanisms to rightsize their manpower. In fact there could be several causes which led to opting VRS by the employees but present study is a modest attempt to find out what are the major causes behind opting VRS by the employees, especially in steel manufacturing organizations in India. With a sample size of 290 VRS opted employees (both from public and private sector), there has been efforts to examine whether the causes of opting VRS vary across organizations because of the categorization on the basis of their ownership. The findings of the study reveals the existence of difference in causes which need to be addressed by the management of organizations and the planners and policy makers of the country.

Keywords : VRS, Cause, Opting, employees.

JEL CLASSIFICATION: J26 - Retirement; Retirement Policies

1.1 Introduction

In the process of globalization, according to (Kobrin,1992), the world has become more competitive, uncertain and volatile than ever. In order to cope with the challenges of competition it has been time and again reported and found some strong trends since the mid -1980s are restructuring, downsizing or more euphemistically, rightsizing in which organizations reduce their manpower by

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cutting down the size of their permanent full-time staff. It is also reported that the most humane technique of rightsizing the workforce is VRS has virtually become corporate India's only option for shedding manpower (The Economic Times,4 December,P.11,2000). Guha (1996) in his classic study of Voluntary Retirement-problems and perspectives has rightly pointed out that to achieve the cost effectiveness , downsizing of manpower has to be taken up as indispensable exercise. More than 75% of the Fortune 1,000 firms had implemented downsizing programme since the year 2000((Benardin,2007).In order to achieve rightsizing, voluntary retirement schemes and golden handshake schemes are quite popular in the Indian industry, particularly in the public sector enterprises, banks, large private companies, and other overmanned organizations (Kazmi,2007,P.303). For example, during 1991-2008 , due to disinvestment, in 64 public sector undertakings, 5.94 lakh employees had taken VRS(Times of India, July 8,P.16,2009).

According to Das (1995), notwithstanding the fact that the scheme is voluntary in nature, because of circumstantial transformation, it virtually emerged as a situational compulsion for the basic survival of the industrial organizations in India. It is a permanent elimination of workers in an organization. In fact, it is a process of internal consolidation to improve the productivity and reduce the cost. On the other hand, downsizing is the term to designate a reduction in a company's workforce (Ivancevich, 1998, P.60). Through Voluntary Retirement Scheme (VRS) employer and employees can end up their contract of employment after the mutual consensus, before the due date of retirement. It is an early separation scheme for employees, who willfully want to retire early. Being completely voluntary in nature, it is the discretion of an individual employee to opt or not to opt VRS. But surprisingly, lakhs of employees have opted the VRS in past few decades. During the year 1992-93, approximately 94168 employees had opted VRS from the various public sector organizations in India (The Public Enterprises Survey Report, 1993-94, Vol. I). During 1991-2008, due to disinvestment in 64 public sector undertakings, about 5.94 lakh employees had taken VRS (Times of India, July 8, 2009, p-16). Furthermore, it was reported that in order to clear its loss of approximately Rs. 12,000 crore, BSNL is putting its house in order and offering VRS to its approximately one lakh employees to facilitate the saving of about Rs. 2,400 crores per annum (Economic Times, Dec 17, 2011, p-5). Hindustan Zinc Ltd has also implemented the VRS (Capital Market, Sep 18, 2011, p-74). Due to decline in net profit, Graphite India implemented VRS at its Bangalore facility (Business Line, Oct 31, 2010, p-3).

Steel industry used to be a labour intensive industry and had employed huge manpower due to the absence of advanced technology in the early days of industrialization. In India , especially after declaration of NEP- 1991, VRS was introduced by many organizations in steel industry in order to cope with their technological advancement and match with the requirements of cost reduction strategies. SAIL was among the six top PSUs who have spruced its workforce. The Bhilai Steel Plant alone has reduced its total count of 8963 surplus employees during 1986-87 to 1992-93 through VRS (Guha, 1996). As per the Statistics for Iron and Steel Industry in India (2004), about 7398, 4467, 4983, 4475, 2445, 179 and 1395 employees have opted VRS from BSP, DSP, RSP, BSL (Bokaro Steel Plant), ASP, SSP and VISIL for the period of 1999 to 2003-04, respectively. The Statistics for Iron and Steel

Industry in India (2004) shows that about 11,685 employees have opted VRS from TISCO during the year 1999 to 2003-04.

In fact, a large number of studies have been conducted on causes of opting VRS by the employees in many organizations in different industries. A review of some of the previous studies can develop a deeper inside into the various causes of opting VRS by the employees. Aggarwal (2007) in a study found job insecurity and transfer were among the important reasons due to which employees have opted voluntary retirement scheme. The study of World Bank and Institute for Social Sciences (2000-03) have found that, many VRS opted employees have felt VRS as compulsory retirement scheme, which is in line with a study by Kumar and Kumar (2007). Coercion tactics by management to opt VRS has also been reported by Khasnabis and Banerjea (1996) in their study and also have identified factors like frustration, fear of transfer, fear of retrenchment, victimization have been predominantly used in coercing the employees to opt VRS. Mukherjee (2007) reported from a study conducted by Ramesh for V.V Giri National Labour Institute, on "Impact of Privatisation on Labour: A Study of BALCO Disinvestment" found that while implementing VRS scheme different forms of coercion like creating job uncertainties, humiliation and demoralization of workers, deferred payment etc., have been used by the management. Narula (2004) study revealed the involuntary nature of VRS(Golden Handshake Scheme) found that the threats of transfer or litigation or dismissal without money were the sources of coercion by management.

Vishwanath (2003) in a study pointed out that the management could neither provide sufficient opportunities to the VRS opted employees for planning their post VRS prospects, nor guided them in due course of time. Therefore, the least studied voluntary retirement schemes and compulsory retirement schemes could have become one of the burning issues of the present scenario (Gupta, 2001). In view of the above facts, it seems VRS have become compulsory retirement schemes in a large number of cases. Similaly, Suri and Poonam (2003) in a study on 60 VRS opted employees of public sector bank located in NCR (Delhi) found that better employment opportunity, monotonous job, self or spouse transfer, entrepreneurship lure, children settlement, skill obsolesce, skill up gradation, harassment by superior, self or family health problems, chances of reduction in retirement age, retrenchment threat on the part of government, ambitions, to enjoy family life etc. have led male employees to opt VRS. Whereas the women employees have opted VRS due to self or family health problems, transfer of self or spouse, job redundancy, monotonous job, harassment by superiors, retrenchment threat, better employment opportunities, entrepreneurship lure, children settlement or to spend time with family. Moreover, the family members and friends have supported their decision for opting VRS. Aggarwal (2007) found in his study (sample size 643), the financial attractiveness of the scheme, fear related to job or transfer, poor health and fear of lowering of retirement age to 58 as the important reasons behind opting voluntary retirement by the employees.

Thus while managing people is a critical competitive advantage to organizations but one analysis of Fortune 500 firms between 1995 and 2005 found that the downsizing was one of their most

prominent initiative for cost reduction program Robert(2008), Moreover, there is scanty of efforts to examine whether there exist significant difference in causes of opting VRS between public and private sector employees in Indian steel industry. In the above backdrop, and present study is a modest attempt to analyze the causes of opting VRS by the employees in selected steel manufacturing organizations in India.

1.2 Methodology

The research study has been conducted on Four large steel manufacturing plants of India viz. Durgapur Steel Plant (DSP) and Bhilai Steel Plant(BSP) both are in Public Sector and will be subsequently to be referred as A and B, respectively. Tata Iron and Steel Company (TISCO) and Mukund Ltd. Will be referred as C and D , respectively (both of them are in Private Sector). It took almost 3 years to locate the respondents and collect data from the VRS employees because after taking retirement many of them have changed their residences and are staying in different localities and many of them were either not available or even reluctant to provide information to the researcher . Following is the details of the VRS opted employees (Organisation -A, 69, B,100, and Organisation-C, 100 and D,21) which together constitute 290 respondents from the Four steel manufacturing organizations. In fact for the purpose of present study, a total of 135 VRS opted employees from each sampled organizations were planned and approached in 3 sampled organizations, while in Organization D only 52 VRS opted employees had taken VRS out of which only 21 could be contacted with much difficulty to collect data. The data was collected through schedule specially designed for this research. For data analysis, Chi-square test, percentage and content analysis methods were used. For analysis and interpretation of data, SPSS package (software) was used. The results were presented as percentages and values of $p<0.05$ was taken as significant.

1.3 Findings of Study

At the time of the survey, it was found that the majority of respondents belonged to the age group of 50 to 70 years and almost all of them were either self employed or working in some other organizations. Moreover, except organization C, the majority of VRS opted employees have qualification of Xth standard or less. In the study, it has been established that there exist five major causes due to which the employees have opted VRS from their respective organizations. It includes health issues, job dissatisfaction, domestic or financial problems, management pressure and one time VRS compensation. The percentage wise classification of VRS opted employees with the causes of their opting VRS are shown

Table No. 1 : Causes of Opting VRS by Respondents in Selected Steel Manufacturing Organizations

Causes	Organization A (n=69)	Organization B (n=100)	Organization C (n=100)	Organization D (n=21)	Total (n=290)
Health Issues	47.8%	34%	14%	76.2%	53.4%
Job Dissatisfaction	0.0%	10%	44%	0.0%	18.6%
Domestic/ Financial Problems	26.1%	07%	0%	23.8%	10.4%
Management Pressure	8.7%	05%	40%	0.0%	17.6%
One time compensation	0.0%	04%	0%	0.0%	1.4%
Others	17.4%	40%	2%	0.0%	18.6%

Table-1 shows the causes of opting VRS by the VRS opted employees from the selected large steel manufacturing organizations under study. It could be seen from Table-1 that while "health issue" emerged to be the most important cause by majority (53.4%)of the respondents, "one time compensation" has become the least important cause(only by a few employees,1.4%) of opting VRS by respondents of the selected large steel manufacturing organizations understudy. However, job dissatisfaction and management pressure have also compelled nearly one- fifth (18.6% and 17.6%, respectively) respondents under study to opt for VRS. Further, due to domestic/financial problems, about 10.4% respondents under study have opted VRS. However , opting VRS , there were several other individual reasons such as:age, family pressure, desire to start a business of own, other issues including old age, unhealthy wife, for comfortable retired life, mental stress, self-interest, reservation in employment, to enjoy family life, for child's future, spouse's death, colleagues were opting VRS etc. have motivated remaining almost one-fifth (18.6%) of sampled respondents under study.

It could also be seen from the Table-1 that irrespective of sectoral differences, health issue is becoming a predominant cause of opting VRS in all the organizations under study in general and in Organization-D in particular in which more than three -fourth(76.2%) while on the other hand in organization C, only 14% respondents opted VRS for this reason. Majority of respondents of organizations C has opted VRS due to management pressure (40%) and job dissatisfaction (44%). Further, domestic/financial problems have also led 23.8% respondents of Organization D to opt for VRS. However, "one time compensation" could not be a dominating factor for respondents to opt VRS from their respective organizations. Likewise , except organization C, "management pressure" was not there for employees to take VRS, which seems for them it was truly voluntary.

Table-2 shows the differences in causes of opting VRS by the sampled respondents on the basis of their categorization as the ex-employees of Public and private sector organizations. Interestingly, while health issues is the major (39.6%) cause of opting VRS in public sector, and job dissatisfaction is the major(36.4%)cause in private sector. Similarly, while "management pressure" is the 2nd most important(33%) cause of taking VRS in private sector, which is not an important cause. In fact it could be seen from Table-2 that "management pressure(6.5%) and job dissatisfaction(5.9%) emerged to be the least important cause of obtaining VRS in public sector organizations under study. Moreover,

while in public sector, one of the cause is " domestic/financial problems" , which seems to be unimportant (4.1%) cause in private sector to opt VRS by the respondents under study. While "one time compensation" perhaps fascinated employees to opt VRS in public sector but it had Zero impact on the VRS opted employees of private sectors under study. Other miscellaneous reasons such as age, family pressure, desire to start a business of own, other issues including old age, unhealthy wife, for comfortable retired life, mental stress, self-interest, reservation in employment, to enjoy family life, for child's future, spouse's death, colleagues were opting VRS etc. have also motivated especially public sector employees who have taken VRS from their organizations.

Table 2 : Causes of opting VRS Between Public and Private Sector Organizations Under Study

Causes	Public Sector (n=169)	Private Sector (n=121)
Health Issues	39.6%	24.8%
Job Dissatisfaction	5.9%	36.4%
Domestic/Finance Problems	14.8%	4.1%
Management Pressure	6.5%	33.0%
One time compensation	2.4%	0.0%
Others	30.8%	1.7%

In order to test the null hypothesis that there exists no significant differences within and between the selected steel manufacturing organizations on the basis of their categorization in to public and private sector with respect to causes of opting VRS by the employees, Chi square test was used. The test results are shown in Table 3. It could be seen from Table-3 that there exist significant difference in the causes of opting VRS within the organization A,B,C and D among the VRS opted employees. Further, chi square test has also established a significant difference in causes between respondents public as well as private sector employees with respect to their cause of opting VRS.

Table 3 : Statistics of Causes of Opting VRS by Sampled Respondents

	Chi- sq. Value	Df	P
Organization A	23.348	3	P<0.001
Organization B	76.760	5	P<0.001
Organization C	49.440	3	P<0.001
Organization D	5.762	1	P<0.05
Public Sector	116.976	5	P<0.001
Private Sector	63.504	4	P<0.001
Public Vs Private	98.097	5	P<0.001

1.4 Interpretation of Findings and Conclusions

The findings of the study is in line with Gough (2002), in which "state of health" first among the nine factors, perceived by the respondents in choosing age of retirement. Similarly, Aggarwal(2007)and Padmini (2007-08) in their study also found poor health was one of the important cause of behind

opting VRS by the employees. In fact health of an employee emerges to be a major concern in the late part of employment life due to growing age, occurrence of different age related diseases, psychological insecurity which emerges in employee on major health problems like Heart, BP, Sugar etc and non existence of appropriate and adequate medical facilities within and around the organizations. Of course it was not so in case of one of the respondent organizations , which is having a very updated hospital and progressive medical policy, both for their existing and retired employees. Interestingly, job dissatisfaction and management pressure found to be one of the important causes of opting VRS among the employees in one of biggest and oldest steel manufacturing organization in private sector could be due to modernization of plant on the one hand and educational background and age of those employees for which they might have a fear in their mind and inability to handle the new technology could be the cause of their dissatisfaction. This finding of the study is in line with that of Datta (2001), Denton et.al (2010)in which it reported that a large number of employees have opted VRS in management influence, due to health problem, job dissatisfaction, domestic /financial problem or management pressure, due to job loss, early retirement incentives, fear of compulsory retirement, job related problems or to look after their family. Moreover, the differences causes of opting VRS by employees between public and private sector could be due to one time compensation being floated in the name of Golden Handshake Scheme, less management pressure , relatively favourable work environment and pressure in public sector in comparison to their counter parts in private sector for which employees decide to opt or not to opt VRS.

To conclude, whether it is VRS or CRS it is against the healthy HR policy and practices of any organization and plays a negative role in the Employer Branding Programme. At least in the present context be it public or private sector, professionalism is the requirement of time and no organization can gain competitive advantage without strategically managing its manpower. In case of extreme situation which necessitates to reduce manpower, VRS should be the only the last option for the organizations because no new organization feels comfortable to employ a VRS opted employee and pay him/her the packages which one was getting in the previous organization before VRS. Therefore , organizations floating VRS should have systematic arrangement for outplacement services,, outselling facility, retraining programme, attractive severance packages, strong proactive medical policy and facilities etc. for VRS opted employees, so that it can keep the moral of the survivors high, retiring employees should leave the organizations as ambassadors of goodwill than a beggar on the street with a begging bowl.

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A Conceptual Analysis of Accounting for Depreciation using Component Wise Approach - Indian Perspective

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Abstract

The concept of Accounting for Depreciation on a component wise valuation basis is a fairly niche concept. There have been significant amendments in the Companies Act pertaining to calculation of depreciation, in the last 3 decades. This has impacted the results of the companies, as the financials undergo a change due to changes in the depreciation accounting. The Companies Amendment Act of 1988 introduced the Schedule XIV with retrospective effect from 02nd April 1987 and prohibited the use of depreciation rates prescribed under the Income Tax Act, 1961.Also, the Companies Act amended in the year 2000 permitted companies to use Straight Line Method (SLM) for determination of Net Profit for computing managerial remuneration by amending the section 350 of the Act.Further, Schedule XIV of the Erstwhile Companies Act 1956 recognizes Straight Line Method (SLM) and Written Down Value (WDV) Method for calculating the Depreciation. Both SLM and WDV Methods have been considered for Depreciation accounting.

However, the Schedule II of the Companies Act, 2013 that deals with depreciation significantly departs from the erstwhile Schedule XIV of the 1956 Act and provides the Useful life of the asset method and introduced the concept of componentization of asset for calculating the depreciation. This method may seem to be relatively new to the Indian Asset Accounting.

However, reference to the same can be found in the Existing Accounting Standard AS-10 on Accounting for Fixed Assets:

"The requirement to depreciate assets based on the useful life as estimated by the management has brought the present Indian GAAP in line with Ind AS. Schedule II useful lives are mere indications and are neither minimum nor maximum thresholds."

Objective of the Study :The present study is a conceptual analysis of Accounting for Depreciation using Componentisation Approach, to identify the practical issues and problems in implementation and differences in approach.

Methodology and Scope : The New Companies Act 2013 came into existence and became a law on 29.08.2013. Section 1 of the Companies Act 2013 came into force with immediate effect

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on 29.08.2013. The new method of depreciation on the basis of useful life of asset as per Schedule-II of the Companies Act, 2013 has became operational from 1st April, 2014 vide MCA Notification No. S.O. 902(E) dated 26th March, 2014. Schedule-II of the Companies Act, 2013 prescribed the useful life of individual assets for the purpose of depreciation on fixed asset. The requirement under the new para 4(a) shall be voluntary in respect of the financial year commencing on or after 1st April 2014 and shall be mandatory in respect of the financial year commencing on or after 1st April 2015. Also, the transitional provisions will be applicable for the accounting periods beginning or after April 1, 2016. Hence, the financials shall be prepared as per Schedule II of the Companies Act 2013.Since, it is the first year and hence no data shall be available as on 31.12.2016 for analysis. However, this study is a conceptual analysis and review of technical and practical aspects of the newly-introduced concepts with the help of case studies and illustrations.

Introduction

The Companies Act, 2013 replaced the erstwhile Companies Act 1956. The Bill received the ascent of the President of India on 29th August 2013 and hence the New Companies Act 2013 came into existence and became a law. Section 1 of the Companies Act 2013 came into force with immediate effect on 29.08.2013. However, Section 1(3) of the Act empowers Central Government to appoint different dates for different provisions of the Act, by notifying provisions in the official gazette. The Ministry of Corporate Affairs (MCA) of the Government of India accordingly notified 98 different Sections with effect from 12th September 2013. Subsequently, on 26th March 2014, the Ministry notified another 183 Sections, sub-Sections and remaining Schedules of the Act. These sections came into effect from 1st April 2014 being the appointed date in notification. Section 123 of the Act that came into effect from 1st April 2014 states that dividend shall be not be declared or paid without providing depreciation as per the Schedule II of the Act. Notification No. G.S.R. 627(E) dated 29th August 2014 substituted the paragraph 4 of notes to part C of the Schedule II with the new paragraph. With this substitution, the requirement under the new para 4(a) shall be voluntary in respect of the financial year commencing on or after 1st April 2014 and shall be mandatory in respect of the financial year commencing on or after 1st April 2015. Schedule II of the Act has introduced the concept of the componentization of asset which was not applicable under the erstwhile Schedule XIVof the Companies Act, 1956. The new method of depreciation on the basis of useful life of asset as per Schedule-II of the Companies Act, 2013 has became operational from 1st April, 2014 vide MCA Notification No. S.O. 902(E) dated 26th March, 2014.

Literature Survey

Depreciation is systematic allocation of the depreciable amount of an asset over its useful life.

Depreciable assets are assets which

- are expected to be used during more than one accounting period; and
- have a limited useful life; and

- are held by an enterprise for use in the production or supply of goods and services, for rental to others, or for administrative purposes and not for the purpose of sale in the ordinary course of business.

Depreciation on assets held for sale - They are valued at lower of carrying amount and net realisable value, hence, depreciation is not applicable

The depreciation method usually reflects the pattern of consumption of the asset. The depreciable amount of an asset can be allocated on a systematic basis over its useful life through:

A. Straight-line Method (SLM)

B. Diminishing Balance Method / Written Down Value Method (WDV Method)

C. Units of production method

A. In Straight-line Method (SLM), the amount of annual depreciation remains uniform. The amount of annual depreciation is calculated as:

= Capitalized Cost – Estimated Residual Value

Estimated Useful Life

B. Diminishing Balance Method / Written Down Value Method (WDV Method), the amount of annual depreciation is calculated as:

1-n Estimated Residual Value

Capitalized Cost Where n= useful life (in years).

C. Unit of Production (UOP): UOP commonly used for Natural Resource Extraction Equipment.

Depreciation expense under units-of-production, based on units produced in the period,

Benefits of Units of production (UOP) method:

- Better matching of depreciation charge with revenue
- Possibility of depreciating an asset faster than is allowed by class life depreciation

Disadvantages of UOP method:

- Possibility of delaying the start of depreciation and depreciation being stopped if the asset is not in use due to work delays

There have been significant amendments in the Companies Act pertaining to calculation of depreciation, in the last 6 decades. This has impacted the results of the companies, as the financials undergo a change due to changes in the depreciation accounting. The Companies Amendment Act of 1988 introduced the Schedule XIV with retrospective effect from 02nd April 1987 and prohibited the use of depreciation rates prescribed under the Income Tax Act, 1961.Also, the Companies Act amended

in the year 2000 permitted companies to use Straight Line Method (SLM) for determination of Net Profit for computing managerial remuneration by amending the section 350 of the Act. Further, Schedule XIV of the Erstwhile Companies Act 1956 recognizes Straight Line Method (SLM) and Written Down Value (WDV) Method for calculating the Depreciation. Both SLM and WDV Methods have been considered for Depreciation accounting.

However, the Schedule II of the Companies Act, 2013 that deals with depreciation significantly departs from the erstwhile Schedule XIV of the 1956 Act and provides the Useful life of the asset method without specifically mentioning the method of depreciation.

Is Depreciation Mandatory?

Depreciation has to be necessarily calculated and provided in the books of accounts. The Companies Act 1956 contains provisions for calculating depreciation. There are some specific sections in the act that insist on providing depreciation as a pre condition. Similar provisions have been inserted in the Companies Act 2013. Hence, Depreciation is to be mandatorily provided in the books of accounts.

The Section 205 of the Companies Act 1956 mentions that DIVIDEND TO BE PAID ONLY OUT OF PROFITS. i.e., (1) No dividend shall be declared or paid by a company for any financial year except out of the profits of the company for that year arrived at after providing for depreciation. Also, Section 349 mentions DETERMINATION OF NET PROFITS: (1) In computing the net profits of a company in any financial year - (4) In making the computation aforesaid, the following sums shall be deducted: (k) depreciation to the extent specified in section 350; Hence, it is clear that when the company wants to declare a dividend, minimum depreciation needs to be provided for. Further 197 & 198 which apply only for Public limited companies. Section 197 mentions that (1) The total managerial remuneration payable by a public company. Section 198 refers to 197. 198. OVERALL MAXIMUM MANAGERIAL REMUNERATION AND MANAGERIAL REMUNERATION IN CASE OFABSENCE OR INADEQUACY OF PROFITS (1) The total managerial remuneration payable by a public company or a private company which is a subsidiary of a public company,

Similar Provisions have been incorporated in the Companies Act 2013. Sec 123 begins with: (1) No dividend shall be declared or paid by a company for any financial year except- (a) out of the profits of the company for that year arrived at after providing for depreciation. This is the section 205 of the Erstwhile Companies Act 1956. Also, Section 198 (1) In computing the net profits of a company in any financial year for the purpose of section 197 & 198 (4) In making the computation aforesaid, the following sums shall be deducted, namely: (k) depreciation to the extent specified in section 123. This is the Section 349 of the Erstwhile Companies Act 1956.

Hence, it is clear that the Act suggests inclusion of depreciation and the same is mandatory.

Depreciation is a charge for the usage of assets for the business purpose. Usage of assets is one of the costs of doing business and hence, the value of the asset diminishes on usage and needs to be

charged as an element of cost similar to other expenditures. If the depreciation is not accounted, which in reality is a deferred expenditure on Fixed Assets, on which the benefits are derived over the lifetime of the asset, the payment of dividend will tantamount to refund of capital. Dividends should be paid only out of profits and not out of capital.

The Rates of Depreciation as per CL-2013 Schedule II [CA-1956 Schedule XIV] are minimum rates and hence companies can provide depreciation at a higher rate.

Schedule II of the Companies Act 2013 is divided into three parts:

Part A - Basic Provisions for providing depreciation

Part B - Depreciation on assets covered under special legislations

Part C - Useful Life and other provisions

Interpretation of Part B of the Schedule II of the Companies Act 2013 is as under:

Part B of the schedule II states that the useful life or residual value of any specific asset, as notified for accounting purposes by a Regulatory Authority constituted under an Act of Parliament or by the Central Government shall be applied in calculating the depreciation to be provided for such asset irrespective of the requirements of this Schedule.

For example: The MCA had issued a General Circular dated 31 May 2011, which states that for companies engaged in generation/supply of electricity, rates of depreciation prevail over the Schedule XIV to the Companies Act.

Accordingly, in accordance with Part B of the schedule II, electricity companies will still continue to charge depreciation in accordance with the Electricity Act.

Schedule II of the Companies Act, 2013 replaces the erstwhile Schedule XIV of the 1956 Act. The key differences are as under:

S. No.	Topic	Schedule II of The Companies Act 2013	Schedule XI of the Erstwhile Companies Act 1956
1	Depreciation:	Indicative Useful Life of Asset prescribed in Schedule II of the Act. Useful Life has been defined and it is possible to use higher or lower useful life with justification and disclosure.	Minimum Rate of depreciation prescribed in the Schedule XIV of the Act. Minimum Rates were defined and accordingly higher rates could be used with disclosure
2	Method of Depreciation	No reference to any method	SLM / WDV Method
3	Unit of Production (UoP)	Unit of production method allowed	Unit of production method not allowed

S. No.	Topic	Schedule II of The Companies Act 2013	Schedule XI of the Erstwhile Companies Act 1956
4	Guidance on Intangible Assets	Guidance for useful life on Intangible assets	No guidance for useful life on intangible assets except Intangible Assets under BOT model.
5	Component Accounting	Component accounting covered and mandatory	No reference to Component Accounting
6	Extra Shift Depreciation	Extra Shift depreciation simplified. No separate Rates/ Useful life provided. However extra depreciation of 50%/100% to be applied	Extra shift depreciation was based on number of days. Separate rates provided for Double Shift and Triple Shift
7	Residual Value	Residual Value defined as a value not more than 5% of the Original cost of Asset	Concept of Residual Value not explicitly defined
8	Revaluation	In case of Revaluation depreciation to charged on revalued cost of asset	In case of Revaluation depreciation to charged on Original cost of Asset only
9	Depreciation on low value items	No reference to depreciation on low value items	Items less than Rs 5,000 to be charged off

Schedule XIV of the Erstwhile Companies Act, 1956 mentioned SLM and WDV rates for calculating depreciation. Also, the Note 5 to the Schedule XIV required companies to disclose the method of depreciation accounting being followed. The Schedule II of the Companies Act, 2013 provides useful life of the asset without specifically mentioning the method of computing depreciation. Moreover, Note 3 to the Schedule II of the Companies Act, 2013 requires companies to disclose depreciation methods used. It also means that the Companies Act, 2013 recognizes any other method for calculating depreciation provided the useful life of asset does not exceeds the useful life of asset as mentioned in the Schedule II.

Also, the method of calculating extra shift depreciation has undergone a change. The Erstwhile Companies Act 1956 had provided separate rates for double and triple shifts of the asset. However, the Companies Act 2013 provided for additional depreciation of 50% in case of double shift and 100% in case of triple shift.

For Low value items whose cost does not exceed Rs. 5,000/-. The Schedule XIV of the Erstwhile Companies Act, 1956 required provision of depreciation at the rate of 100%. i.e., to be wholly depreciated in the same year. However, interestingly, there is no mention of the same in the Schedule II of the Companies Act 2013.

Concept of Useful life

Useful life is the period over which an asset is expected to be available for use by an entity, or the number of production or similar units expected to be obtained from the asset by the entity

- There is no restriction on method to be used; hence, WDV can be used as well until the depreciable amount is amortized over its useful life.
- Intangible assets (toll roads) created under BOT, BOOT or any other form of PPP route will be amortized using amortization rate arrived at by dividing actual revenue for the year with total estimated revenue.
- Rebuttable presumption under AS 26 that useful life of Intangible assets (IA) will not exceed ten years
- IA can be amortised over higher useful life if persuasive evidence available that useful life will be specific period longer than 10 years
- A Company may use revenue based amortisation of Built, Operate & Transfer (BOT) assets
- Companies regulated by other law, e.g., electricity companies - Depreciation rates / residual values prescribed by regulatory body to prevail.

Useful lives of fixed assets prescribed under the 2013 Act is different from those envisaged under Schedule XIV e.g.

- General furniture and fittings - useful life reduced from 15 to 10 years
- Buildings other than factory buildings and other than RCC frame structure - useful life reduced from 58 to 30 years
- Continuous Process Plant - Schedule II has originally prescribed life as 8 years, now changed to 25 years. Major relief for companies having such assets

Intangible Assets

- As per AS-26, "An intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes." eg: software, patents, goodwill, licences etc.
- The amendment in Schedule II dated 31st March 2014 reads as follows
- "For intangible assets, the provisions of the accounting standards applicable for the time being in force shall apply except in case of intangible assets (Toll roads) created under BOT, BOOT or any other form of public private partnership route in case of road projects."
  - No useful life prescribed for Intangible Assets.
  - For all intangible assets other than those created under BOT model, AS-26 will be followed.
  - The amendment clearly suggests that revenue based amortization applies to BOT Assets only.

BOT Assets

Mode of amortization for BOT Assets (Toll Roads)

$$\text{Amortization Rate} = \frac{\text{Amortization Amount}}{\text{Cost of Intangible Assets } (A)} \times 100$$

$$\text{Amortization Amount} = \frac{\text{Actual Revenue for the year } (B) * \text{Cost of Intangible Asset } (A)}{\text{Projected Revenue from Intangible Asset till the end of the concession period } (C)}$$

Where,

- Cost of Intangible Assets (A) = Cost incurred by the company in accordance with the accounting standards
- Actual Revenue for the year (B) = Actual revenue (Toll Charges) received during the accounting year
- Projected Revenue from Intangible Asset (C) = Total projected revenue from the Intangible Assets as provided to the project lender at the time of financial closure / agreement

Conceptual Analysis of the Component Based Method of Depreciation as per Companies Act, 2013:

Total Cost Accounting (Rate based Depreciation) Vs. Component Based Accounting (Based on useful life of the asset):

For the first time, Schedule II of the Companies Act, 2013 has introduced the concept of componentization of asset for calculating the depreciation. This method may seem to be relatively new to the Indian Asset Accounting.

"The requirement to depreciate assets based on the useful life as estimated by the management has brought the present Indian GAAP in line with Ind AS. Schedule II useful lives are mere indications and are neither minimum nor maximum thresholds"

Residual value: The GN clarifies that the residual value of 5% of the original cost mentioned in Schedule II is also indicative in nature. Residual value estimation of more than 5% should be supported by external or internal technical advice.

"Management estimation of residual value supported by technical advice has also brought the present Indian GAAP in line with Ind AS. Companies are no longer required to adopt the fixed residual value of 5% of original cost."

However, reference to the same can be found in the Existing Accounting Standard AS-10 on Accounting for Fixed Assets. The Para 8.3 of AS-10 states as under:

"In certain circumstances, the accounting for an item of fixed asset may be improved if the total expenditure there on is allocated to its component parts, provided they are in practice separable, and estimates are made of the useful lives of these components. For example, rather than treat an aircraft and its engines as one unit, it may be better to treat the engines as a separate unit if it is likely that their useful life is shorter than that of the aircraft as a whole".

There are two schools of thought for depreciation accounting. The first school suggests that the asset is a composite item and can be used as a one single unit and hence the asset accounting needs to be on a total cost basis using its actual useful life. However, the second school of thought recommends that each part of the asset may have a different useful life and hence the enterprise should charge depreciation on each part separately and independently after arriving at the useful life of each independent component. The Schedule XIV of the Erstwhile Companies Act, 1956 supported the first view while the Schedule II of the Companies Act, 2013 supported the latter.

Note 4(a)* of Schedule II of the Companies Act, 2013 states:

"Useful life specified in Part C of the Schedule is for whole of the asset and where cost of a part of the asset is significant to total cost of the asset and useful life of that part is different from the useful life of the remaining asset, useful life of that significant part shall be determined separately."

Thus, it is clear from the Note 4(a) of Schedule II of the Companies Act 2013 that the companies are required to compute depreciation after considering significant part of the asset (i.e., significant component of asset) and its useful life. The important terms being used in the note are "part of the asset and significant".

The term "part of the asset" suggests componentization of the asset. But, The Companies Act, 2013 however has not defined the word "significant". Hence it is left to the judgment of the enterprises to decide what constitutes significant cost of a part of the asset in relation to the total cost of the asset.

Also, Indian Accounting Standard-16 (Ind. As-16 - Property, Plant and Equipment) specifies in Para 43 to 45 the component accounting of fixed asset and is as under:

Para-43: Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.

Para-44: An entity allocates the amount initially recognised in respect of an item of property, plant and equipment to its significant parts and depreciates separately each such part. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease. Similarly, if an entity acquires property, plant and equipment subject to an operating lease in which it is the lessor, it may be appropriate to depreciate separately amounts reflected in the cost of that item that are attributable to favorable or unfavorable lease terms relative to market terms.

Para-45: A significant part of an item of property, plant and equipment may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another significant part of that same item. Such parts may be grouped in determining the depreciation charge.

Hence, thus, where one Fixed Asset comprises of different items of fixed assets which are significant to the total cost of principal / main asset and their useful life is different from the useful life of principal / main asset, Depreciation in respect of such different items of fixed assets is required to be calculated by their respective useful life.

However, an alternative reference can be drawn of the term "Significant Control". For instance, explanation given to sub-Section 6 of Section 2 of the 2013 Act states:

For the purposes of this clause, 'Significant Influence' means control of at least 20% of total share capital, or of business decisions under an agreement.

Similarly, AS-23 that deals with Accounting for Investments in Associates in Consolidated Financial Statements also considers 20% or more of voting power in arriving at significant influence.

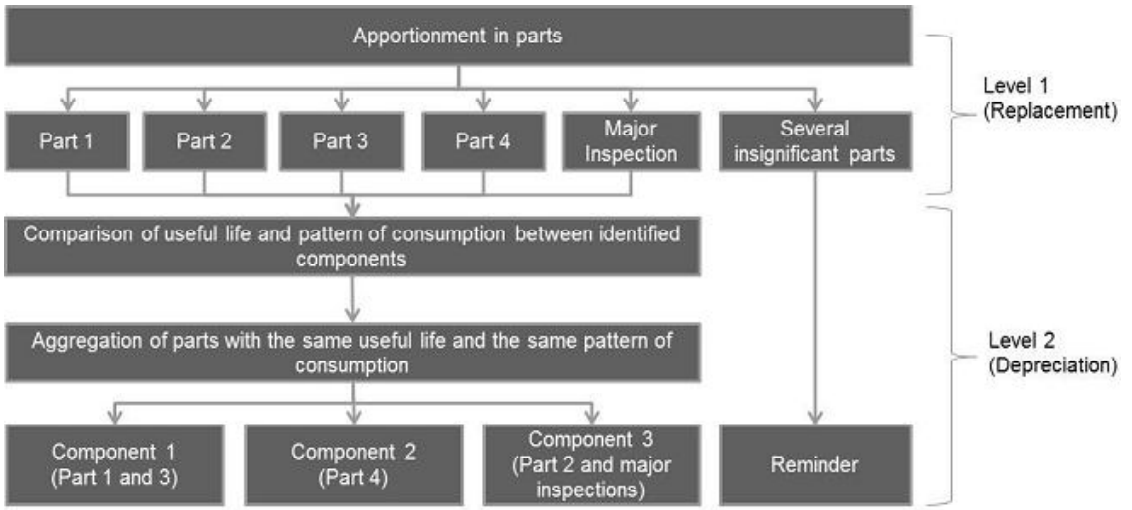
Hence, companies may also consider 20% of the total cost of the asset as benchmark for determining the component. However, it is a judgement call of the entrepreneur and hence companies are free to consider lower than 20% as benchmark for determining the component, if the nature of asset so requires.

Usually, Most of the assets are composed of various parts having different useful life, which may get replaced during the useful life of assets. For instance, a desktop is composed of four major components, viz., CPU, Monitor, Keyboard and Mouse, where each can be accounted as a separate asset and can be depreciated separately depending upon their respective useful life. For eg., If the management feels that the life of CPU and monitor is 4 years and life of key board and mouse is 2 years, then CPU and monitor will be depreciated in

4 years and key board and mouse will be depreciated within 2 years. Of course, there are other factors that should be considered before deciding the componentization of assets.

Under this approach, first split the fixed asset into various identifiable parts to the extent possible.

- The identified parts are then grouped together if they have the same or similar useful life.
- No need to identify and depreciate insignificant parts as separate components; rather, they can be combined together in the remainder of the asset or with the principal asset.
- Identification of significant parts is a matter of judgment and decided on case-to-case basis.
- Identification of separate parts of an asset and determination of their useful life is not merely an accounting exercise; rather, it involves technical expertise.
- Hence, involve technical experts to determine the parts of an asset.



The purpose for componentization of asset is:

- To recognize depreciation cost accurately;
- To derecognize the cost of replaced component; and
- To correctly measure the cost of repairs and maintenance.

This can be explained with the help of a case study:

Case study 1: Hyderabad Industries Ltd., an aluminum manufacturing industry commissioned a power plant at its aluminum plant at a cost of Rs.1400 Crores. The cost break up of Rs. 1400 Crore is as follows:

Components	Cost (Rs. in Crores)	Useful life
Erection, fabrication & construction of Building Structure	200	30
Electrical Panels Installation	100	10
Plant &Equipments (Boiler, Turbine, Generator, condenser etc)	1000	40
Transformer, grids	100	10
Total	1400	

The Depreciation per annum on the Straight Line Method as per the Erstwhile Companies Act, 1956, will be @ 4.75%, 7.42% and 10.34% for Single, Double and Triple Shifts respectively. Hence, the Depreciation Calculations will be as under:

- Assuming, it is a Single Shift, The Depreciation per annum on the Straight Line Method is Rs.1,400 Crores * 4.75% = Rs. 66.50 Crores.
- Assuming, it is a Triple Shift, The Depreciation per annum on the Straight Line Method is Rs.1,400 Crores * 10.34% = Rs. 144.76 Crores.

Whereas, the Companies Act 2013 considers the Depreciation on Component Wise Basis and hence each component will be treated separate item. The Depreciation per annum, after considering 5% Residual Value will be as under:

Components	Cost	Useful life	Depreciable Amount (After 5% Residual Value)	Depreciation p.a.
I	II	III	IV (II * 95%)	V = (IV / III)
Erection, fabrication & construction of Building Structure	200	30	190	6.33
Electrical Panels Installations	100	10	95	9.50
Plant & Equipments (Boiler, Turbine, Generator, Condenser etc)	1000	40	950	23.75
Transformer grids	100	10	95	9.50
Total Depreciation	**1400**			**49.08**

The value of the Components can be arrived from the following:

- **Interpreting the importance of the working of assets:** There are certain assets that require frequent repairs and maintenance while certain assets don't require it. For instance, the working of a crane would significantly differ from the working of the wind power generation plant.
- **Information from users of the asset:** Companies should gather component-related information from the users of asset as they can guide us in identifying the different components of the asset and its useful life.
- **Records:** Records sheets of assets captures vital information about repairs and maintenance of the assets.
- **Records of Repairs and Maintenance:** Scrutinise the repairs and maintenance account for the last few years. This can be used in lieu of history sheets of the assets.
- **Tenure of Significant Component:** Component may have a lesser useful life than the life of the asset.
- **Materiality:** Setting a materiality level can help in determining the extent and scope of assets to be componentised.

- Cost of a component: Ascertaining the cost of a component may be easier in some cases while posing difficulty in others.
- Components having similar or identical useful life: It is possible that different components of the same asset may have similar useful life. In such case, such different components may be grouped together.

Hence, as per Companies Act 1956, each individual asset is depreciated with the Parent/Main Asset. Whereas, As per the Companies Act 2013, each component of the Main asset is depreciated over its respective useful life if that component is significant to the total cost of main asset.

One of essential features of component approach of Asset and Depreciation Accounting are:

- One part of the asset is significant to the total cost of main asset and
- The Useful life of that part is different from the useful life of the remaining asset.

The Companies Act 2013 does not define the Word "Significant" and hence it becomes very subjective. The Significance of a particular component of the asset in comparison to the main asset is left to the judgement of the entrepreneur and the entity's practices or policies decide and define the same. Hence, Identification of asset and the component to which component accounting shall be applicable is the most important factor and hence is the subject matter of the company's practice and policy.

The term "Insignificant" has not been defined. Hence, the same can be interpreted in two parameters.

Alternative 1: Since, the Companies Act is Silent on the same, it may be interpreted that the "Company may depreciate its Insignificant component of the Main Asset over the Useful life of the Main Asset.

Alternative 2: A reference can be drawn to the Indian Accounting Standard-16. A fine reading of the Indian Accounting Standard 16 suggests formation of a "remainder" block which shall club insignificant assets in one block and depreciation of such reminder depends on the Consumption pattern/ useful life of Insignificant asset which are clubbed in the "remainder" block.

Para 46 and Para 47 of Ind. As-16 - Property, Plant and Equipment reads as under:

Para-46: To the extent that an entity depreciates separately some parts of an item of property, plant and equipment, it also depreciates separately the remainder of the item. The remainder consists of the parts of the item that are individually not significant. If an entity has varying expectations for these parts, approximation techniques may be necessary to depreciate the remainder in a manner that faithfully represents the consumption pattern and/or useful life of its parts.

Para-47: An entity may choose to depreciate separately the parts of an item that do not have a cost that is significant in relation to the total cost of the item.

Case Study 2: Classification on the basis of Significant nature of component of asset and remainder block.

The Depreciation calculation under Alternative 1, i.e., As per The Companies Act 2013, considering Classification on the basis of Significant and Insignificant nature of the component of the asset, shall be as under:

Components	Cost	Useful life	Depreciable Amount (After 5% Residual Value)	Depreciation p.a.
I	II	III	IV (II * 95%)	V = (IV / III)
Erection, fabrication & construction of Building Structure	200	30	190	6.33
Plant & Equipments (Boiler, Turbine, Generator, Condenser etc & Electrical Installation)	1100	40	1045	26.13
Transformer, grids	100	10	95	9.50
Total Depreciation	**1400**			**41.96**

The Depreciation calculation under Alternative 2, i.e., As per As per Ind AS-16 (Para 46 & 47), considering Classification on the basis of remainder block:

Components	Cost	Useful life	Depreciable Amount (After 5% Residual Value)	Depreciation p.a.
I	**II**	**III**	**IV (II * 95%)**	**V= (IV / III)**
Main Component:				
Erection, fabrication & construction of Building Structure	200	30	190	6.33
Plant & Equipments (Boiler, Turbine, Generator & Condenser etc)	1000	40	950	23.75
Transformer, grids	100	10	95	9.50
Remainder (Insignificant Assets)				
i. Electrical Panels Installations	100	10*	95	9.50
Total Depreciation	**1400**			**49.08**

* The useful life is considered on the basis of the consumption pattern and / or useful life of the remainder.

Hence, from the above illustration, it can be interpreted that the Component of Main Asset which is significant to the cost of Main asset, useful life of the main asset shall be considered as the useful life of the insignificant component for depreciation as per the Companies Act, 2013.

However, as per Ind-AS 16, the useful life of remainder which is not at par with useful life of the main asset, but it will depend upon consumption pattern and/or useful life of the remainder itself.

Retrospective Effect for Component Approach of Accounting

The Companies Act, 2013 is silent as to retrospective adjustment/effect in the books of account in view of the new Schedule-II to the Companies Act, 2013. But, reference can be drawn to the Accounting Standard 6 (AS-6) "Depreciation Accounting", which contains a provision regarding retrospective adjustment of depreciation by virtue of requirement of new statute. Hence, the component approach of accounting in respect of fixed asset is required to be incorporated in the books of accounts from the date original asset came into existence. After recalculation of the value of the asset as per useful life prescribed in Schedule-II of the Companies Act, 2013 certain amount is required to be charged from the opening retained earnings as well as certain amount is required to be charged to the statement of Profit & Loss for the current year which is described in Part-II.

Para 15 of the AS 6 reads as under:

"15. The method of depreciation is applied consistently to provide comparability of the results of the operations of the enterprise from period to period. A change from one method of providing depreciation to another is made only if the adoption of the new method is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate preparation or presentation of the financial statements of the enterprise. When such a change in the method of depreciation is made, depreciation is recalculated in accordance with the new method from the date of the asset coming into use. The deficiency or surplus arising from retrospective re computation of depreciation in accordance with the new method is adjusted in the accounts in the year in which the method of depreciation is changed. In case the change in the method results in deficiency in depreciation in respect of past years, the deficiency is charged in the statement of profit and loss. In case the change in the method results in surplus, the surplus is credited to the statement of profit and loss. Such a change is treated as a change in accounting policy and its effect is quantified and disclosed."

Also, Para- 21 of AS-6, Depreciation Accounting reads as follows:

"The depreciation method selected should be applied consistently from period to period. A change from one method of providing depreciation to another should be made only if the adoption of the new method is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate preparation or presentation of the financial statements of the enterprise. When such a change in the method of depreciation is made, depreciation should be recalculated in accordance with the new method from the date of the asset coming into use. The deficiency or surplus arising from retrospective re computation of depreciation in accordance with the new method should be adjusted in the accounts in the year in which the method

of depreciation is changed. In case the change in the method results in deficiency in depreciation in respect of past years, the deficiency should be charged in the statement of profit and loss. In case the change in the method results in surplus, the surplus should be credited to the statement of profit and loss. Such a change should be treated as a change in accounting policy and its effect should be quantified and disclosed.

A fine reading of the Note 7 to the Notes-7 to the Schedule-II of the Companies Act, 2013 indicates as under:

"From the date this Schedule comes into effect, the carrying amount of the asset as on that date

(a) shall be depreciated over the remaining useful life of the asset as per this Schedule;

(b) after retaining the residual value, shall be recognised in the opening balance of retained earnings where the remaining useful life of an asset is nil".

Hence, a comparative analysis of the readings of the Accounting Standard 6 and Provisions of the new Companies Act 2013 is as under:

As per the requirement of AS-6, retrospective calculation of depreciation on existing fixed asset as per requirement of new act is required to be carried out and the deficiency or surplus by virtue the change in method should be charged to Statement of Profit & Loss.

Whereas, Note-7 to the Schedule-II of the Companies Act, 2013 prescribed that, if an asset having some carrying amount in books as on the date of implementation of the Companies Act, 2013 with 'NIL' useful life, then after keeping some residual value entire carrying amount should be charged to opening retained earnings. But, if asset is having some useful life then asset will be depreciated over remaining useful life of the asset.

Hence, the following contradicting opinions can be inferred:

- The Companies Act, 2013 does not envisaged on retrospective adjustment of depreciation. Whereas, AS-6 envisaged on retrospective adjustment of depreciation.
- The Companies Act, 2013 envisaged on adjustment from opening retained earnings of carrying amount where the useful life is 'nil'. Whereas, AS-6 only emphases in charging in the current year profit and loss a/c.

Case study 3: The following case study helps in understanding the implications?

S. No.	Particulars	If Purchased on 31st March, 2004	If Purchased on 31st March,2005
1	Furniture purchase cost	10,00,000	10,00,000
2	No of year used as on 1st April, 2014	10	9
3	Depreciation charged as per the Companies Act, 1956 (@ 6.33% pa as on 1st April, 2014	633,000	569,700
4	Net Carrying Amount as on 1st April,2014	367,000	430,300
5	Useful life as per CA-2013 (years)	10	10
6	Residual Value presumed @ 5%	50,000	50,000
7	Remaining useful life as on 1st April,2014	-	1
8	Amount to be charged to opening retained earnings after retaining residual value	317,000	-
9	Depreciation as per the Companies Act, 2013	-	380,300

From the above example, it has been clearly interpreted that only due to change in the year, a huge amount will be charged to opening retained earning i.e. when furniture purchased on 31st March, 2004 entire carrying amount is charged to opening retained earnings. Whereas, furniture purchased after one year i.e. on 31st March, 2005 carrying amount is charged to statement of profit and loss.

However, Arriving at the Cost of significant component, Interpreting and configuration of the Main Asset and Child Asset, Issues in arriving at a consensus with the auditor of the value of the Asset and Consolidation of multiple accounts are some of the challenges which are yet to be addressed.

Table-1 below shows specific assets which have nil useful life as on 1st April, 2014. Hence, carrying amount in respect of these assets should be charged to opening retained earnings.

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
A	B	C	D	E	F
I	**Bridges, culverts, benders, etc. (NESD)**				
(b)	Buildings (other than factory buildings) other than RCC Frame Structure	30	3.17	1.63	31.03.1984

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
A	B	C	D	E	F
(c)	Factory buildings	30	3.17	1.63	31.03.1984
(d)	Fences, wells, tube wells	5	19	1.63	31.03.2009
II	**Bridges, culverts, benders, etc. (NESD)**				
III	**Roads (NESD)**				
(a)	**Carpet Roads**				
(i)	Carpeted Roads-RCC	10	9.5	1.63	31.03.2004
(ii)	Carpeted Roads-other than RCC	5	19	1.63	31.03.2009
(b)	***Non-carpeted roads***	3	31.67	1.63	31.03.2011
IV	***Plant and Machinery***				
(i)	General rate applicable to plant and machinery not covered under special plant and machinery				
(a)	Plant and Machinery other than continuous process plant not covered under specific industries	15	6.33	4.75	31.03.1999
(b)	continuous process plant for which no special rate has been prescribed under (ii) below [NESD]	8	11.88	5.28	31.03.2006
(ii)	***Special Plant and Machinery***				
(a)	Plant and Machinery related to production and exhibition of Motion Picture Films				
1	Cinematograph films—Machinery used in the production and exhibition of cinematograph films, recording and reproducing equipments, developing machines, printing machines, editing machines, synchronizers and studio lights except bulbs	13	7.31	7.07	31.03.2001
2	Projecting Equipment for exhibition of films	13	7.31	7.07	31.03.2001

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
(b)	***Plant and Machinery used in glass manufacturing***				
1	Plant and Machinery except direct fire glass melting furnaces Recuperative and regenerative glass melting furnaces	13	7.31	7.07	31.03.2001
2	Plant and Machinery except direct fire glass melting furnaces Moulds [NESD]	8	11.88	7.07	31.03.2006
(c)	Plant and Machinery used in mines and quarries - Portable underground machinery and earth moving machinery used in open cast mining [NESD]	8	11.88	11.31	31.03.2006
(d)	Plant and Machinery used in Telecommunications [NESD]	18	5.28		31.03.1996
1	Towers	18	5.28	4.75	31.03.1996
2	Telecom transceivers, switching centers, transmission and other network equipment	13	7.31	4.75	31.03.2001
3	Telecom—Ducts, Cables and optical fibre	18	5.28	4.75	31.03.1996
4	Satellites	18	5.28	4.75	31.03.1996
(e)	Plant and Machinery used in exploration, production and refining oil and gas [NESD]				
7	Field Operations (above ground) Portable boilers, drilling tools, well-head tanks, etc.,	8	11.88	11.31	31.03.2006
8	Loggers	8	11.88	4.75	31.03.2006
(f)	Plant and Machinery used in generation, transmission and distribution of power [NESD]				
(g)	Plant and Machinery used in manufacture of steel				

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
(h)	Plant and Machinery used in manufacture of non-ferrous metals				
(i)	Plant and Machinery used in medical and surgical operations [NESD]				
1	Electrical Machinery, X-ray and electrotherapeutic apparatus and accessories thereto, medical, diagnostic equipments, namely, Cat-scan, Ultrasound Machines, ECG Monitors, etc.	13	7.31	7.07	31.03.2001
2	Other Equipments.	15	6.33	4.75	31.03.1999
(j)	***Plant and Machinery used in manufacture of pharmaceuticals and chemicals [NESD]***				
(k)	***Plant and Machinery used in civil construction***				
1	Concreting, Crushing, Piling Equipments and Road Making Equipments				
2	Heavy Lift Equipments—				
	Cranes with capacity of less than 100 tons	15	6.33	4.75	31.03.1999
3	Transmission line, Tunneling Equipments [NESD]	10	9.5	4.75	31.03.2004
4	Earth-moving equipments	9	10.56	4.75	31.03.2005
5	Others including Material Handling /Pipeline/ Welding Equipments [NESD]	12	7.92	4.75	31.03.2002
(l)	***Plant and Machinery used in salt works [NESD]***	***15***	***6.33***	4.75	31.03.1999
V.	***Furniture and fittings [NESD]***				
(i)	General Furniture and Fittings	10	9.5	6.33	31.03.2004

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
(ii)	Furniture and fittings used in hotels, restaurants and boarding houses, schools, colleges and other educational institutions, libraries; welfare centers; meeting halls, cinema houses; theatres and circuses; and furniture and fittings let out on hire for use on the occasion of marriages and similar functions.				
VI.	**Motor Vehicles [NESD]**				
3	Motor buses, motor lorries and motor cars other than those used in a business of running them on hire	8	11.88	11.31	31.03.2006
4	Motor tractors, harvesting combines and heavy vehicles	8	11.88	11.31	31.03.2006
5	Electrically operated vehicles including battery powered or fuel cell powered vehicles	8	11.88	7.07	31.03.2006
VII	**Ships [NESD]**				
1	Ocean-going ships				
(iii)	Chemicals and Acid Carriers:				
(x)	Hovercrafts	15	6.33	5	31.03.1999
2	Vessels ordinarily operating on inland waters—				
(i)	Speed boats	13	7.31	7.07	31.03.2001
(ii)	Other vessels	28	3.39	3.34	31.03.1986
IX	Railways sidings, locomotives, rolling stocks, tramways and railways used by concerns, excluding railway concerns [NESD]	15	6.33	4.75	31.03.1999
X	Ropeway structures [NESD]	15	6.33	4.75	31.03.1999
XI	Office equipment [NESD]	5	19	4.75	31.03.2009

Impact of Note-7 (b) of Schedule-II of the Companies Act 2013 on retained earnings due to following Assets					
		Companies Act, 2013		Companies Act, 1956	
S. No.	Nature of assets		Depreciation rate after considering 5% residual value (%)	Depreciation (%)	Asset Capitalise upto (Approx)
XII	Computers and data processing units [NESD]				
(ii)	End user devices, such as, desktops, laptops, etc.	3	31.67	16.21	31.03.2011
XIII	Laboratory equipment [NESD]				
(i)	General laboratory equipment	10	9.5	4.75	31.03.2004
(ii)	Laboratory equipments used in educational institutions	5	19	4.75	31.03.2009
XIV	Electrical Installations and Equipment [NESD]	10	9.5	4.75	31.03.2004
XV	Hydraulic works, pipelines and sluices [NESD]	15	6.33	4.75	31.03.1999

From the above table, it is can be inferred that the asset purchased /capitalised upto the year mentioned in Column-D is having carrying amount in the books of account along with "NIL" useful life as on 31st March, 2014. Hence, as per the requirement of Note-7 of Schedule-II of the Companies Act, 2013, keeping some residual value in respect of above asset entire amount will be charged from retained earnings.

Industry Impact

Mining and Construction

- Assets in Mining and Construction industry include heavy duty trucks, vehicles, dozers, excavators, loaders & unloaders, tunnelling machinery, etc.
- Heavy duty machineries are made up of various assembled parts which are high in value and also have a different useful life as compared to the other parts such as chassis, rollers, body, electrical systems, etc. These items will have to be broken in to their components.
- Entities will also have to estimate mine restoration liabilities and capitalise with the initial cost of the mine.

Commodity manufacturing Industry - Crude, Ore, Power

- Various facilities that can be identified as first level components such as Water treatment, Gas tapping, Conveyors, Turbines, Rooters, Shafts, Grids, Tankages, Ovens, Casters, Moulds, Furnaces, Rolling mills, etc. More often one component that is left out in the analysis is the Pipelines, which have material value and different useful life.
- Entities will need to estimate its asset retirement obligations at the time of initial capitalisation.

Shipping: Main parts of a ship include hull and engine. Further, hull is made up of deck, chassis, propeller, funnel, stern and super structure. A modern ship includes a fair component of electronic and automatic control systems. Entities will have to carry out a detailed exercise and use its judgement for capitalising each component

Hotel Industry

- A restaurant maintains a minimum stock of silverware and dishes. Some entities treat cutlery, crockery, linen, etc, as stores and spares and group them under inventory. Any increase or decrease is accounted as consumption in profit and loss account. Moreover, Schedule XIV does not lay down any rate for depreciating such items and hence companies in India adopt inventory and consumption approach to account these items.
- For a restaurant, cutlery is similar to a plant, without which it cannot operate. Under Ind AS 6, these items fall into the definition of tangible assets and hence need to be capitalised as such and depreciated based on its useful life. Considering the nature of these assets, the estimation of their useful life may involve a significant amount of judgment.
- Globally, few Companies depreciates above assets over a period of three years

Power Manufacturing, Transmission and Distribution

- Different useful lives must be applied to 'main grids' and 'sub grids' as well as 'power grids' and 'gas grids';
- The residual value of the grid is significant due to the need for continuous renewal
- Useful life is impacted by service concession arrangements with the State Governments

High Voltage Grids	Distribution Grids	
Land – Buildings (for example, buildings for sub-stations) – Technical equipment (for example, protection and measurement equipment, control devices) – Overhead lines (for example, 380/230KV steel) – Cable (e.g. 380/230KV) – Current transformers	Land – Buildings (for example, sub-plant buildings) – Piping – Cable tunnel – Cable – Cables for communication (under / overground) – Open wire (steel, concrete and wood) – Sub-station – without buildings – Sub-station – technical equipment – Power sub-stations – without buildings	– Power sub-stations – technical equipment – Power sub-stations (poles, steel and wood) – Cable for connection to customers – Open wire for connection to customers – Counters and measuring devices – mechanical – Counters and measuring devices – electronic – Mobile power sets

Consequential Effect on Accounting Policy

Accounting Standard-5: Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies contents:

Para - 29: A change in an accounting policy should be made only if the adoption of a different accounting policy is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate presentation of the financial statements of the enterprise.

Para - 32: Any change in an accounting policy which has a material effect should be disclosed. The impact of, and the adjustments resulting from, such change, if material, should be shown in the financial statements of the period in which such change is made, to reflect the effect of such change. Where the effect of such change is not ascertainable, wholly or in part, the fact should be indicated. If a change is made in the accounting policies which has no material effect on the financial statements for the current period but which is reasonably expected to have a material effect in later periods, the fact of such change should be appropriately disclosed in the period in which the change is adopted.

Hence, on a combined reading of the AS -5 and the provisions of the Companies Act, 2013, there is a need for change in accounting policy of the company. Therefore, a change in the method of depreciation to useful life based depreciation will result in the company assessing the impact on financial statements of the company and hence need to disclose the same in the notes of the financial statements of the company.

Hence, at the time of transition from the old Companies Act, 1956 to the new Companies Act, 2013, detailed evaluation of useful life of the asset and its carrying amount should be done as well as in the new era of deprecation identification of significant asset of main asset for component approach of accounting will push the company towards more detail evaluation of the project/fixed asset which are going to be capitalised during coming years or already capitalised during the previous years.

Findings of the Study & Conclusion:

Hence, it can be inferred from the above critical analysis that, the following challenges need to be addressed for successful implementation of the Component Wise Accounting.

1. Arriving at the Cost of significant component: It is not an easy task to identify the cost of significant component. For example, if a company purchases a car and identifies chassis, body, engine and other residual parts as significant components, identifying the cost of chassis, engine, body, etc., of the car is not going to be easy. Moreover, in most of the cases the company is not likely to get the cost of significant component separately on the invoice.
2. Configuration for Accounting for fixed assets: Accounting of fixed assets would require parent and child configuration in the system.
3. Lack of consistency in accounting: It is likely that the same class of asset may be componentized differently at different points of time. This may create inconsistency in accounting.
4. Value Disagreement with auditors: There could be disagreement with auditors, which may further delay the finalization process.
5. Valuation of Opening block: The major challenge shall be identifying each component separately and assigning value to the component. The management will be required to ascertain the remaining useful life of the component and compute depreciation accordingly from the financial year 2014-15 onwards.
6. Issues in Consolidation of financial statements: Accounting Standard (AS) 21 Consolidated Financial Statements requires consolidated financial statements to be prepared using uniform accounting policies. Hence, the management will have to incorporate the changes in accounting for depreciation for not only to Indian companies but also to the subsidiaries incorporated outside India.
7. Issues in identifying number of components and legal compliance: Since, the assets are divided into a number of components. It would be a complex task to maintain the number of components and legal compliances.

Influencers of Stress Level among Working Women in Chennai City

– J. Karthikeyan*

Abstract

Women's role was naturally limited to the family. Since she was the bearer of children, she was fully occupied with her duties as a mother and homemaker. This was no small feat, since the traditional household may be described as both a production and a consumption unit.Many factors like urbanization, technical progress, women's education, etc., have profoundly changed these traditional conditions even in a developing country like India. Stress is a part and parcel of everybody's life. Though it is both men and women who deal with stress, it is women who tend to be its most common victims. In this present study an attempt has been made to study the stress level among working women in Chennai city. The result reveals that The major factors causing the stress among working women is job insecurity, Poor motivation, Lesser Compensation, Excessive workload, improper working hours, Poor work Environment, lack of opportunities and recognition, counselling, Training and Development, Job design and Job analysis, Participative management and Maternity and Paternity leaves are significantly influencing the Organisational Stress. High pressure in work, work life balance, Feeling of Inequality and lack of time management and planning is major factors causing the Personal stress among working women.

Keywords: Organisational Stress, Working Women, Motivation, Leaves, Personal Stress.

Introduction

In the traditional society, women's role was naturally limited to the family. Since she was the bearer of children, she was fully occupied with her duties as a mother and homemaker. This was no small feat, since the traditional household may be described as both a production and a consumption unit. Man's responsibility was to provide the household with raw materials, which were then converted by the woman into consumable products or conditions by means of rudimentary methods and tools.

Many factors like urbanization, technical progress, women's education, etc., have profoundly changed these traditional conditions even in a developing country like India. Stress is a part and parcel of everybody's life. Though it is both men and women who deal with stress, it is women who tend to be its most common victims. And it is particularly the working women who find them struggling with stress more than others. As per socio cultural environment in India, women are also expected to perform social responsibilities of Home makers. Thus, working women across the world, specifically in India exposed with stressors from socio cultural environment and work environment.

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Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope.Workplace stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the employee.

Causes for Job stress can be of two types;

Personal factors and Organisational factors; Personal factors include ability, perception, level of self-confidence, desire to work and beliefs.Differences in such individual characteristics as personality and coping style are most important in predicting whether certain job conditions will result in stress-in other words, what is stressful for one person may not be a problem for someone else. Organisational factors include nature of job, employer-employee relationship, targets, time management and work conditions. Other factors to consider in workplace stress include the design of tasks, autocratic management style, work roles, job insecurity or such difficult environmental conditions as noisy or dangerous working conditions

The Stress-Performance relationship is compared to the amount of salt in food. Lack of salt or excess salt in food will spoil the taste.

Review of Literature

Richardson, and Rothsetin,(2008) they provided an empirical review of stress management interventions, employing meta-analysis procedures. The results also revealed that relaxation interventions were the most frequent type of intervention. Further, there were a few stress interventions focused on the organizational level. More specific results also indicated that cognitive-behavioural interventions produced larger effects than other types of interventions.

C. Redfem et.al (2008), had examined on occupational stress: consensus or divergence? A challenge for training and development specialist. The main objective of the paper is to explore current views about the nature and causes of occupational stress as portrayed in the publications of employers and employee association; and consider the implication of these current views in relation to the work of training and development specialist. The result of the paper of the study is to offer a topical insight into how issues surrounding occupational stress are presented by influential parties and, further, how knowledge of these views can be used by training and development specialist.

Viljoen, Rothmann, (2009). the results were that organizational stressors contributed significantly to ill health and low organizational commitment. Stress about job security contributed to both physical and psychological ill health. Low individual commitment to the organization was predicted by five stressors, namely work-life balance, overload, control, job aspects and pay.

Agolla, (2009) has conducted a study among the police to find out work stress symptomsand coping strategies among the police service in Botswana. This studyreveals that the police work stressors are; getting injured while on duty andthe use of force when the job demands to do so, etc. The coping strategies were identified as exercising, socializing, healthy eating or diets, careerplanning and employee training.

Joshi and Gopal (2012), identified factors responsible for causing stress among employees to understand the human factors to be considered before merger such as, uncertainty, Insecurity, Nature & Quality of job, Changes in salary, Authority and power and change process are dominant dimensions causing stress and they identified various stressors affecting the performance of the employees. Finally, they concluded that, merger and acquisition is an inevitable part of banks and they suggested the bank to focus on employees' satisfaction.

Sneha. S and RajaniSuresh (2014) indicates women are entering into corporate world to earn their living, the organisation needs to take care of basic stress causing agents which might lead to increase in rate of attrition among women working in the organisation.Chitra . D andMahalakshmi. V (2015)says, maximum number of employees in bank's remains in stress and majority of the employees are still struggling to find solutions or measures to manage stress.

Objectives of the Study

1. To study the influence of personal profiles on Personal causes of stress.
2. To find the association between the age groups, income group and level of education with level of employment.
3. To suggest the remedial measures to reduce the stress level among working women

Analysis and Interpretation

Table 1 - Personal Profiles of the Respondents

PROFILE	Groups with Frequency				Total
AGE[Yrs.]	[Upto25]= 75 [37.5%]	[26-35]= 51 [25.5%]	[36-45]= 26 [13.0%]	[>45] =48 [24.0%]	200 [100%]
EDUCATIONAL QUALIFICATION	School Education = 38 [19.0%]	UG = 56 [28.0%]	PG = 71 [35.5%]		200 [100%]
	Professional = 11 [5.5%]	Diploma = 24 [12%]			
LEVEL OF EMPLOYMENT	Higher Level = 32 [16.0%]	Middle Level = 107 [53.5%]	Lower Level = 61 [30.5%]		200 [100%]
MARITAL STATUS	Unmarried = 103 [51.5%]	Married = 97 [48.5%]			200 [100%]
NATURE OF ORGANISATION	Government Sector = 83[41.5%]	Private Sector = 117 [58.5%]			200 [100%]
NATURE OF FAMILY	Nuclear Family = 129 [64.5%]	Joint Family = 71 [35.5%]			200 [100%]
SCHEDULE OF WORK	Day Shift = 148 [74%]	Night Shift = 52 [26%]			200 [100%]
FAMILY MONTHLY INCOME(Rs)	Upto Rs. 20,000 =133 [66.5%]	[Rs. 20,001-50,000] = 37 [18.5%]	[Rs. 50,001-100000] = 13 [6.5%]	[>Rs.100000] = 17 [8.5%]	200 [100%]

Table 1 indicates that sizable portion of the respondents is belonging to the age group up to 25 years (37.5%) and Post-Graduates (35.5%). Majority of the respondents are Unmarried (51.5%), earning monthly family income less than Rs.20,000 (66.5%), belonging to the nuclear family (64.5%) and Working in Private Organisations (58.5%), on Day Shift schedule (74%) and in Middle level designations (53.5%).

Table 2 : Ranking of Different Factors Influencing the Stress Level

S.No	Factors Influencing the Stress	Reverse Weight (Mean)	Rank
1.	Work Environment	**3.70**	**I**
2.	Supervision	**3.18**	**III**
3.	Work Group	**2.32**	**V**
4.	Social Injustice	**2.59**	**IV**
5.	Family	**3.20**	**II**

Inference : Table 5 reveals that the stress level of working women is most significantly influenced by the Work Environment Factor (3.70) followed by Family Factor (3.20), Supervision Factor (3.18), Social injusticeFactor (2.59) and Work Group Factor (2.32) in the order of preference given by the respondents.

Table 3 : Analysis of variance of influence of Personal Profileson PersonalCausesfor Stress

Sources of Variance	Sum of Squares	Df	Mean Square	F	P – Value
Regression	Regression	352.500	2	176.250	6.376
Residual	Residual	3234.091	117	27.642	
Total	Total	3586.592	119		
R = 0.314[b]		**R^2**= 0.098 **Adjusted R^2**= .083		**Std. Error of the Estimate** = 5.257	

Table 4 : Personal Profilessignificantly influencing the Personal Cause of Stress

Predictors	Unstandardised Coefficients		Standardised Coefficients	t – Value	P - Value
	Beta	Std. Error	Beta		
(Constant)	22.022	.559		39.405	**.000**
Nature of Family	3.125	1.123	.245	2.783	**.006**
Educational Qualification	22.022	.559	.133[b]	1.488	.139
Schedule of Work	3.254	1.137	.156[b]	1.767	.080
Nauture of Organisation	20.425	.945	.183[b]	2.081	.140
Level of Employment	3.125	1.123	.057[b]	.631	.529
Age	.962	.463	.152[b]	1.720	.088
Marital Status	2.783	.245	-.011[c]	-.120	.904
Monthly Family Income	.962	.463	.183	2.081	**.040**

The Tables 6 and 7show that F - Value of 6.376 with P - Value of 0.000 reveals that Multiple Regression has a good fit. The most important predictors of Personal Cause of Stress in various Personal Profiles of the respondents are Nature of family and Family Monthly Income. Both the Nature of the family and Monthly Family Income has higher influence on Personal Cause (PC) of Stress among respondents.

Findings, Suggestions and Conclusion

1. Sizable portion of the respondents is belonging to the age group up to 25 years and Post-Graduates. Majority of the respondents are Unmarried, earning monthly family income less than Rs.20,000, belonging to the nuclear family and Working in Private Organisations, on Day Shift schedule and in Middle level designations.

2. The stress level of working women is most significantly influenced by the Work Environment Factor (3.70) followed by Family Factor (3.20), Supervision Factor (3.18), Social injusticeFactor (2.59) and Work Group Factor (2.32) in the order of preference given by the respondents.

3. The most important predictors of Personal Cause of Stress in various Personal Profiles of the respondents are Nature of family and Family Monthly Income. Both the Nature of the family and Monthly Family Income has higher influence on Personal Cause (PC) of Stress among respondents.

4. The organisations are suggested to ensure the Job security among the working women to reduce the stress level. The Organisations are suggested to follow the Workers' Participation Management (WPM) in Decision - making which is a successful method in Japan to engage a employee in a job to reduce the stress level among working women. Most of the women employees are feels working environment is a major factor causing the stress. So, the management are suggested to provide good working environment to reduce the stress level.

5. Management needs to take some initiatives for better division of workload and redesigning job to utilise the capabilities of the employee and to eliminate the job depression among the working women.Organisation suggested to provide the proper counselling in work related and personal activities to the employees and adopting different training methods to the employees' in the different levels of management.

6. Working women are suggested to spend quality time with family and also for own self development to eliminate the work life imbalance which is a major effect of high level stress.Working women are suggested to eliminate the feeling of inequality to maintain better relations with Subordinates/ Peers.

To conclude, The major factors causing the stress among working women is job insecurity, Poor motivation, Lesser Compensation, Excessive workload, improper working hours, Poor work Environment, lack of opportunities and recognition, counselling, Training and Development, Job design and Job analysis,

Participative management and Maternity and Paternity leaves are significantly influencing the Organisational Stress. High pressure in work, work life balance, Feeling of Inequality and lack of time management and planning is major factors causing the Personal stress among working women.

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Savings and Investment Behaviour of Private Sector Employees in Tirunelveli District

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Abstract

Savings and investment is the commitment of money or capital to purchase financial instruments or other assets in order to gain profitable returns in the form of interest, income, or appreciation of the value of the instrument. Investment is related to saving or deferring consumption. Investors have a lot of investment avenues to park their savings. The risk and return available from each of these investment avenues differ from one avenue to another. Investors expect more return with relatively suggestions on the investors.

Keywords: Investment, Savings, Income.

Introduction

Savings and investments are important and integral activities of men and women. Every individual has a tendency to save for various reasons. They may be for short term purposes like buying a car or they may be made for long term purposes such as providing for retirement. Sometimes savings are made simply to meet unknown contingencies

Savings and investment is the commitment of money or capital to purchase financial instruments or other assets in order to gain profitable returns in the form of interest, income, or appreciation of the value of the instrument. Investment is related to saving or deferring consumption. Investors have a lot of investment avenues to park their savings. The risk and return available from each of these investment avenues differ from one avenue to another. Investors expect more return with relatively suggestions on the investors.

The investment behaviour is defined as how the investors judge, predict, analyze and review the procedures for decision making, which includes investment psychology, information gathering, defining and understanding, research and analysis. These processes are collectively called investments behaviour.

There are several parameters that an investor will think before investing like return, flexibility, etc., but the markets will face a question mark in knowing the pulse of an investor. So a study must be made on the personal and investment details of the investor and such that the market can know the pulse of an investor and can act upon it.

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This study classifies investors into different personality types and explores the relationship between various personal factors and the investment personality exhibited by the investors. Further the study explored the investor's behaviour towards investment in corporate securities such as debenture/ bonds, preference shares and equity shares based on the four aspects such as awareness, preference, decision making and satisfaction.

Statement of the Problem

Many people consider investment is a scary activity Common problems faced by the individual investors while thinking of investment are, lack of awareness and knowledge, blind faith, lack of financial inclusion, traditional thinking, emotional attachment to money, fear of loss and many more. Investor's education is a task which is performed by the financial service providers and regulatory bodies. But all the people are not aware of how and when these guidelines are being communicated. There are various sources, which provide guidelines on investment of hard earn money, still many people are not putting their funds in proper investment avenues.

Savings and investment behaviour differs from individual who in turn differs according to their socioeconomic background. Investors consider their investment needs, goals, objectives and constraints in making investment decisions, but it is not possible to make a successful investment decision at all times. Their attitude is influenced by various factors such as dividend, 'quick return' strategy, stories of successful investors, online trading, investor awareness programme and the experience of other successful investors etc.

A better understanding of behavioural processes and outcomes is important for financial planners which would definitely help them in devising appropriate asset allocation strategies for their clients. It is to be noted that there are many studies conducted nationally and internationally, but to the best of the researcher's knowledge, a comprehensive study on the behaviour of investors of corporate securities Tirunelveli district based on four aspects such as awareness, preference, decision making and satisfaction has not so far been made, hence this attempt to study the saving and investment behaviour's of private sector employees in Tirunelveli district.

Objectives of the Study

The study was conducted with the following objectives.

1. To study about savings and investment behaviour of private sector employees in Tirunelveli district.
2. To analyze the purpose of investment of private sector employees.
3. To identify the source of investment and investment preference of private sector employees.
4. To analyze the level of satisfaction of private sector employees on returns of investments.
5. To offer suitable suggestions based on the findings of the study.

Scope of the Study

This study attempts to focus on investment preferences of private sector employees. The private sector employees have fixed flow of income and their investments patterns are also different. In connection with this, researcher will try to find out investment preferences of private sector employees in Tirunelveli district. This study will also throw a light on the awareness of the investments avenues available in India. The study is confined to the factors considered by the private sector employees while making their investment in different investment avenues. Their level of awareness about the various aspects of investment avenues available in the study area is considered.

Need and Importance of the Study

It is observed that investors are more reliable and attached with a particular type of investment avenues. So it becomes significant to study the motivational factors that compel them for selecting the investment avenues. A study on the savings and investment behaviour of private sector employees assumes a greater significance in the formulation of policies for the development and regulation of security markets in general and protection and promotion of small and house-hold investors in particular, which ultimately leads to the economic development of a nation.

In Tirunelveli District, wider savings and investment options are available to the investors. So they are in a position to decide any option better on their need. Historically the returns on investments in corporate securities are higher than other investments available in the market. This means the money will grow more if it is invested in the stock market. Since the activities of exchanges are clearly monitored and governed by SEBI, which really regulates the working of stock brokers, eventually investors would be safe due to SEBI's incorporation.

Methodology

The research design is empirical in nature since the study is conducted using both analytical and diagnostic types of research. The study is conducted in two stage formats, with a preliminary pilot study followed by the main study. The major part of the study is based on primary data. The sample size was 120 and the respondents were selected from private sector employees in Tirunelveli district.

Sources of Data

Primary data have been collected from the private sector employees in and around the selected taluks of Tirunelveli district. Secondary data collected from various published and unpublished sources including Journals, Magazines, Publications, Reports, Books, Dailies, Periodicals, Articles, Research Papers, Websites, Bank publications, Manuals, and Booklets.

Sampling Technique

The researcher visited the respective office premises of the private sector organization/institution.

Permission was denied to meet the employees inside the office during working hours. The only alternative available for the researcher was to meet the respondents when they come out of the office. With hard difficulty the researcher could persuade 120 employees from different private sector organization/institution to get the required information within the scheduled time frame. With a view to analyzing the savings and investment behaviour among employees in private sector, 120 private sector employees were selected as sample respondents. Adequate cares has been taken to include the various types of private sector employees working in the private sector as samples. The personal profile of the respondents shows that the universe of study is represented by various backgrounds relating to gender, age, educational qualification, marital status, nature of work, number of family members and income of private sector employees. The researcher has collected primary data on the basis of the following ways:

Results Analysis and Discussions

Table 1 : Distribution of Sample Unit

Sl. No	Name of the Institution	Sample Size
1.	Private Schools	24
2.	Private Hospitals	24
3.	Private Banking Sector	24
4.	Private Insurance Sector	24
5.	Private Industry	24
	Total	**120**

Now a-days private sector means not only corporate sector but also other sectors like Educational Institutions, Hospitals, Companies, Banking Sector and Insurance Sector. On the above basis, primary information's were collected for analyzing the savings and investment behaviour of private sector employees. Stratified random sampling is used. The sample respondents were randomly selected.

The Data collected with the help of questionnaire regarding the savings and investment behavior of Private Sector Employees are analyzed in this part.

Table 2 : Gender-wise Classification

S.No	Gender	No.of.Respondents	Percentage
1	Male	90	75
2	Female	30	25
Total		120	100

Source: Primary Data

The above table-1 represents gender-wise classification. There are 75% of male respondents and 25% of female respondents.

Table 2 : Monthly Income wise Classification

S.No	Monthly Income	No. of Respondents	Percentage
1	Below Rs.10000	06	5
2	Rs.10000-20000	41	34
3	Rs.20001-30000	38	32
4	Rs.30001-40000	10	8
5	Rs.40001-50000	16	13
6	Rs.50000	09	8
Total		120	100

Source: Primary Data

It is observed from the Table 2, 16(13%) respondents earned a monthly income between Rs.40,001-50,000, 10 (8%) respondents earned a monthly income between Rs.30,001-40,000, 38 (32%) respondents earned a monthly income between Rs.20,001-30,000, 41 (34%) respondents earned an income ranging from Rs 10,000 to 20,000 per month and 6(5%) earned monthly income of below Rs.10,000. From the data the individuals who belonged to the higher income category were 06 (5%) respondents. Their income was above Rs.50,000.

Table - 3 : Purpose of Investment

S.No	Particulars	Total Score	Average Score	Rank
1.	For children's education/marriage	36162	60.27	I
2.	For purchase of assets	29838	49.73	V
3.	To meet emergencies	35934	59.89	II
4.	Well settled retired life	25356	42.26	VII
5.	Provision for additional income	34704	57.84	III
6.	Repayment of old debts	27348	45.58	VI
7.	Provision for festivals	21912	36.52	VIII
8.	Construction of house	31416	52.36	IV

Source: Primary Data

It is clear from the Table 3, that a majority of private sector employees have given the first rank to children's education/marriage. The table exhibits that the sample private sector employees have given second rank to meet emergencies. The table further shows that the sample private sector employees have given the third rank to provision for additional income. It is further clear from the table that the sample private sector employees have given the last rank to provision for festivals.

Table 4 : Level of Investment among different gender group of Private Sector Employees

Investment Schemes	Gender (Mean Score)		T- Statistics
	Male	Female	
Bank Deposit	3.9841	3.9009	1.252
Private Chit	2.9206	2.8694	0.438
Provident Fund	1.6712	1.5979	1.676
Private Financial Deposit	1.8730	1.8468	0.419
Post Office Savings	3.3122	3.8613	2.657*
Money Market Instruments	2.2928	2.2566	0.501
ULIP	3.5714	3.5541	0.198
Forex Trading	2.2646	2.2568	0.136
Equity Shares	1.4099	1.3862	0.549
Mutual Funds	1.4910	1.4312	1.420
Government Bond	1.7613	1.7354	0.468
Debenture	1.9815	1.8243	2.611*
Gold	3.6587	3.6441	0.191
Silver	3.3810	3.3604	0.268
Diamond	2.2297	2.2487	0.307
Land	3.9009	3.5069	2.723*
Building	3.8378	3.7037	1.638
Scheme of LIC	3.1466	3.1441	0.044

Source: Computed data

**-Significant at five per cent level*

Table 4 shows the mean score of level of investment among different gender group of private sector employees along with its respective 'T' statistics. The important investment among the male respondents are bank deposit and land and their respective mean scores are 3.9841 and 3.9009 and among the female respondents, bank deposit and post office savings and their respective mean scores are 3.9009 and 3.8613. Regarding the level of investment, the significant difference among the different gender group of private sector employees, are identified in the case of post office savings, debenture and land since the respective 'T' statistics are significant at 5 per cent level, the null hypothesis is rejected.

Summary of Findings

- It is observed from the study that 75 per cent of the respondents were males and 25 per cent of the respondents were females. Sizable numbers of female respondents were chosen for the study as female members in the family also played a vital role in investment decision. Therefore their perception along with their views was also highly valuable for the study.

- It is observed from the Table 2, 16(13%) respondents earned a monthly income between Rs.40,001-50,000, 10 (8%) respondents earned a monthly income between Rs.30,001-40,000, 38 (32%) respondents earned a monthly income between Rs.20,001-30,000, 41 (34%) respondents earned an income ranging from Rs 10,000 to 20,000 per month and 6(5%) earned monthly income of below Rs.10,000. From the data the individuals who belonged to the higher income category were 06 (5%) respondents. Their income was above Rs.50,000.
- It is observed the mean score of level of investment among different gender group of private sector employees along with its respective 'T' statistics. The important investment among the male respondents are bank deposit and land and their respective mean scores are 3.9841 and 3.9009 and among the female respondents, bank deposit and post office savings and their respective mean scores are 3.9009 and 3.8613. Regarding the level of investment, the significant difference among the different gender group of private sector employees, are identified in the case of post office savings, debenture and land since the respective 'T' statistics are significant at 5 per cent level, the null hypothesis is rejected.

Suggestions

- The private sector employees should develop proper plan which will help them in to their short or long term savings investment decision making.
- Financial planning can only enable the creation/increase the wealth, it can provide opportunity for saving/ investment of private sector employees. So, the importance and awareness of financial planning should increase among private sector employees at great extent.
- The private sector employees should try to develop the intellectual property of their own it will expand the knowledge and develop investment skill, thereby understand the significant aspect like liquidity of assets and Investment Avenue.

Conclusion

The paper has made an attempt to infer the savings and investment behaviour of private sector employees. The study on savings and investment behaviour of private sector employees has been undertaken with the objective of identifying the source of investment, investment preference and level of satisfaction on returns of investment of private sector employees in Tirunelveli district. Analysis of the study was undertaken with the help of survey conducted. After analysis and interpretation of data it is concluded that in Tirunelveli district private sector employees prefer to invest in land, buildings and bank deposits but they do not prefer forex trading, equity shares, mutual fund, government bond and debenture. All the age groups give more important to invest in land, buildings, insurance and bank deposit. Income level of private sector employees is an important factor which affects portfolio. Middle age group, Lower income level groups respondents are preferred to invest in insurance and bank deposit rather than any other investment avenues. In Tirunelveli district private sector employees

are more aware about various investment avenues like insurance, bank deposits, small savings like post office savings etc.

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A Study of Economic Reforms and Performance of Private Insurance Sector in Marathwada Region

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Abstract

The insurance industry in India has witnessed many radial transformations during the last about one hundred ninety years of its inception. This paper studies the reforms in the insurance sector in India and the performance of the private general insurance sector in India and compare with Public sector

Keywords: Insurance, radial transformations

Introduction

The insurance industry in India has witnessed many radial transformations during the last about one hundred ninety years of its inception. The insurance business remained in the hands of private insurers with minimal government intervention up to 1956. Both the life insurance as well as the general insurance companies was nationalized by the government in the years 1956 and 1972 respectively, giving them a chance to have monopoly in the field. But, unlike life insurance, a different structure was created for the general insurance industry. One holding company was formed with four subsidiaries, and again, the private sector was allowed to enter the insurance business in the year 2000. With the entry of private players, the competition is becoming intense. In order to satisfy the customers, there is competition between the public and private companies to implement new creations and innovative product characteristics to attract customers. Hence it is intended, through this study, to make an comparative analysis between private and public companies to understand the differences that lies interns of the growth and market position Apart from it in this study in-depth analysis of the performance of general insurance business in India is done with reference to various performance parameters.The main objective of that study is to analyze the performance of the private insurance companies at Marathwada level. The performance of the private insurance sector in Marathwada region is studied by conducting the survey with the consumers of the general insurance policies.

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Performance of the Indian Insurance Players

The following points will provide you an insight into the insurance market of India and its fast expanding prospects. The report is well supported by data based on detailed analysis that would help investors, financial service providers and global banking players to venture into the Indian insurance market.Taking into account the changing socio-economic demographist, rate of GDP growth, behavior of consumers, and occurrences of natural calamities at regular intervals the market of Life Insurance in India is expected grow to the value of around US $ 41.44 billion by the year 2009.The Market is expected to grow at a compounded annual growth rate (CAGR) of more than 200 % year over year (YOY) from year 2009 onwards. 65 % of the general insurance market is controlled by private houses that already exist in the market. However in automobile insurance, public sector covers a substantial 68 % of the total market value.Among individual companies that are worthy of mentioning, ICICI Lombard enjoys a whopping 53 % market share in Accident Insurance while the remaining 47 % is shared by New IndiaAssurance and United India Insurance , both belonging to the public sector.

Effects of insurance sector on Indian economy

For economic development investments are necessary. Investments are made out of savings. Life Insurance Company is a major instrument for the mobilization of savings of people, particularly from the middle and lower group. All good life insurance companies have huge funds accumulated through the payments of small amounts of premium of individuals. These funds are invested in ways that contribute substantially for the economic development of the countries in which they do business The system of insurance provides numerous direct and indirect benefits to the individuals and his family as well as to industry and commerce and to the community and the nation as a whole. Present day organization of industry, commerce and trade depend entirely on insurance for their operation, banks, and financial institutions lend money to industrial and commercial undertakings only on the basis of the collateral security of insurance.

Objectives of the Study

1. To study the reforms in the insurance sector in India.
2. To know the performance of the private general insurance sector in India and compare with Public sector.
3. To know the reasons for purchasing general insurance policy by consumers in Marathwada region.
4. To study the impact of the demographic factors like age, gender, and income on the purchase of the general insurance policies in the region.
5. To analyze the performance of the private general insurance companies in Marathwada region through consumer feedback.

6. To analyze the consumer satisfaction and brand loyalty for the general insurance companies in the region.

Hypotheses Tested

1. There is no impact of the demographic factors like age, gender, and income on the purchase of the general insurance policy.
2. The performance of the private insurance companies is not satisfactory in Marathwada region.
3. There is no difference in the consumer satisfaction and loyalty among the general insurance companies.

Research Methodology

Data collection

Both type of data are collected for this research i,e secondary data as well as primary data.Theprimary data are those which are collected afresh and for the first time, and thus happen to be original in character. The secondary data, on the other hand, are those which have already been collected by someone else and which have already been passed through the statistical process.

In this research the secondary data are collected from the different sources like reports, publications by companies, books etc. The secondary data is interpreted to full fill the objectives of the research

The primary data are collected through survey conducted 8 districts of the Marathwada region. The Questionnaire has been designed for conducting survey.

Sample design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample.Sample design for this research as followed.

1. Universe : Marathwada Region
2. Size of Sample : 1600 (200 respondents are selected from each district of Marathwada region.)
3. Sampling Technique: Random Sampling

The respondents are selected randomly from each district. Under this sampling technique, every item of the universe has an equal chance of inclusion in the sample.

The sample design as given in the table 1.1

Table 1 : Sample Design

Sr No	District	Number of respondent
1	Aurangabad	200
2	Nanded	200
3	Parbhani	200
4	Latur	200
5	Beed	200
6	Hingoli	200
7	Jalna	200
8	Osmanabad	200
	Total	**1600**

Table No. 2 : Quality service provided by the general insurance companies

Sr No		Strongly agree	Agree	Neutral	Some what agree	Not at all agree	Mean	SD
	Statement	**5**	**4**	**3**	**2**	**1**		
1	The Physical facilities at the general insurance company is visually appealing	152 (9.5%)	1115 (69.7%	333 (20.8%)	00	00	3.886	.5389
2	Material associated with the service (such as pamphlets , forms etc) are visually appealing and simple to understand	182 (11.4%)	1147 71.7%	271 (16.9%)	00	00	3.944	.5293
3	When customers have a problem, company solves it promptly.	76 (4.8%)	797 (49.8%)	727 (45.4%)	00	00	3.593	.5801
4	Company provides right service in the first instance.	76 (4.8%)	907 (56.7%)	617 (38.6%)	00	00	3.669	.5648
5	Error free records (issues error free bills, statements , receipts etc)	76 (4.8%)	1093 (68.3%)	431 (26.9%)	00	00	3.778	.5175

Sr No		Strongly agree	Agree	Neutral	Some what agree	Not at all agree	Mean	SD
	Statement	5	4	3	2	1		
6	Employees and agents of the company always be willing to help customers.	76 (4.8%)	878 (54.9%)	646 (40.6%)	00	00	3.643	.5696
7	Employees and agents of the company is never be to too busy to respond to customers' request.	76 (4.8%)	766 (47.9%)	758 (47.4%)	00	00	3.573	.58290
8	Employees and agents of the company adopt the method of communication which suits the need to the customers	274 (17.1%)	469 (29.3%)	857 (53.6%)	00	00	3.635	.75793
9	The company gives accurate representation or information of product and service.	76 (4.8%)	490 (30.6%)	956 (59.8%)	78 (4.9%)	00	3.352	.6488
10	The company frequently update you about the status of your product.	00	566 (35.4%)	880 (55.0%)	154 (9.6%)	00	3.257	.6196
11	Company shared complete information about the claim settlement formalities.	00	467 (29.2%)	1034 (64.6%)	99 (6.2%)	00	3.230	.5486
12	Company offers the diversified products and policies .	00	444 (27.8%)	1057 (66.1%)	99 (6.2%)	00	3.215	.5413
13	Company issues contract of insurance policies with clear and transparent terms	00	444 (27.8%)	1057 (66.1%)	99 (6.2%)	00	3.215	.5413
14	Company settle customer's claims without any delay	00	368 (23%)	1133 (70.8%)	99 (6.2%)	00	3.168	.5135

Source : Field study year 2014-15

The above table analyzes the overall quality service of the general insurance companies.

Table 3 : Comparison of the Public and private general insurance companies in Marathwada Region.

Sr No	Statement	Mean		Mean	SD
		Public Sector	Private Sector		
1	The Physical facilities at the general insurance company is visually appealing	3.498	4.275	3.889	.53899
2	Material associated with the service (such as pamphlets , forms etc) are visually appealing and simple to understand.	3.549	4.338	3.944	.52934
3	When customers have a problem, company solves it promptly.	3.233	3.952	3.591	.58012
4	Company provides right service in the first instance.	3.295	4.028	3.669	.56480
5	Error free records (issues error free bills, statements , receipts etc)	3.400	4.155	3.771	.51751
6	Employees and agents of the company always be willing to help customers.	3.279	4.008	3.648	.56968
7	Employees and agents of the company is never be to too busy to respond to customers' request.	3.216	3.931	3.578	.58290
Sr No	**Statement**	**Mean**		**Mean**	**SD**
		Public Sector	**Private Sector**		
8	Employees and agents of the company adopt the method of communication which suits the need to the customers.	3.272	3.999	3.636	.75793
9	The company gives accurate representation or information of product and service.	3.017	3.687	3.355	.64885
10	The company frequently update you about the status of your product.	2.931	3.583	3.255	.61962
11	Company shared complete information about the claim settlement formalities.	3.068	3.391	3.230	.54867
12	Company offers the diversified products and policies .	3.054	3.376	3.216	.54135
13	Company issues contract of insurance policies with clear and transparent terms .	3.054	3.376	3.216	.54135
14	Company settle customer's claims without any delay.	3.009	3.326	3.168	.51359
	Average mean	3.2050	3.8165	3.511	

Source : Field Study year 2014-15

From the above table it is noticed that , The private sector companies score mean more than public sector companies in all factors related to quality service. In below factors of the service quality of the private sector scored mean more than 4.00.

- The Physical facilities at the general insurance company is visually appealing
- Material associated with the service (such as pamphlets , forms etc) are visually appealing and simple to understand.
- Company provides right service in the first instance.
- Error free records (issues error free bills, statements , receipts etc).
- Employees and agents of the company always be willing to help customers.

Major Conclusions

1. 61.9% of the consumers purchased the policies from the public sector companies. 38.1% of the consumers purchased the policies from the public sector companies New India is the most preferred public general insurance company and Tata AIG is the most preferred private general insurance company.

2. The private sector companies' score mean more than public sector companies in all factors related to quality service. Thus the performance of the private general insurance companies is better than public general insurance companies. The private general insurance companies satisfactory in all below parameters.

3. Sector wise analysis shows that out of 429 insurance claims , 186 claims form private sector, and 243 are from public sector companies. The 54.8 % consumers of private sector who claimed for the insurance are responded that they received expected benefits from the policy.

   The 37 % consumers of public sector who claimed for the insurance are responded that they received expected benefits from the policy

   Thus private scoter general insurance companies are successful in fulfilling the expectation of the consumers .

4. 76.02 % of the consumers of the private sector general insurance sector are responded that they refer the company to others.

   Only 25.93 % of the consumers of the public sector general insurance sector are responded that they refer the company to others.

   Thus we can interpret that the consumers from the private sector companies are more loyal compare to public sector companies.

5. Around 30. 21 % of the consumers of the private sector companies are like to switch over to other company if given chance.

   Around 49.94 % of the consumers of the public sector companies are like to switch over to other company if given chance.

   Thus we can conclude that the consumers of the private sector companies are more loyal towards it compare to public sector.

The major reason the consumer stated to switch over to other company is low premium and maximum risk coverage.

Preferred general insurance policies in Marathwada region.

1. Car insurance is the most preferred policy in the selected sample.
2. Second most preferred general insurance policy is two wheeler insurance i.e 439.
3. No respondent has purchased home insurance.
4. No respondent has purchased fire insurance
5. Around 10.6% of the respondents purchased three general insurance policies.
6. 21.3% of the respondents purchased two general insurance policies.
7. Around 68 % of the respondents purchased one general insurance policy.

Important Suggestions

There is growth of the general insurance sector in India and same way the performance of the general insurance sector in Marathwada region is also satisfactory. But in some areas the sector still need some improvements. The following suggestion will help the sector to accelerate the growth in all segments of the general insurance sector.

1. Focus on health insurance , travel insurance and fire insurance segment: In Marathwada region the companies are lagging behind in the health insurance, travel and fire insurance segments. The share of out-of-pocket expenditure in overall healthcare expenditure is significantly higher than comparable developing countries as well as the developed countries. Moreover, the government focus on healthcare spending is focussed on low income and below the poverty line segments. Considering the rising healthcare cost inflation and changing disease pattern more towards lifestyle diseases in the urban areas, the health insurance market would have significant headroom for growth as it would replace the out-of-pocket expenditure.

   Thus companies need to execute special marketing strategies for creating awareness about the untapped segments of the general insurance.

2. **Motivate consumers to purchase policy for the risk coverage:** Most of the consumers are purchase the policies as the statutory compliance. But the main objective of the insurance is the risk coverage. Therefore it is necessary that the consumers to purchase the policies of the risk coverage.

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