

# 1. A Study on Investment Portfolio optimization Using Value at Risk Approach.

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## **Abstract**

### *Purpose –*

The purpose of this study is to optimize the portfolio to maximize return and minimize risk using Value at Risk model of variance – covariance matrix. To understand in which situation, the portfolio has maximum return at given level of risk. To identify, whether VaR based portfolio has maximum return at minimum risk or portfolio which equal weightage of assets (Non – VaR based portfolio) has maximum return at minimum risk.

### *Design/ methodology/ approach –*

VaR is been calculated using variance- covariance matrix with the help of Henry Markowitz theory portfolio is been created and optimized. The study is subjected to the calculation of value at risk on 2 portfolios on Nifty auto and nifty FMCG by assigning the equal weights to the assets in the portfolios. The scope of data is limited for 3 past financial years i.e. from 1<sup>st</sup> April 2015 to 31<sup>st</sup> March 2018. The analytical tool used in the study is solver (Non – linear). The study is limited to use of only one approach in the study which is variance – covariance approach for calculation of portfolio value at risk.

*Originality/value –* The riskiness of an asset can be measured alone and also of a portfolio. The magic of diversification can be seen when assets are assessed in a portfolio. So, portfolio theory emphasizes that instead of investing your money into one asset, spread it between different investment alternatives. However, what amount should be allocated to what asset class or alternative depends on individual's investment objective and constraint? Within the parameter of one's objectives, a better return can be achieved with the help of proper investment management. As soon the money is divided into different assets, the attributes of all these assets form a base for assessing portfolio, for e.g. risk & return of individual investment avenue.

**Keywords:** Henry Markowitz theory of modern portfolio, Portfolio return, portfolio risk using standard deviation, solver, Value at Risk, Variance – covariance approach calculation

## **Introduction**

An investor before investing in any assets/ portfolio consider about the factors like return and risk. An investors choose the alternative investment depending upon his/ her risk averseness. Investor's objective of investment is that he/ she can get maximum return at given minimum level of risk. Hence before investing, investor does risk – return analysis of its prospective investment. Due to which an investor gets the idea about the where to invest and also in what proportions the investments in assets must be allocated. Hence in this study value at risk, has been considered as risk analysis tool. With the help of Value at Risk, portfolio optimization will be done. With the object to minimize value at risk and portfolio sigma of 2 selected portfolios and maximize the returns of the portfolio. So that, investors gets the idea about the proportions of the investment allocations through optimization of portfolio using value. For better understanding, the results of Var optimized portfolio with the same index returns and standard deviation.

## **Literature Review**

Simi Carkalo (2011) from Croatia operational research review has tried to give us idea about what is VaR and how it is calculated. The author had also tried to compare the various approaches of VaR by considering 5 stocks listed on Zagreb stock exchange with data set of daily 400 returns with the proportion of 20% to each stock. The results were like returns were not normal which in turn it results into non-linear data. Hence bootstrapping and historical simulation found best suitable at these stock for VaR calculation.

Prateek Bedi and Devesh Shankar (2018) The authors in this study has tried to dealt with comparative evaluation of four Value-at-Risk models namely, historical VaR, normal VaR, GARCH VaR, and volatility weighted historical simulation (VWHS) VaR in terms of their prediction accuracy for an active portfolio of Indian equities. Daily NAVs of 34 Indian equity growth mutual fund schemes for a period of 10 years were used to calculate 95% VaR and back test the results using Kupiec's POF test for all four VaR models. To identify the better performing VaR methods accurately, the analysis was performed in two phases: pre-crisis analysis and post crisis analysis. The research outcome was volatility weighted average historical simulation was found to be of better methodology for measuring VaR of an active portfolio of Indian equity stocks.

Suyash Bhatt( 2017) in his research has applied the concept of Value-at-Risk (VaR) to Indian Capital Markets and examines the different computational approaches to VaR and their relative differences in measuring the downside of the risk involved in the investment of equities by

applying the concept of VaR on a portfolio comprising of the stocks listed on the Indian Capital Market Index - the BSE SENSEX; by testing the model on time series data i.e. historical daily returns of the Index over a two month horizon and back testing the results of the Monte-Carlo Simulation against historically obtained VaR estimates. And the results shows that the Formula-based approach and the Monte Carlo approaches are better indicators of VaR as compared to other approaches.

Hafiz Madir and Ummat Uyar (2013) in this research, the author has compare the var and Markowitz efficient frontier curve in terms of portfolio risk. It has calculated the optimal portfolio by Portfolio Optimization method based on average variance calculated from the daily closing prices of the ninety-one stocks traded under the Ulusal-100 index of the Istanbul Stock Exchange in 2011. Then, for each of designated portfolios, Monte-Carlo Simulation Method was run for thousand times to calculate the VaR. portfolio optimization has been done on the basis of average variance. Results give us idea about VaR value increases which portfolio sigma increases.

## **Research Methodology**

### *a. Research Problem:*

The study is based on portfolio optimization using value at risk approaches. It seeks to find out the whether VaR based optimised portfolio provides better returns at reduced level of risks. The only Value at Risk approach used in the study is variance – covariance approach calculating portfolio value at risk. Value at risk is based on 95% confidence level with 1 day value at risk. Analytical tool used in the study is Solver – GRG Non – Linear. While portfolio creation is based on nifty indices i.e. CNX NIFTY FMCG and CNG NIFTY AUTO. While the data consider for the daily returns is based on past 3 financial years i.e. from 1<sup>st</sup> April 2015 – 31<sup>st</sup> March 2018.

### *b. Objectives of Research*

- To calculate the portfolio returns and portfolio standard deviation of 2 selected portfolios.
- To compute the value at Risk using variance – covariance approach.
- To optimize the each portfolio using Value at Risk approach.
- To identify whether the VaR optimized portfolio provide better results than non var optimized portfolio and Nifty FMCG and Nifty Auto index.

### *c. Sample profile*

The sample includes portfolio building based on 2 portfolios with equal proportion i.e. CNX Nifty FMCG and CNX Nifty Auto.

CNX Nifty FMCG:

Britannia Industries Ltd.	Godrej Consumer Products Ltd.	Marico Ltd.
Colgate Palmolive (India) Ltd.	Godrej Industries Ltd.	Procter & Gamble Hygiene & Health Care Ltd.
Dabur India Ltd.	Hindustan Unilever Ltd.	Tata Global Beverages Ltd.
Emami Ltd.	I T C Ltd.	United Breweries Ltd.
GlaxoSmithkline Consumer Healthcare Ltd.	Jubilant Foodworks Ltd.	

CNX Nifty Auto:

Amara Raja Batteries Ltd.	Bharat Forge Ltd.	Hero MotoCorp Ltd.	Motherson Sumi Systems Ltd.
Apollo Tyres Ltd.	Bosch Ltd.	MRF Ltd.	TVS Motor Company Ltd.
Ashok Leyland Ltd.	Eicher Motors Ltd.	Mahindra & Mahindra Ltd.	Tata Motors Ltd DVR
Bajaj Auto Ltd.	Exide Industries Ltd.	Maruti Suzuki India Ltd.	Tata Motors Ltd.

*d. Defining Variables:*

Value at risk is the maximum amount of money that may be lost on a portfolio over a given period of time, with given level of confidence .For an example, daily VaR of 100 rupees with confidence level of 95%, means that in normal market conditions or in 95 out of 100 days loss will not exceed 100 rupees.

**Data Analysis and Interpretation**

The 2 portfolios have been selected Nifty Auto and Nifty FMCG. Where Nifty FMCG has 14 companies and Nifty Auto has 16 companies. The daily closing prices gave been considered for the calculation of daily returns of each asset in each portfolio. The scope of data in this study have been considered for past 3 financial years i.e. 1<sup>st</sup> April 2015 to 31<sup>st</sup> march 2018.

The data observation comes out to be in 739 observations. And then daily returns for each asset in each portfolio have been computed. The returns are then been annualised. From the data of returns following things will be computed.

- ✓ Average daily returns of each asset in each portfolio.
- ✓ Variance of each asset in each portfolio.
- ✓ Excess daily returns of each asset in each portfolio.
- ✓ Standard deviation of each asset in each portfolio.

From daily returns, excess daily returns will be computed for the purpose of creation of variance covariance matrix of each portfolio for the computation of value at Risk.

Let's see the variance covariance matrix of nifty FMCG index.

$$\underline{\text{Portfolio return} = \text{Sum} (W1 * R1 \dots W14 * R14)}$$

$$\underline{\text{Portfolio sigma} = \text{SORT} (W1 * SD1 * W2SD2 \dots COV1, 2)}$$

W indicates weights.

The “yellow” highlighted cells indicates the variance covariance matrix of each assets in Nifty FMCG index. Where yellow cells are covariance while rest are variance of each assets.

- Portfolio returns will be calculated by assigning the weights.
- Portfolio risk will be calculate by assigning the weights and the correlation between the assets in the same portfolio.
- From Portfolio sigma, portfolio value at risk will be computed.

Now by assigning equal weights to the entire asset's return, portfolio return and sigma are as follows:

Then portfolio return is 50.55%

Portfolio sigma is 23.18%

Portfolio 1 day value at risk at 95% confidence level is Rs. 14026.

Portfolio Value at risk is

computed as:

$P * Z \text{ value} * SD =$   
Rs. 14026

$(1000000 * 1.645 * 0.856) =$

		Mean returns							probability						
		0.001244398							0.0714						
		variance - covariance matrix													
		0.000150241							0.0714						
	Britannia	Colgate	Dabur	Emami	Glaxosmith Kline	Godrej Cons	Godrej Ind	Hul	ITC	Jubilant	Marico	P & G	Tata global	United bew	
Britannia	0.00025425	5.01292E-05	4.98338E-05	5.843E-05	2.79298E-05	7.03567E-05	5.89781E-05	4.58054E-05	3.88704E-05	7.77815E-05	6.494E-05	3.8526E-05	7.543E-05	6.06533E-05	
Colgate	5.01292E-05	0.00015395	4.73736E-05	5.61088E-05	2.59332E-05	6.39272E-05	5.1604E-05	7.21621E-05	3.58621E-05	4.91218E-05	4.9703E-05	1.1102E-05	6.179E-05	3.34852E-05	
Dabur	4.98338E-05	4.73736E-05	0.000203184	5.61088E-05	2.59332E-05	9.79949E-05	6.70932E-05	6.22554E-05	5.33694E-05	4.39116E-05	8.4255E-05	2.1776E-05	8.234E-05	6.64815E-05	
Emami	5.843E-05	5.32122E-05	5.61088E-05	0.000355379	2.20413E-05	7.19902E-05	8.7776E-05	3.49564E-05	3.76633E-05	6.38976E-05	6.863E-05	1.3536E-05	9.863E-05	5.97494E-05	
Glaxosmith Kline	2.79298E-05	1.61407E-05	2.59332E-05	2.20413E-05	0.000106593	2.38837E-05	3.87838E-05	2.29438E-05	2.1148E-05	2.9551E-05	1.756E-05	1.855E-05	4.529E-05	4.11426E-05	
Godrej Cons	7.03567E-05	6.39272E-05	9.79949E-05	7.19902E-05	2.38837E-05	0.000371135	0.000104943	6.3240E-05	7.5729E-05	8.48044E-05	7.5208E-05	2.8732E-05	9.501E-05	8.73361E-05	
Godrej Ind	5.89781E-05	5.1604E-05	6.70932E-05	8.7776E-05	3.49564E-05	0.000104943	0.000361694	7.88321E-05	5.74065E-05	0.000126117	8.2498E-05	3.827E-05	0.0001693	9.85368E-05	
Hul	4.58054E-05	4.2622E-05	6.22554E-05	3.49564E-05	2.29438E-05	6.3240E-05	4.88322E-05	0.00015712	5.52157E-05	4.37336E-05	4.9028E-05	1.1689E-05	5.44E-05	5.34934E-05	
ITC	3.88704E-05	3.58621E-05	5.33694E-05	3.76633E-05	2.1148E-05	7.5729E-05	5.74065E-05	5.52257E-05	0.000248082	6.90525E-05	4.8712E-05	3.3799E-06	6.801E-05	4.25094E-05	
Jubilant	7.77815E-05	4.91218E-05	4.39116E-05	6.38976E-05	2.9551E-05	8.48044E-05	0.000126117	4.37336E-05	6.90525E-05	0.000563269	8.0926E-05	3.4548E-05	0.0001642	8.3148E-05	
Marico	6.49395E-05	4.97032E-05	8.4255E-05	6.863E-05	1.55604E-05	7.5207E-05	8.2498E-05	4.90279E-05	4.8712E-05	8.09265E-05	0.00025346	2.6187E-05	8.864E-05	4.70872E-05	
P & G	3.85264E-05	1.11023E-05	2.1775E-05	1.3536E-05	4.529E-05	2.87322E-05	3.827E-05	7.1889E-05	3.37987E-06	3.45477E-05	2.6187E-05	0.00013868	5.378E-05	2.22812E-05	
Tata global bev	7.54279E-05	6.17926E-05	8.23392E-05	9.863E-05	4.11426E-05	9.50138E-05	0.0001693	5.4401E-05	6.8013E-05	0.00016421	8.8639E-05	5.3784E-05	0.0004014	0.000103707	
United bew	6.06533E-05	3.34852E-05	6.64815E-05	5.97494E-05	4.11426E-05	8.73361E-05	9.85368E-05	5.34934E-05	4.25094E-05	8.3148E-05	4.7087E-05	2.2281E-05	0.0001037	0.000383331	
		0.000384497							0.0714						
		0.000383851							0.0714						
									1.0000						

Now, to optimize the portfolio, with the object to reduce the portfolio value at risk. And by changing the proportion of weights in order to minimize the portfolio risk with the increase in returns by Solver GRG Non – linear. Change in weights are as follows:

Mean returns	Probability
0.001244398	0.1226
0.000150241	0.0896
0.000384497	0.0144

0.000273205	0.0274
-0.000588424	0.0535
0.001143417	0.0427
0.000757959	0.0134
0.000636312	0.1822
0.000317249	0.0708
0.000832507	0.0154
0.000832507	0.0769
0.000454808	0.2740
0.000930453	0.0000
0.000383851	0.0172
	1.0000

The changes in portfolio return, sigma and value at risk is as follows:

Annualised portfolio return is 50.464%

Annualised portfolio sigma is 20.13%

Which in turn reduces the portfolio value at risk to Rs. 12,186.

Hence, var optimised portfolio has the minimum risk at the given of returns as compared to Non – Var portfolio. As we observe the significant reduction in portfolio sigma and value at risk by optimising the portfolio using value at risk approach.

Now if we compare the returns, portfolio sigma and portfolio value at risk. With the CNX Nifty FMCG index with the actual proportion of weighs during the same period the results are as follows:

<b>Risk and return details of Nifty FMCG using VaR</b>			
	Non-VaR optimised portfolio	VaR optimised Portfolio	Normal Index details (Annualised)
Portfolio			

return	50.55%	50.46%	-19.73%
portfolio			
sigma	23.18%	20.14%	28.53%
1 day Var			
95% confident level	14026.50321	12186.0283	

Which clearly indicates that portfolio which is VaR optimized has maximum return with minimum level of risk as compare to Non – VaR optimised portfolio and current actual index with actual proportion of weights.

Now if we consider, Nifty Auto index, with equal proportion of weights to each assets, then with changes in proportion of weights due to optimization and the comparing with actual index of Nifty Auto with actual proportion of weights during the same period. The results of portfolio returns, portfolio sigma, portfolio value at risk is as follows:

**Variance – Covariance matrix of average daily returns of Nifty Auto Index is as follows:**

	Amar rajja ba	Apollo tyres	Ashok leyland	Bajaj Auto	Bharat forge	Bosch ltd	Eicher	Exide	Hero moto corp	MRF	M & M	Maru. Suz	Motherson Sumi s	TVS	TATA Motors	TATA motors D
Amar rajja batt	0.000333541	0.000133694	0.00011592	6.04442E-05	0.000110956	6.58807E-05	0.000100223	0.000130865	7.00527E-05	7.00527E-05	6.92033E-05	8.28653E-05	0.000126097	0.000126097	0.000109691	0.00010581
Apollo tyres	0.000133694	0.000497188	0.0001744	9.48123E-05	0.000162227	0.000110217	0.000136696	0.00014286	8.67333E-05	8.67333E-05	0.000101983	0.000118812	0.000166178	0.000166178	0.00015397	0.000183386
Ashok leyland	0.000115917	0.0001744	0.00042037	9.12726E-05	0.000149435	9.49913E-05	0.000136732	0.000121709	7.85137E-05	7.85137E-05	9.39318E-05	0.000107118	0.00016182	0.00016182	0.000166659	0.000179923
Bajaj Auto	6.04442E-05	9.48123E-05	9.1273E-05	0.000215318	9.16509E-05	8.27399E-05	0.000102136	6.71904E-05	0.000110633	0.000110633	9.41063E-05	8.41556E-05	7.93042E-05	7.93042E-05	0.000109018	0.000104585
Bharat forge	0.000110956	0.000162227	0.00014944	9.16509E-05	0.00041609	0.000120692	0.000127935	0.000100763	8.63198E-05	8.63198E-05	9.72142E-05	0.000107265	0.000164778	0.000164778	0.00016129	0.000175094
Bosch ltd	6.58807E-05	0.000110217	9.4991E-05	8.27399E-05	0.000120692	0.000269244	0.000115502	7.66573E-05	7.63685E-05	7.63685E-05	7.96989E-05	7.77505E-05	0.000133573	0.000133573	0.000122308	0.000129279
Eicher	0.000100223	0.000136696	0.00013673	0.000102136	0.000127935	0.000115502	0.000354987	0.000112773	8.49524E-05	8.49524E-05	0.000105673	0.000101268	0.000129179	0.000129179	0.000129866	0.000132121
Exide	0.000130865	0.00014286	0.00012171	6.71904E-05	0.000100763	7.66573E-05	0.000112773	0.000304301	6.32967E-05	6.32967E-05	6.04144E-05	9.09045E-05	0.000128663	0.000128663	0.000126432	0.000135417
Hero moto corp	7.00527E-05	8.67333E-05	7.8514E-05	0.000110633	8.63198E-05	7.63685E-05	8.49524E-05	6.32967E-05	0.000208838	0.000208838	8.4617E-05	8.8353E-05	8.9265E-05	8.9265E-05	0.000117054	0.000108635
MRF	7.00527E-05	8.67333E-05	7.8514E-05	0.000110633	8.63198E-05	7.63685E-05	8.49524E-05	6.32967E-05	0.000208838	0.000208838	8.4617E-05	8.8353E-05	8.9265E-05	8.9265E-05	0.000117054	0.000108635
M & M	6.92033E-05	0.000101983	9.3932E-05	9.41063E-05	9.72142E-05	7.96989E-05	0.000105673	6.04144E-05	8.4617E-05	8.4617E-05	0.000231076	9.28762E-05	0.000100568	0.000100568	0.000112936	0.000119674
Maru. Suz	8.28653E-05	0.000118812	0.00010712	8.41556E-05	0.000107265	7.77505E-05	0.000101268	9.09045E-05	8.8353E-05	8.8353E-05	9.28762E-05	0.000220892	0.000119575	0.000119575	0.000127429	0.000131279
Motherson Sumi s	0.000126097	0.000166178	0.00016182	7.93042E-05	0.000164778	0.000133573	0.000129179	0.000128663	8.9265E-05	8.9265E-05	0.000100568	0.000119575	0.000520979	0.000520497	0.000212106	0.000209977
TVS	0.000126097	0.000166178	0.00016182	7.93042E-05	0.000164778	0.000133573	0.000129179	0.000128663	8.9265E-05	8.9265E-05	0.000100568	0.000119575	0.000520497	0.000520497	0.000212106	0.000209977
TATA Motors	0.000109691	0.00015397	0.00016666	0.000109018	0.00016129	0.000122308	0.000129866	0.000126432	0.000117054	0.000117054	0.000112936	0.000127429	0.000212106	0.000212106	0.000492722	0.000428994
TATA motors D	0.00010581	0.000183386	0.00017992	0.000104585	0.000175094	0.000129279	0.000132121	0.000135417	0.000108635	0.000108635	0.000119674	0.000131279	0.000209977	0.000209977	0.000428994	0.00049098

<b>Risk and Return details of Nifty Auto portfolio</b>			
	Non - VaR optimised Portfolio details	VaR Optimised Portfolio details	Normal portfolio details (Annualised)
Portfolio return	38.07%	38.72%	-15.32%
Portfolio sigma	31.65%	27.88%	31.82%
1 day VaR (95% confidence level)	19155.03957	16868.38074	

**From the above details, we can observe that,**

Var optimised portfolio has the better results compare to normal index and non – var optimised portfolio. Because in Var optimised portfolio. Proper weights has been assigned to the each asset in portfolio depending upon the variance covariance matrix. Due to which maximum return has been possible at the very minimum level of risk and also at the minimum portfolio value at risk.

Hence, objective of optimising the portfolio to reduce the level of portfolio value at risk. Using variance covariance approach of value at risk has been successfully achieved. Because if would one want to invest his/her amount. After doing risk and return analysis using value at risk approach. One would get the maximum returns and minimum level of risk.

**Now comparing the Var optimised portfolios of both the indices**

Now, as an investor, if one like to choose to invest in any of indices i.e. Nifty Auto index and Nifty FMCG index. What options one would get?

Hence in this study, comparison of both the Var optimised portfolios. From which, one would get an idea about in which portfolio to choose? And in which Portfolio, investor would get the maximum return at the minimum level of portfolio value at risk?

	Var Based Nifty	Var based Nifty Auto
	FMCG portfolio	Portfolio
Portfolio return	50.464%	38.724%
Portfolio sigma	20.138%	27.876%
Value at Risk		
At 95% confidence level for 1 day	12186.0283	16868.38074

**If we observe from the above table.**

**Portfolio return:**

Nifty FMCG has return of about more than 50%. While nifty Auto has return 38. 72%. Hence Var based nifty FMCG provides better returns than Var optimised Nifty auto.

**Portfolio sigma:**

Nifty FMCG has the portfolio standard deviation of 20. 14%. While nifty Auto has portfolio standard deviation of 28. 88%. Hence Var based Nifty FMCG index is less risky than Var based nifty auto index.

**Portfolio value at risk:**

Portfolio value at risk of Nifty FMCG VaR based is Rs. 12, 186. Which is quite less than value at risk of Var based Nifty auto index which is 16, 868. Hence Var based Nifty FMCG portfolio is less risky in terms on portfolio value at risk as compared to Var based Nifty Auto index.

Hence from all the above details, Var based Nifty FMCG index seems to better option for investment in terms of portfolio value at risk, portfolio returns and standard deviation. If an investor wants to invest in any of the above 2 portfolios. It is advisable to invest in Nifty FMCG Var based portfolio as it provides maximum returns at minimum level of risk and also at reduced value of portfolio value at risk

## (II) Conclusion:

Value at risk (VaR) is a statistic that measures and quantifies the level of financial risk within a firm, portfolio or position over a specific time frame. Every portfolio or investment has some inherent risk which can be avoided rather it can be reduced. Risk can be reduced by apportionment of assets in the portfolio. Which often involves risk free assets along with the risky assets in the portfolio. However optimal portfolio is the one which provides, maximum return at minimal level of risk. In this study, the researcher observed that whether, is there any differences in the portfolio which are categorized in 3 forms. One is VaR model. Second is Non –Var optimised and third one which is of current market. From which we can get the maximum returns and at minimal levels of risks. For the object to reduce the portfolio value at risk. The optimised the portfolio. And found that Var optimised portfolio provides the maximum return at the very minimal level of risk and also at minimum level of portfolio risk. As compare to risk and return of Non –Var optimised portfolio and of current market Nifty indices. Hence, by apportioning of assets in the portfolio. We can get the maximum returns at minimum risk.

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## **2. A Study on Determinants of Capital Structure with specific reference to Listed Commercial Banks in India.**

- Jyoti Gurdasani

### **Abstract**

#### *Purpose –*

The purpose of this study is to analyze the relationship between the various determinants and the leverage of 41 Listed Commercial Banks in India. Capital structure decision is critical for any firm for maximizing return to the various stake holders and also to enhance firm's ability to operate in a competitive environment. One of the essential requirements for banks and financial institutions is adequate and sufficient capital and every banks and financial organizations must keep balance between capital and available risk in its assets in order to guarantee its stability.

#### *Design/ methodology/ approach –*

The analysis is conducted using correlation and multiple regression on selected determinants of the Capital Structure for the period of 10 years from 2009 to 2018.

#### *Originality/value –*

In today's world, the contribution of the service sector is growing. However, less attention has been devoted to understanding the critical factors that determine capital structure in service sector firms. Among the service sector, Banks have a significant role in economy as primary financial intermediaries. So in this study, an attempt is made to examine the impact of selected determinants on Capital Structure of Commercial Banks in India. The study is highly beneficial to the policy-makers, management and investors.

**Keywords:** Capital Structure, Determinants, ROA, NIM, Tobin's Q, Efficiency.

### **Introduction**

Capital structure is arguably one of the most significant subjects in modern finance. Capital structure refers to the way a firm chooses to finance its assets and investments through some combination of equity, debt or internal funds. Capital Structure is typically expressed as a "Debt-to-Equity Ratio or Leverage Ratio", which provides an insight into how risky a company is. Capital structure decisions are very important for the value of the firm and its cost of capital. Inappropriate

capital structure decisions can lead to an increased cost of capital thereby lowering the net present value (NPV) of many of the firm's investment projects. Effective capital structure decisions will lower the firm's overall cost of capital and raise the NPV of investment projects leading to more projects being acceptable to undertake and which in turn increases the overall value of the firm.

The optimal capital structure of a firm is often defined as the proportion of debt and equity that result in the lowest weighted average cost of capital (WACC) for the firm. One of the essential requirements for banks and financial institutions is adequate and sufficient capital and every banks and financial organizations must keep balance between capital and available risk in its assets in order to guarantee its stability.

### **Literature Review**

Mitali Sen and J K Pattanayak (2005) has examined the Factors Influencing the Capital Structure of Indian Commercial Banks. This paper used a multiple regression analysis to test the direction of relationship between the leverage (dependent variable) and the factors (independent variables). The paper finds that liquidity, size, efficiency and growth, quality of assets, profitability and service diversification are the most critical factors influencing the capital structure of the Indian banking firms.

A.M. Goyal (2013) has evaluated the Impact of Capital Structure on Performance of Listed Public Sector Banks in India. In this paper, Regression Analysis had been used for establishing relationship between ROE, ROA & EPS with capital structure. This paper finds a strong positive dependence of short term debt to capital (STDTC) on all profitability measures (ROA, ROE and EPS). Long term debt to capital (LTDTC) & TDC have a negative relationship with ROA, ROE and EPS. Firm size (SIZE) had a optimistic connection with variables (ROA, and EPS) and negative with ROE. Assets growth (AG) proposed a positive relationship with ROA, ROE and EPS.

Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2016) has examined Determinants of capital structure of Islamic and conventional commercial banks. In this paper, Panel data techniques namely, pooled ordinary least squares, fixed effects and random effects, were used to estimate the relationship between book leverage and bank-specific variables such as profitability,

size, growth, tangibility and earnings volatility. Through Regression this paper finds that profitability, growth and tangibility are negatively, whereas bank size and earnings volatility are positively, related to book leverage of conventional commercial banks. On the other hand, only three variables, namely Profitability and tangibility are negatively while bank size is positively related to book leverage of the Islamic banks.

## Research Methodology

### a. Research Problem:

The Capital Structure of firms is very important and it is affected by various determinants. This paper analysis the impact of various determinants of capital structure on Leverage of listed commercial banks in India.

### b. Objectives of Research

- To analyze the relationship between the selected determinants and the capital structure.
- To study the impact of selected determinants on the capital structure i.e. leverage of listed commercial banks in India.

### c. Sampling

The sample selected for the study includes 41 listed commercial banks in India. The determinants of capital structure selected for the study are Profitability, Liquidity, Size, Growth, Business Risk, Asset Quality, Tangibility, Tobin's Q and Operating Efficiency.

### d. Defining Variables:

Sr. No.	Particulars	Variable Definition
1	Capital Structure	$\text{Leverage} = \text{Total Debt} / \text{Total Asset}$
2	Profitability	(i) $\text{ROA} = \text{EBIT} / \text{Total Assets}$ (ii) $\text{NIM} = (\text{Interest Earned} - \text{Interest Expended}) / \text{Total Assets}$
3	Liquidity	$\text{CBT} = \text{Cash \& Bank Balance} / \text{Total Assets}$
4	Size	Natural Logarithm of Total Assets

5	Growth	$\text{Growth} = \frac{\text{Total Assets (x)} - \text{Total Assets (x-1)}}{\text{Total Assets (x-1)}}$
6	Business Risk	$\text{Risk} = \frac{\text{Standard Deviation of EBIT}}{\text{Total Assets}}$
7	Asset Quality	$\text{NPA} = \frac{\text{Net NPA}}{\text{Net Advances}}$
8	Tangibility	$\text{Tangibility} = \frac{\text{Fixed Assets}}{\text{Total Assets}}$
9	Tobin's Q	$\frac{\text{Market value of Equity} + \text{Book Value of Debt}}{\text{Book Value of Assets}}$
10	Operating Efficiency	$\frac{\text{Total Operating Cost}}{\text{Average Total Assets}}$

*e. Hypotheses Formulation:*

The following null hypothesis has been formulated:

H01: There is no significant impact of Profitability (ROA) on Capital Structure of Listed Banks in India.

H02: There is no significant impact of Profitability (NIM) on Capital Structure of the Listed Banks in India.

H03: There is no significant impact of Liquidity on Capital Structure of the Listed Banks in India.

H04: There is no significant impact of Size on Capital Structure of the Listed Banks in India.

H05: There is no significant impact of Growth on Capital Structure of the Listed Banks in India.

H06: There is no significant impact of Business Risk on Capital Structure of the Listed Banks in India.

H07: There is no significant impact of NPA on Capital Structure of the Listed Banks in India.

H08: There is no significant impact of Tangibility on Capital Structure of the Listed Banks in India.

H09: There is no significant impact of Tobin's Q on Capital Structure of the Listed Banks in India.

H010: There is no significant impact of Operating Efficiency on Capital Structure of the Listed Banks in India.

**Data Analysis and Interpretation**

a. Correlation Analysis of Determinants of Capital Structure with Leverage of Listed Commercial Banks:

Name Of Variable	P- Value	Correlation	Relationship
Profitability (ROA)	0.136	0.237	Insignificant
Profitability (NIM)	0.893	0.022	Insignificant
Liquidity	0.485	0.112	Insignificant
Size	0.814	0.038	Insignificant
Growth	0.135	0.237	Insignificant
Business Risk	0.134	0.238	Insignificant
Asset Quality	0.165	-0.221	Insignificant
Tangibility	0.777	-0.046	Insignificant
Tobin's Q	0	0.712	Significant Positive
Operating Efficiency	0.134	0.238	Insignificant

From the above table, it can be seen that only Tobin's Q with P-value 0.000 at 0.05 level of Significance contributes highly to Capital Structure. Correlation is highly significant and positive in case of Tobin's Q. So if the Tobin's Q Ratio is higher, this means that the bank has taken more debt that results in overvaluation of the firm. Therefore, the banks should undertake Capital Restructuring in order to reduce their Tobin's Q Ratio. All other variables have insignificant relation with Capital Structure.

b. Regression Analysis to analyse impact of Determinants of Capital Structure with Leverage of Listed Commercial Banks:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.859 <sup>a</sup>	.738	.672	.03117

a. Predictors: (Constant), Operating Efficiency, Tobin's Q, Liquidity, Tangibility, Asset Quality, NIM, Size, ROA

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.087	8	.011	11.250	.000 <sup>b</sup>
	Residual	.031	32	.001		
	Total	.119	40			

a. Dependent Variable: Capital Structure

b. Predictors: (Constant), Operating Efficiency, Tobin's Q, Liquidity, Tangibility, Asset Quality, NIM, Size, ROA

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.130	.051		2.563	.015
	ROA	-.720	.538	-.10574	-1.339	.190
	NIM	-5.269	1.347	-.618	-3.911	.000
	Liquidity	-.249	.294	-.093	-.847	.403
	Size	.003	.004	.129	.744	.462
	Asset Quality	-.004	.005	-.131	-.861	.396
	Tangibility	2.994	1.659	.191	1.805	.081
	Tobin's Q	.042	.005	.969	7.963	.000
	Operating Efficiency	.361	.267	10.724	1.353	.186

a. Dependent Variable: Capital Structure

In the above model summary, R-Square is 0.738 i.e. 73.8% which is highly significant. This means movement in Dependent Variable is properly explained by Independent Variables. Therefore, Regression Model is best fitted for this study.

The Growth and Business Risk in the above regression table are excluded as these variables have highly significant correlation among each other. So this implies that there is a Multi-Collinearity Effect.

Below is the regression equation of Leverage on selected determinants:

$$\text{Leverage} = 0.130 + ((-0.720) * \text{ROA}) + ((-5.269) * \text{NIM}) + ((-0.249) * \text{CBT}) + (0.003 * \text{Size}) + ((-0.004) * \text{Asset Quality}) + (2.994 * \text{Tangibility}) + (0.042 * \text{Tobin's Q}) + (0.361 * \text{Operating Efficiency}).$$

Hypothesis	Name Of Variable	P-value	Null Hypothesis
H01	Profitability (ROA)	.190	Accept
H02	Profitability (NIM)	.000	Reject
H03	Liquidity	.403	Accept
H04	Size	.462	Accept
H07	Asset Quality	.396	Accept
H08	Tangibility	.081	Accept
H09	Tobin's Q	.000	Reject
H010	Operating Efficiency	.186	Accept

**Conclusion:**

Though the banking sector is booming the scams in this sector are increasing due to which there is a need for policy-makers and management to put more efforts in maintaining an Optimal Capital Structure to protect the interest of stakeholders, because these scams can hamper the growth and existence of various banks in India.

- Through Regression Analysis, it was found that only Profitability (NIM) and Tobin's Q with P-Value 0.000 have significant impact at 5% level of Significance on the Capital Structure of the Listed Banks in India. Whereas the other Variables do not have significant impact on the Capital Structure of Listed Commercial Banks in India.
- However, the two determinants Growth and Business Risk in the regression analysis were excluded as these variables have highly significant correlation among each other. So this implies that there is a Multi-Collinearity Effect.
- The R-Square in the Regression Analysis is 0.738 i.e. 73.8% which is highly significant. This means movement in Dependent Variable is properly explained by Independent Variables. Therefore, Regression Model is best fitted for this study.
- After Regression, Correlation Analysis was done. In Correlation Analysis it was found that only one determinant i.e. Tobin's Q has a Highly Significant Positive Correlation having P-Value of 0.000 with the Capital Structure of the Listed Commercial banks in India. This means Tobin's Q contributes highly to the Capital Structure.

→ To conclude with, this study considered only the banking sector. Hence, there is a scope for further research to be undertaken for each service sector separately.

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### **3. Assessing Bankruptcy probability of listed real estate firms of India**

- Ms. Priya Kanjan

## **Abstract**

Purpose –

The purpose of the study is to analyze the Altman Z score model and to determine the bankruptcy probability of listed real estate companies of India. This model is vital for both the organization and the investor. Z score will help to evaluate creditability of firm. This paper will deal into five ratios with 131 real estate companies to emphasize the prediction of bankruptcy in India.

*Design/ methodology/ approach –*

The data use an ANOVA model to know the significance difference between the Z score of the company and the Size of the company.

Keywords: Altman Z score, Bankruptcy, Safe Zone, grey zone, Green zone

## **Introduction:**

The real estate sector is one of the most globally recognized sectors. Real estate sector comprises four sub sectors - housing, retail, hospitality, and commercial. The growth of this sector is well complemented by the growth of the corporate environment and the demand for office space as well as urban and semi-urban accommodations Real estate sector in India is expected to reach a market size of US\$ US\$ 1 trillion by 2030 from US\$ 120 billion in 2017 and contribute 13 per cent of the country's GDP by 2025. Real estate sector in India is expected to reach a market size of US\$ US\$ 1 trillion by 2030 from US\$ 120 billion in 2017 and contribute 13 per cent of the country's GDP by 2025.

Bankruptcy has become one of the most critical issues in the corporate finance world today. Professor Edward Altman developed the Altman Z-score formula in 1967. The Altman's Z-score function is an equation resulted from computation of Multivariate Discrimination Analysis (MDA). Altman considered many ratios and developed the following models for predicting bankruptcy:

### **Altman Z-score (for private non-manufacturing firm):**

$$Z\text{-score} = 6.56T_1 + 3.26T_2 + 6.72T_3 + 1.05T_4$$

where,  $T_1 = \text{Working Capital} / \text{Total Assets}$

$T_2 = \text{Retained Earnings} / \text{Total Assets}$

$T_3 = \text{Earnings before Interest and Taxes} / \text{Total Assets}$

$T_4 = \text{Equity} / \text{Total Liabilities}$  Zones of Discrimination

*Z- Score levels:*

- 1.1 or less – “Distress” Zone
- 1.1 to 2.6 – “Grey” Zone

- 2.6 or more – “Safe” Zone

**Altman Z-score (for private manufacturing firm):**

$$Z\text{-score} = 0.717T1 + 0.847T2 + 3.107T3 + 0.42T4 + 0.998T5$$

where, T1 = Working Capital / Total Assets

T2 = Retained Earnings / Total Assets

T3 = Earnings before Interest and Taxes / Total Assets

T4 = Equity / Total Liabilities

T5 = Sales / Total Assets

*Z- Score levels:*

- 1.23 or less – “Distress” Zone
- 1.23 to 2.9 – “Grey” Zone
- 2.9 or more – “Safe” Zone

**Altman Z-score (for public manufacturing firms):**

$$Z = 1.2T1 + 1.4T2 + 3.3T3 + 0.6T4 + 1T5$$

Where, T1 = Working Capital / Total Assets

T2 = Retained Earnings / Total Assets

T3 = Earnings Before Interest and Taxes / Total Assets

T4 = Market Value of Equity / Book Value of Total Liabilities

T5 = Sales/ Total Assets

*Z- Score levels:*

- > 2.99 - 'Safe' Zones
- 1.81 < Z < 2.99 - 'Grey' Zones
- Z < 1.81 - 'Distress' Zones

**Review of Literature:**

Most of the organizations exist with an objective of profit maximization. To achieve profit maximization objective, firm needs strong internal & external support. The failure of internal support system such as effective utilization of funds, labor, material etc. & external support system such as economic, political & socio-cultural conditions results in Bankruptcy of the organization. Bankruptcy is a situation where the firm’s total liabilities exceed total assets. The real net worth of the firm is, therefore negative. This leads to reduced sales, increased cost & losses, ineffective competition etc. Ultimately firm will be under distress stage. Under such situations it becomes difficult for investors & lenders to analyze the financial performance of the organization.

Several bankruptcy models for example, logit analysis, recursive partitioning algorithm and neural networks are available but still Altman’s model is considered to be superior and pervasively

applied by researchers all over the world in the present days. Altman's Z-Score Model is the output of a credit-strength test that predicts company's likelihood of bankruptcy.

This study intends to estimate likelihood of Bankruptcy of selected firms by applying Altman's Z-Score Model Edward Altman Finance Professor of the Leonard N. Stern School of Business of New York University has developed the Financial Model in 1967 to predict the likelihood of bankruptcy of the company which is named as Altman's Z-Score Model. Later, in 2012 he released an updated version called the Altman's Z-Score plus Model that can be used to evaluate both manufacturing & non-manufacturing firms & public & private companies in both U.S & non-U.S companies. The investors can use this model to determine whether to buy or sell a particular stock if they are concerned about the financial strength of the organization. The Altman Z-score Plus can be used to evaluate corporate credit risk. Altman added a statistical technique called multivariate analysis to the mix of traditional ratio analysis techniques, and this allowed him to consider not only the effects of several ratios on the "predictiveness" of his bankruptcy model, but to consider how those ratios affected each other's usefulness in the model.

### **Research Methodology:**

#### *Research Problem:*

The real estate market is not any different as a form of investment; it has its risks, its highs and lows. To invest in real estate is a scary idea for most people who are yet to make the leap of grasping the real estate market potential.

#### *Objectives:*

- To study the conceptual framework of Altman Z score
- To find out the probability of failure of selected companies by using Altman's Z-score model.
- To examine the financial health and predict the distress of the real sector of India.
- To calculate the bankruptcy of all the listed companies of real estate companies.

#### *Sampling Size:*

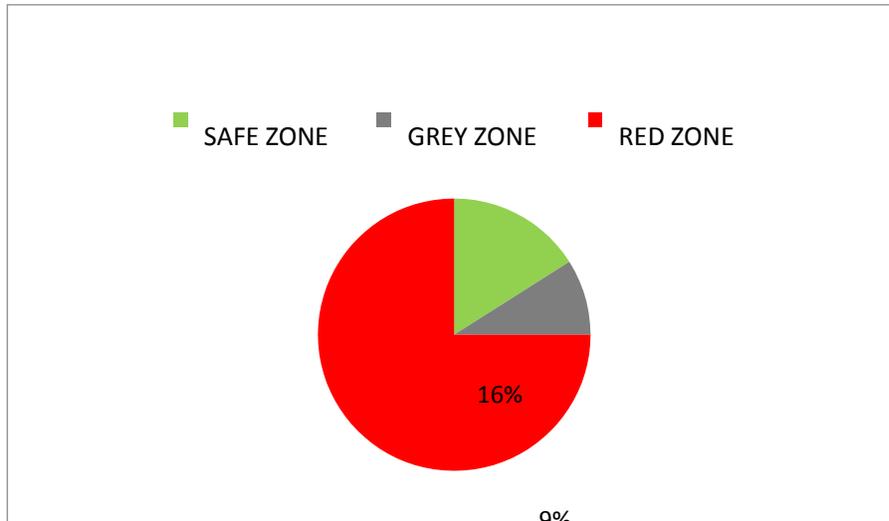
131 companies listed real estate companies were selected for the purpose of study.

#### *Hypothesis:*

(H0) There is no significant difference between Z score and Size of a company

(H1) There is significant difference between Z score and Size of a company.

### **Data Interpretation:**



- Out of 131 companies there are 22 companies under Green zone i.e there z-score value is higher than 2.99
- Out of 131 companies 9 companies are under Grey Zone with the z score between 1.8 to 2.99
- Rest of the 100 companies are in a danger zone with the z score less than 1.8
- Size of the company is calculated on the basis of average total assets.
- Companies are being categorized into large, medium, small with the help of median spilt.

The following table shows the Anova output to test significance difference in z score of companies based on size:

Z\_score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	112375.242	2	56187.621	3.638	.027
Within Groups	22208044.33	1438	15443.703		
Total	22320419.57	1440			

As P-value is less than 0.05, null hypothesis is rejected and therefore there exist a significant difference in z score of real estate companies based on size of the firm.

Z\_score

Size	Mean	N	Std. Deviation
Large	18.7245	583	194.10802
Medium	1.2285	385	7.45841
Small	.3518	473	23.38562
Total	8.0193	1441	124.50017

The above table shows that large firms are more likely to have a higher score as the size matter in the real estate sector whereas the small scale firms are not able to generate the good score.

### **Findings:**

- Majority of the companies in real estate sector are in danger zone as there Altman Z-score is very less
- There exists a significant difference in Z score of listed real estate firms based on its size.
- Larger firms are financially healthier than small firms as the Z-score of large firms is significantly higher than small scale firms.

### **Conclusion:**

The prediction of failure of business is useful for financial managers, investors, and other financial statement users. This paper recommended that all the variables should be positive in order to have a higher Z-score. As a result, the companies will be saved from the financial distress. The investors should invest in the green zone companies are considered 'Safe' based on the financial figures. They should be conscious to invest in the red zone companies as these companies have a good chance of going bankrupt within the next 2 years of operations.

The present study found that the real estate industry in India is not in financial satisfactory position. Though the sample industry has fall on green zone but 76.33% companies of sample industry has fall on distress zone, 6.9% companies of sample industry has fall on grey zone and the rest has fall on save. Again the average Z-score shows that the real estate in a red zone, i.e in Distress zone.

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#### **4. Impact of Off-Balance sheet Activities on Listed Indian Banks**

- Ms. Yashoda Chawla

##### **Abstract**

##### *Purpose –*

The purpose of this paper is to investigate the relationship between off-balance sheet items and the profitability of Indian banking sector. Off-balance sheet items include Guarantees in India, Partly paid investment, FEC, Acceptance & Endorsement, Derivatives, Guarantees outside India. And the profitability is being measured with the help of ratios like ROA, NIM, NNPA the time span I have taken for this study is 10 years that means from 2009 to 2018.

*Design/ methodology/ approach –* In this research some of the off balance sheet items like guarantees in India , outside India , partly paid investments, derivative contract, forward exchange contract, acceptance and endorsement have been studied and with the help of correlation and

regression impact of these off-balance sheet items have been studied on the profitability of Indian listed banks. For profitability analysis 3 ratios i.e. Return on Asset, Net interest Margin and Net profit ratio has been considered for the purpose of study.

**Keywords:** Indian listed banks, Off balance sheet activities, Derivatives, Forward Exchange Contract, Guarantees in India and outside India, Partly Paid Investment Acceptance & Endorsement, Profitability, Ratios, ROA, NIM, NPA.

## **Introduction**

The 'off-balance sheet' (hereafter OBS) description denotes that the activities involve contingent commitments or contracts which generate income to a bank, but are normally not captured as assets or liabilities under conventional accounting procedure. Contingent items may be recorded in a bank's accounts as 'notes to balance sheet', 'contingent commitment banking', 'asset less banking' or even 'invisible banking'.

The commercial banking industry has changed dramatically over the past twenty years, and one notable change is in the composition of bank businesses and product lines towards non-interest income activities such as off balance sheet activities. As a result the structure of the balance sheet of commercial banks has experienced changes with the introduction of off-balance sheet activities.

Off-balance sheet activities refer to banking products and practices not related to traditional forms of portfolio lending. Off-balance sheet activities are contingent commitments or contracts which generate income to a bank, but are not captured as assets or liabilities under conventional accounting procedure (Nachane and Ghosh 2002). These items are recorded in a bank's accounts as notes to balance sheet. Off-balance sheet activities of commercial banks include guarantees, commitments, market-related activities (financial derivatives), and advisory or management functions. OBS activities include issuing various types of guarantees, like letters of credit, which often have a strong insurance underwriting element, and making future commitments to lend. Both services generate additional fee income for banks. OBS activities also involve engaging in derivatives transactions, such as futures, forwards, options, and swaps. A loan commitment is a contractual commitment to loan a certain maximum amount to a borrower at a given interest rate over some period in the future. Letter of credit is a guarantee that banks sell to underwrite the future performance of the buyers of guarantees. A commercial letter of credit is used mainly to assist a firm in domestic and international trade. The bank's role is to provide a formal guarantee that it will pay for the goods shipped or sold if the buyers of the goods default on its future payments. Standby letters of credit cover contingencies that are potentially more severe, less predictable or frequent, and not necessarily trade related. Loans sold are loans that banks originate and then sell to other investors that (in some cases) can be returned to the originating institution in the future if the credit quality of the loans deteriorates. Derivatives are a position taken in the form of swaps, options, futures, and forwards contracts by the banks for hedging and trading purposes.

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time.

## **Literature Review**

Swain & Panda in a paper titled *Off Balance Sheet Exposure of Public Sector Banks in India: An Empirical Analysis* studied the off-balance sheet activities of banks. Off-balance sheet activities play an important role in helping the banks to hedge their long-term financial assets in the on-balance sheet and increasing the bank's profitability. These are the fee based incomes of banks having no or a little investment. This enables the banks to extend their leverage against their capital adequacy requirements and maximize the return on invested capital. Off balance sheet activities are an intriguing part of the financial statements. Presented as footnotes to accounts, these contingent items have an important economic impact that affects the future rather than the current shape of an institution. Off-balance sheet activities also help to improve the commercial banks' scope of operations, and diversification of product lines and earnings. The business of financial intermediaries has witnessed a large increase in the use of off balance sheet activities during the last 40 years. This growth that have come as a response to the need of corporate and firms for different types of guarantees did have a conflicting impact on financial stability and bank soundness. This study is designed to investigate the OBS exposure of Indian banks. This study describes empirically the role of OBS in profitability of Indian banking sector. Besides that the various determinants of off balance sheet activities like CRAR, NNPA, NIM, LT and ROA considered and empirically how these are related to Off balance sheet activities of scheduled commercial banks in India by analysing data from 2005-06 to 2014-15

Perceive et.al. in a paper titled 'The Impact of Off-Balance Sheet Items on the Profitability Of Croatian Banking Sector' has shown how Off-balance sheet items present the potential bank obligations which can significantly effect on bank financial position and profitability as well as the cash flows in case of the settlement. According to the regulations of Croatian National Bank, banks in Croatia are obligated to evaluate the credit risk for created off-balance sheet items in order to make provisions which are recorded as an expense and obligations in accounting records and therefore presented in bank financial statements. Although, the contracted value of off-balance sheet items are recorded in off-balance sheet records, the provisions for identified and unidentified losses on those off-balance sheet items are actually income statement item and thus can seriously effect on bank profitability. Provisions for identified losses on bank off-balance sheet items are formed based on the classification of certain off-balance sheet item into risk groups defined by the Croatian National Bank. The more riskier the off-balance sheet items is, the more provisions must be calculated on this item and therefore the more expenses must be recorded in accounting records and presented in income statement. The primary objective of this research is to determine the

intensity of the relationship between off-balance sheet items and the profitability of Croatian banking sector and to identify the significance of provisions on the profitability of Croatian banking sector. The research includes the period from 2010 to 2012, because in this period the new methodology for the preparation of aggregate financial statements is applied by the Croatian National Bank. Moreover, the objective of this paper is to identify the structure of off-balance sheet items in Croatian banking sector and the circulation of these items in the period from 2010 to 2012.

## Research Methodology

Research Problem: in India rare researches are done based on all listed Indian banks and on so large data I have taken the data of past ten years and major reflected ratios to analysis the profitability of Indian listed banks there can be other off balance sheet items which can also be considered to carry out another research.

### *Objectives of Research*

- To Study about off balance sheet activities of listed banks
- To Study profitability of listed Indian banks based on various ratios.
- To know the impact of off-balance sheet items on profitability of listed banks.

### *Sampling profile:*

Au Small Finance	Federal
Axis	Jammun & Kashmir
Bandhan	Karnataka Bank
City Union Bank	Lakshmi Vilas Bank
Development Credit Bank	The South Indian Bank
Dhanlaxmi Bank	Yes Bank
Hdfc	Allahabad
Icici	Andhra Bank
Idfc	Bank Of Baroda
Indusind	Bank Of India

Karur Vysya	Bank Of Maharashtra
Kotak Mahindra Bank	Canara
Ratnakar Bank	Central Bank
Standard Chartered	Corporation
Dena Bank	Idbi
Syndicate Bank	Indian Bank
Union Boi	Indian Overseas
United Bank Of India	Oreintal Bank Of Commerce
Vijaya	Pns
Sbi	Pnb

*Defining Variables:*

1. Gaurantees in India-

A bank guarantee is a type of guarantee from a lending institution. The bank guarantee means a lending institution ensures that the liabilities of a debtor will be met. In other words, if the debtor fails to settle a debt, the bank will cover it. A bank guarantee enables the customer, or debtor, to acquire goods, buy equipment or draw down a loan in India.

2. Guarantees outside India-

A bank guarantee is when a lending institution promises to cover a loss if a borrower defaults on a loan. The guarantee lets a company buy what it otherwise could not, helping business growth and promoting entrepreneurial activity outside India.

3. Liability for partly paid investment

4. Forward exchange contract-

A forward exchange contract is a special type of foreign currency transaction. Forward contracts are agreements between two parties to exchange two designated currencies at a specific time in the future. These contracts always take place on a date after the date that the spot contract settles and are used to protect the buyer from fluctuations in currency prices.

5. Acceptances and endorsements-

A bank endorsement is an endorsement by a bank for a negotiable instrument, such as a banker's acceptance or time draft. This assures any counterparty that the bank will stand behind the obligations of the creator of the instrument.

6. Derivatives contract-

A derivative is a contract between two or more parties whose value is based on an agreed-upon underlying financial asset (like a security) or set of assets (like an index). Common underlying instruments include bonds, commodities, currencies, interest rates, market indexes and stocks

The ratios I have taken to measure the profitability of listed Indian banks are

- ROA - Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage.

Formula:

$ROA = \frac{\text{Net Income}}{\text{Total Asset}}$
--

- NIM- Net interest margin is a ratio that measures how successful a firm is at investing its funds in comparison to its expenses on the same investments. A negative value denotes that the firm has not made an optimal investment decision because interest expenses exceed the amount of returns generated by investments.

Formula:-

$\text{Net Interest Margin} = \frac{(\text{Investment Returns} - \text{Interest expenses})}{\text{Average Earning Asset}}$
--

- Net NPA- A nonperforming asset (NPA) refers to a classification for loans or advances that are in default or are in arrears on scheduled payments of principal or interest. In most cases, debt is classified as nonperforming when loan payments have not been made for a period of 90 days. While 90 days of nonpayment is the standard, the amount of elapsed time may be shorter or longer depending on the terms and conditions of each loan.

*Hypotheses Formulation:*

The following null hypothesis has been formulated:

H0:- There is no significant Impact of off balance sheet activities on profitability of listed banks.

H1:- There is significant impact of off balance sheet activities on profitability of listed banks.

**Data Analysis and Interpretation**

Correlations									
	RO	NI	NN	GAURA	invest	FE	Accep	Deriv	GO

		A	M	PA	NTEES	ments	C	tance	atives	UTI
ROA	Pearson Correlation	1	-.495**	-.181	.034	-.014	-.073	-.116	-.033	-.060
	Sig. (2-tailed)		.001	.263	.836	.932	.656	.474	.840	.713
	N	40	40	40	40	40	40	40	40	40
NIM	Pearson Correlation	-.495**	1	-.304	-.049	.142	.274	.046	.376*	.044
	Sig. (2-tailed)	.001		.056	.764	.382	.087	.776	.017	.789
	N	40	40	40	40	40	40	40	40	40
NNP A	Pearson Correlation	-.181	-.304	1	.119	-.146	-.082	.322*	-.232	.089
	Sig. (2-tailed)	.263	.056		.463	.367	.613	.043	.150	.587
	N	40	40	40	40	40	40	40	40	40
GAURANTEES	Pearson Correlation	.034	-.049	.119	1	-.062	.384*	.304	.026	.649**
	Sig. (2-tailed)	.836	.764	.463		.702	.014	.057	.876	.000
	N	40	40	40	40	40	40	40	40	40
Investments	Pearson Correlation	-.014	.142	-.146	-.062	1	-.061	-.117	-.032	-.020
	Sig. (2-tailed)	.932	.382	.367	.702		.708	.473	.844	.905
	N	40	40	40	40	40	40	40	40	40
FEC	Pearson Correlation	-.073	.274	-.304	.384*	-.061	1	.502**	.520**	.644**
	Sig. (2-tailed)	.656	.087	.613	.014	.708		.001	.001	.000
	N	40	40	40	40	40	40	40	40	40
Acceptance	Pearson Correlation	-.116	.046	.322*	.304	-.117	.502**	1	.128	.206
	N	40	40	40	40	40	40	40	40	40

	Sig. (2-tailed)	.474	.776	.043	.057	.473	.001		.433	.203
	N	40	40	40	40	40	40	40	40	40
Derivatives	Pearson Correlation	-.033	.376*	-.232	.026	-.032	.520**	.128	1	.006
	Sig. (2-tailed)	.840	.017	.150	.876	.844	.001	.433		.972
	N	40	40	40	40	40	40	40	40	40
GOU TI	Pearson Correlation	-.060	.044	.089	.649**	-.020	.644**	.206	.006	1
	Sig. (2-tailed)	.713	.789	.587	.000	.905	.000	.203	.972	
	N	40	40	40	40	40	40	40	40	40
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

### Interpretation:-

- **Return On Asset:-** In the above correlation table it is observed that guarantees in India has positive insignificant relation with ROA.
- **Return On Asset:-** In the above correlation table it is observed that Investment in India has positive insignificant relation with ROA.
- **Return On Asset:-** In the above correlation table it is observed that Forward exchange contract has positive insignificant relation with ROA.
- **Return On Asset:-** In the above correlation table it is observed that acceptance and endorsement has positive insignificant relation with ROA.
- **Return On Asset:-** In the above correlation table it is observed that Derivatives contract has positive insignificant relation with ROA.
- **Return On Asset:-** In the above correlation table it is observed that Guarantees outside India has positive insignificant relation with ROA.
- **Net Interest Margin:-** In the above correlation table it is observed that guarantees in India has positive insignificant relation with NIM.
- **Net Interest Margin:-** In the above correlation table it is observed that Investment in India has positive insignificant relation with NIM
- **Net Interest Margin:-** In the above correlation table it is observed that Forward exchange contract has positive insignificant relation with NIM.

- **Net Interest Margin:-** In the above correlation table it is observed that acceptance and endorsement has positive insignificant relation with NIM.
- **Net Interest Margin:-**In the above correlation table it is observed that Derivatives contract has positive significant relation with NIM
- **Net Interest Margin:-** In the above correlation table it is observed that Guarantees outside India has positive insignificant relation with NIM.
- **Net Non Performing Asset:-** In the above correlation table it is observed that guarantees in India has positive insignificant relation with NNPA.
- **Net Non Performing Asset:-** In the above correlation table it is observed that Investment in India has positive insignificant relation with NNPA
- **Net Non Performing Asset:-** In the above correlation table it is observed that Forward exchange contract has positive insignificant relation with NNPA.
- **Net Non Performing Asset:-** In the above correlation table it is observed that acceptance and endorsement has positive significant relation with NNPA.
- **Net Non Performing Asset:-**In the above correlation table it is observed that Derivatives contract has positive insignificant relation with NNPA
- **Net Non Performing Asset:-** In the above correlation table it is observed that Guarantees outside India has positive insignificant relation with NNPA

#### Regression analysis with ROA

Variables	Alpha	Beta	Significance	Hypothesis Accept or Reject	
				H0	H1
Guarantees in India	0.190636	0.033790	0.836018	Accept	Reject
Partly paid investment	0.208955	-0.013952	0.931907	Accept	Reject
FEC	0.242058	-0.072660	0.655917	Accept	Reject
Acceptance &Endorsement	0.282768	-0.116467	0.474187	Accept	Reject
Derivatives	0.212226	-0.032950	0.840041	Accept	Reject
Guarantees outside India	0.224412	-0.060052	0.712805	Accept	Reject

**Interpretation:-** The above table shows the output of regression analysis. It shows that there is no significant impact of off balance sheet activities on ROA. As P value of all the off balance sheet

like guarantees in India , partly paid investment, acceptance and endorsement, derivative contract and guarantees outside India has P value more than 0.05 so we accept the null hypothesis that there is no significant impact of these off-balance sheet items on ROA of the banks.

### Regression analysis with NIM

Variables	Alpha	Beta	significance	Hypothesis	
				Accept or Reject	
				H0	H1
Guarantees in India	0.024048	-0.049080	0.763607	Accept	Reject
Partly paid investment	0.023700	0.141967	0.382203	Accept	Reject
FEC	0.022807	0.274253	0.086798	Accept	Reject
Acceptance & Endorsement	0.023619	0.046434	0.776015	Accept	Reject
Derivatives	0.023383	0.376449	0.016657	Reject	Accept
Guarantees outside India	0.023758	0.043574	0.789491	Accept	Reject

**Interpretation:** - The above table shows the output of regression analysis. It shows that there is significant impact of Derivatives on NIM. As P value is less than 0.05 so null hypothesis is rejected and alternate hypothesis is accepted and rest all the off balance sheet like guarantees in India, partly paid investment, acceptance and endorsement, and guarantees outside India has P value more than 0.05 so we accept the null hypothesis that there is no significant impact of these off-balance sheet items on NIM of the banks.

### Regression analysis with NNPA

Variables	Alpha	Beta	Significance	Hypothesis	
				H0	H1
Guarantees in India	2.225688	0.119428	0.462940	Accept	Reject
Partly paid investment	2.378147	-0.146414	0.367317	Accept	Reject

FEC	2.415392	-0.082465	0.612940	Accept	Reject
Acceptance & Endorsement	1.931371	0.321538	0.043054	Reject	Accept
Derivatives	2.409735	-0.232058	0.149620	Accept	Reject
Guarantees outside India	2.288068	0.088580	0.586762	Accept	Reject

**Interpretation:** - The above table shows the output of regression analysis. It shows that there is significant impact of acceptances and endorsement on NNPA. As P value is less than 0.05 so null hypothesis is rejected and alternate hypothesis is accepted and rest all the off balance sheet like guarantees in India, partly paid investment, derivative contract, and guarantees outside India has P value more than 0.05 so we accept the null hypothesis that there is no significant impact of these off-balance sheet items on NNPA of the banks.

### **Conclusion:**

The purpose of this paper is to investigate the relationship between off-balance sheet items and the profitability of Indian banking sector. Off-balance sheet items include Guarantees in India, Partly paid investment, FEC, Acceptance & Endorsement, Derivatives, and Guarantees outside India. And the profitability is being measured with the help of ratios like ROA, NIM, NNPA the time span I have taken for this study is 10years that means from 2009 to 2018.

With the above table the major findings from this study is that Derivative contract which is one of the off-balance sheet item have major impact on Net interest Margin of the banks. Derivative is a contract where we can hedge the risk and can have huge profit. If more investments done in derivatives than NIM is also high. It has direct relationship with each other.

The another major findings we can see that there is significant impact of acceptances and endorsement on net non-performing asset. So with above I conclude that Derivatives and acceptance and endorsement has major impact on net interest margin and net non performing assets rest of the off balance sheet items like guarantees in India and outside India, liability to partly paid investment, forward exchange contract do not have any significant impact on profitability of Indian banking sector.

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## 5. Evaluating Efficiency of Selected Private and Public Banks in India- Using DEA

- Aarti Nagdev

### Abstract

#### *Purpose –*

The purpose of this study is to evaluate the efficiency of selected Private & Public Bank in India. The analysis of the efficiency of banks has importance for management. Efficiency is the basis of outstanding growth of the banks that preserve the current and the future value of the bank and lead to economies of scale.

#### *Design/ methodology/ approach –*

The study uses Data Envelopment Analysis (DEA) Model to compute the efficiency of Private & Public Banks. The analysis is conducted using 5 input and 5 output variables i.e. Deposits, Labor Expenses, and Total Debt as inputs and Operating Profit, Loans, Profit after Tax and Net Interest Income as outputs on top10 Public & top 10 Private Banks in India for the period of 5 years from 2013-2014 to 2018-2019.

Further this study also analyses which banking sector is performing good by using DEA Model.

**Keywords:** Efficiency, DEA, Profit, Income, Net Interest Income.

### Introduction

The progression of an economy is significantly dependent upon deployment as well as optimum utilization of resources and most importantly operational efficiency of the various sectors, of which banking sector plays a very vital role. Banking sector helps in stimulation of capital formation, innovation and monetization in addition to facilitation of monetary policy. It is imperative to carefully evaluate and analyses the efficiency of banks to ensure a healthy financial system and an efficient economy. The present study attempts to evaluate the efficiency of public and private sector banks in India using DEA approach for a five year period from 2014-2018.

The DEA model is one of the most widely-used frameworks for bank efficiency evaluation. The DEA methodology provides a broader view of bank performance than single ratios such as return on equity, particularly as it takes account of both profitability and risk factors in representing bank performance. In the present study, an attempt has been made to check the efficiency of the various banks operating in India.

### **Literature Review**

The Impact of Bank Characteristics on the Efficiency: Evidence from MENA Islamic Banks

**Author:** Mustapha Ben Hassine and Ratiba Limani

This study aims at analyzing the efficiency Islamic banks by using the non-parametric data envelopment analysis (DEA), to estimate five efficiency scores for each bank, and to study the impact of the banking characteristics on efficiency scores. Based on a sample of Islamic banks in the MENA region over the period 2005-2009, we have shown that the dominant source of overall inefficiency of these banks is organizational (technical inefficiency) rather than regulatory (allocative inefficiency). Through a panel methodology, we also demonstrated that internal factors of Islamic banks contribute significantly to the evolution of the economic efficiency of MENA Islamic banks.

### **Output**

The rapid evolution of the concept of Islamic finance as an alternative to conventional finance has made the Islamic banking a subject of several studies and researches. In this respect, the analysis of changes in levels of efficiency of Islamic banks was an issue that has attracted the attention of many researchers in the field. Under this notion of efficiency, this article has tried to provide an empirical analysis to estimate efficiency of 21 Islamic banks operating in the MENA region over the period 2005 2009.

Impact of Size and Ownership Structure on Efficiency of Commercial Banks in Tanzania:  
Stochastic Frontier Analysis

This study focuses on the efficiency of commercial banks based on the stochastic of minimize cost and or maximize revenue analysis by comparing 21 commercial banks based on the size and ownership structure of the banks for the period 2003 to 2012. The study differentiates performance of the large and small banks, local and foreign banks, and private and government owned banks. The results of the study prove that large banks, foreign banks and government banks are more revenue efficient than small banks, local banks and private banks, but that small banks, foreign banks and private banks are more cost inefficient than large banks, local banks and government banks.

#### Output:

The results of the study, in general, show that commercial banks are more cost efficient than revenue efficient, and that the large banks are more cost and revenue efficient than the small banks. According to the structure of the banks, the study proves that local banks are more cost efficient than foreign banks, whereas foreign banks are more revenue efficient

### **Research Methodology**

#### Research Problem:

The smooth and efficient operation of banking sector helps to reduce the risk of failure of an economy. Therefore, the performance of banking sector has always been a source of interest to judge the economic condition of a country. Rating of the banks is not an easy task, thus a proper procedure of DAE model needs to be followed. It will help to understand the efficiency of the banks.

#### Objectives of Research

- 1) To evaluate the efficiency of selected banks on the basis of variables.
- 2) To determine if there is any significant difference between efficiency of selected public and private banks.
- 3) To study the impact of various input variables on various output variables.
- 4) To provide necessary suggestion for improvement in technical efficiency of banks.

#### Sampling

Judgmental sampling is a non-probability sampling technique where the researcher selects the units based on their knowledge and professional judgment. Top 10 Private & Public Banks are selected on the basis of market caps of the banks which will indicate the strength of selected banks. Data is taken for 5 consecutive year's i.e., 2013-2014 to 2018-2019.

TOP 10 PRIVATE BANK	TOP 10 PUBLIC BANK
State Bank of India	HDFC
Bank of Baroda	Kotak Mahindra
Punjab National bank	ICICI bank
Canara bank	Axis bank
Bank of India	Yes bank
IDBI Bank	Indusind Bank
Indian bank	Bandhan Bank
Union Bank	IDFC Bank
Central bank	Federal Bank
Corporation bank	City union bank

### Defining Variables:

INPUTS & OUTPUTS		
Variables	Variables names	Description
<b>Inputs</b>		
X1	DEPOSITS	Total Deposits With Bank
X2	LABOUR EXPENSES	Total expenditures on employees.
X3	TOTAL DEBT	Total of short-term and long-term loans to customers and other banks
X4	DEPOSITS	Total Deposits With Bank
X5	DEPOSITS	Total Deposits With Bank
<b>Outputs</b>		
Y1	OPERATING PROFIT	a profit from business operations before deduction of interest and taxes.
Y2	LOANS	All the advances given by the bank
Y3	PROFIT BEFORE TAX	profits before the company has to pay corporate income tax.
Y4	LOANS	All the advances given by the bank
Y5	NET INTREST INCOME	difference between the revenue and the expenses

### Hypotheses Formulation:

The following null hypothesis has been formulated:

H01: Public Bank are not efficient

Ha1: Public Bank are efficient.

H02: Private bank are not efficient

Ha2: Private bank are efficient.

## Data Analysis and Interpretation

### Analysis of Efficiency of Private Banks using DEA

INPUTS					OUTPUT					WEIGHTS
LABOUR EXPENSES	TOTAL DEBT	DEPOSITS	DEPOSITS		OPERATING PROFIT	LOANS	PROFIT BEFORE TAX	LOANS	NET INTREST INCOME	
2126.2418	242931.3807	185256.9478	185256.9478		11542.7746	168173.3	5689.1425	168173.3108	21307.1576	1
6036.7342	612247.4808	528572.1238	528572.1238		10467.3592	387719.6	-319.4016	387719.5718	92720.5134	0
										EFFICIENCY

In order to assess the overall efficiency of Private Sector Banks in India, the DEA model has been used 5 inputs and 5 outputs has been taken i.e. Deposits, Labor Expenses, Total Debt as inputs and Operating Profit, Loans, Profit after Tax and Net Interest Income as outputs. The efficiency is calculated of the private sector banks in India for the period of 2014-2018 and results are presented in the above table .As per the DEA analysis the efficiency score is equal to 1 which means that private banks are efficient. It means Private Banks are efficient and thus the alternative hypothesis (Ha1) is accepted. it donates that private banks are efficient

### Analysis of Efficiency of Public Banks using DEA

INPUTS					OUTPUT					WEIGHTS
DEPOSITS	LABOUR EXPENSES	TOTAL DEBT	DEPOSITS	DEPOSITS	OPERATING PROFIT	LOANS	PROFIT BEFORE TAX	LOANS	NET INTREST INCOME	
185256.9478	2126.2418	242931.3807	185256.9478	185256.9478	11542.7746	168173.3108	5689.1425	168173.3108	21307.1576	4.118-17
528572.1238	6036.7342	612247.4808	528572.1238	528572.1238	10467.3592	387719.5718	-319.4016	387719.5718	92720.5134	1
										EFFICIENCY

In order to assess the overall efficiency of Public Sector Banks in India, the DEA model has been used 5 inputs and 5 outputs has been taken i.e. Deposits, Labour Expenses, Total Debt as inputs and Operating Profit, Loans, Profit after Tax and Net Interest Income as outputs. The efficiency is calculated of the public sector banks in India for the period of 2014-2018 and results are presented in the above table .As per the DEA analysis the efficiency score is equal to 1 which means that public banks are efficient. It means Public banks are efficient and thus the alternative hypothesis (Ha2) is accepted. it donates that public banks are efficient.

### Conclusion:

This paper aims to evaluating the efficiency of private and public banks using DEA model for 5 consecutive year's i.e., 2013-2014 to 2018-2019. To find out the difference the efficiency of private and public 5 input variables and 5 output variables are taken ( Deposits, Labor Expenses,

and Total Debt as inputs and Operating Profit, Loans, Profit after Tax and Net Interest Income as outputs)

Based on the empirical results, both public and private company are efficient. As per DEA analysis private banks are Efficient due to higher Operating Profits, Profit before Tax and lower Labor Expenses and Public banks are efficient due to higher number of Deposits, Loans and Net Interest Income.

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## **6. A Study on Investment Pattern of Working, Non- Working and Self Employed Women in Ulhasnagar.**

-Karishma Khushalani

### **Abstract**

An investment is an asset or item acquired with the goal of generating income or appreciation. In an economic sense, an investment is the purchase of goods that are not consumed today but are used in the future to create wealth. In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or will later be sold at a higher price for a profit.

This study is conducted to understand the importance given by women while choosing from various investment avenues. This study is limited to the respondents of Ulhasnagar which consists of 50 working women, 50 Non-Working women and 50 Self Employed Women. The study is limited to the Demographics Factors(Age, Educational Background And Qualification, Level Of Income, Marital Status, Family Type). Purpose For Investing(Assured Returns, Low Risk, Tax Benefits, Child's Education, Child's Marriage, Safety Of Investment, Speculation, Capital Gain, Retirement). Influential Factors (Investment Amount, Potential Risk, Potential Gain, Tax Advantage, Financial Knowledge, Suggestions By Friends/ Relatives, Liquidity, Perception, Past Experience, Information Through Internet, Ease Of Purchase, Tv Channels/ Newspapers). Investment options (Gold, Life Insurance, Fixed Deposits, Government Schemes, Post Office Schemes, Equities, Mutual Funds, Debentures, Derivatives, Chit Funds/VC's, SIP's)

The whole research study is based on preference of various investment avenues by different classes of women investors on the basis of working, non working and self employed. There are 5 demographic factors which shows an association with investment preference. The study shows majority of women tends to invest in gold, fixed deposits and life insurance. At the same time, background of women has association with gold and equities preference. There is also association of age and chit funds, income and equities. Where there is no association of other demographic factors with investment preferences.

## **INTRODUCTION**

In simple terms, Investment refers to purchase of financial assets. While Investment Goods are those goods, which are used for further production. Investment implies the production of new capital goods, plants and equipments. John Keynes refers investment as real investment and not financial investment. Investment is a conscious act of an individual or any entity that involves deployment of money (cash) in securities or assets issued by any financial institution with a view to obtain the target returns over a specified period of time.

Target returns on an investment include:

1. Increase in the value of the securities or asset, and/or
2. Regular income must be available from the securities or asset.

## **INVESTMENT AVENUES COMMON AMONG WOMEN AND FACTORS CONSIDERED**

**A. TRADITIONAL OPTIONS:** Gold, Life Insurance, Fixed Deposits, Government Schemes, Post Office Schemes, Chit funds.

**B. MODERN OPTIONS :** Equities, Mutual Funds, Debentures, Derivatives, SIP's.

## **FACTORS CONSIDERED:**

1. Demographics Factors(Age, Educational Background And Qualification, Level Of Income, Marital Status, Family Type)
2. Purpose For Investing(Assured Returns, Low Risk, Tax Benefits, Child's Education, Child's Marriage, Safety Of Investment, Speculation, Capital Gain, Retirement)

3. Influential Factors (Investment Amount, Potential Risk, Potential Gain, Tax Advantage, Financial Knowledge, Suggestions By Friends/ Relatives, Liquidity, Perception, Past Experience, Information Through Internet, Ease Of Purchase, Tv Channels/ Newspapers)
4. Investment options (Gold, Life Insurance, Fixed Deposits, Government Schemes, Post Office Schemes, Equities, Mutual Funds, Debentures, Derivatives, Chit Funds/VC's, SIP's)

## **LITERATURE REVIEW**

A. Effects of Investor Occupation and Education on Choice of Investment: An Empirical Study in India. AUTHOR: Kaushal A. Bhatt (Shri J. V. Institute of Management Studies, India Kinjal Bhatt (Shri S. VET Management College, India)

This paper will help to understand the investors facet before investing in any of the investment tools and thus to scrutinize the important aspects for the investors before investing that further helped in analyzing the relation between the features of the products and the investors' requirements. This paper also help to understand that there is different behavior among different classes of investors which have been bifurcated on the basis of investor's occupation and education level.

B. Perception of Investors towards the Investment Pattern on Different Investment Avenues - A Review. AUTHOR: Manikandan A Research Associate, School of Social Sciences and Languages, Department of Commerce, VIT University, Vellore, India

This research paper stated, In this fast affecting world, we keep extra money added risk directs to more profit. For the example total liquidity, income stability a variety as share, bank companies, gold and silver, real estate, life insurance postal etc. but most of the investors are to preferred bank deposit because more respondents invested for purchasing home and long-term growth but, most of the investors could not aware of investing their money in mutual funds. Therefore, mutual funds will give more compliment and awareness it will help to invest their money in the mutual funds and the capital market.

C. Investment Pattern of Government Employees - An Empirical Study. AUTHOR: *B.Thulasipriya*  
Assistant Professor, Department of e-Commerce, PSGR Krishnammal College for Women,  
Coimbatore, Tamilnadu, India.

This study shows that, Government employees within the age group of above 30 years and 50 years have high level of investment. Male employees have high level of investment. Government employees who are married have high level of investment. The employees having above 4 members as members of family have high level investment. The employees who have diploma qualification shows have high level of investment. High level of investment is found among the employees who are employed in postal department.

D. Individual Investors' Behaviour : In Demographical Backdrop. AUTHOR: Kiran Mehta and Renuka Sharma

This study shows the behaviour of taking long and short positions in the market when the price has reached the targeted level. From the findings of the current study, it can be generalized that the present study is descriptive in nature and destined to know the behavior of common individual investors in a specific region in India. The findings of the study have documented the following evidences. The primary motive of investment by a common investor in India is tax-saving. The middle age group investors are more risk takers than youngsters.

E. A STUDY OF INVESTMENT BEHAVIOUR. BASED ON DEMOGRAPHICS. AUTHOR: Mugdha Shailendra Kulkarni

The purpose of the study is to help the investment managers understand the context of their client (individual investor) better and thereby be better placed to help the clients make conscious positive change in their investments. This study attempts to find changes in investment decision with age, gender, income, education level, occupation, annual income, no of dependents.

## **RESEARCH METHODOLOGY**

### **A. RESEARCH PROBLEM:**

Indian financial scene too presents a plethora of avenues to the investors. Though certainly not the best or deepest of markets in the world, it has reasonable options for an ordinary man to invest his savings. One needs to invest to and earn return on your idle resources and generate a specified sum

of money for a specific goal in life and make a provision for an uncertain future One of the important reasons why one needs to invest wisely is to meet the cost of future or to meet future uncertainty. Considering this phenomenon, the statement of problem for this research would be “A study on Investment preferences of working, non- working and self employed women in Ulhasnagar.”

#### B. OBJECTIVES OF THE STUDY:

- ❖ To analyze the savings and investment decision.
- ❖ To detect the factors which have an impact on the investor's (women) decision.
- ❖ To identify the preferred investment options among women.
- ❖ To study the level of importance given by the respondents to various factors while considering investment preferences
- ❖ To identify the various socio-economic factors considered by investors while taking decisions on investment preferences.

#### C. DATA COLLECTION AND SAMPLING:

Data: Primary: The study is majorly based on primary data. As the data is to be collected on primary research basis. Whereas, a second hand information is used wherever needed. Questionnaire was distributed to 150 respondents using Google Forms. The research is based only in Ulhasnagar, India. The study is conducted on 50 working women, 50 non-working women, and 50 self employed women.

Sampling: Multi Stage sampling : 50 working women, 50 Non-Working women and 50 Self Employed Women.

#### D. Hypothesis:

**H<sub>01</sub>:** There is no association between Background and Investment Preference.

**H<sub>a1</sub>:** There is association between Background and Investment Preference.

**H<sub>02</sub>:** There is no association between Age and Investment Preference.

**H<sub>a2</sub>:** There is association between Age and Investment Preference.

**H<sub>03</sub>:** There is no association between Marital Status and Investment Preference.

**H<sub>a3</sub>:** There is association between Marital Status and Investment Preference.

**H<sub>04</sub>:** There is no association between Educational Qualification and Investment Preference.

**H<sub>a4</sub>:** There is association between Educational Qualification and Investment Preference.

**H<sub>05</sub>:** There is no association between Level of Income and Investment Preference.

**H<sub>a5</sub>:** There is association between Level of Income and Investment Preference.

**H<sub>06</sub>:** There is no association between Family Type and Investment Preference.

**H<sub>a6</sub>:** There is association between Family Type and Investment Preference.

## DATA ANALYSIS AND INTERPRETATION

The data collected is as follows

- The large number of women belongs to the age group of 18 to 25 years. The married ratio to unmarried is 97%. The majority of women belong to the graduate group. Whereas the highest population belongs to the 20000 to 30000 level of income.
- According to the Garrett's ranking the major purpose of investment decision is SAFETY OF INVESTMENT, followed by Assured return, Low Risk, Capital Gain etc. Speculation being the last is least important among women while considering their purposes for investment decision.
- According to the garrets ranking, investment amount is the highly important factor which has implication on women's investment decision. Potential risk and potential gain is also highly important. Whereas the information through internet and suggestions by friends/family are considered to be as the least important factor by women.
- According to the garrets ranking, women are highly preferring Fixed deposits, life insurance and gold, whereas equities, chit funds, debentures and derivatives are least preferred. Mutual funds, sip's and government schemes are considered to be neutral preference.
- According to the garrets ranking, tax benefits is considered highly important, wealth maximisation is considered important, liquidity is considered as neutral, higher return and low risk is considered as less important.

- Majority of women invest monthly and monitor their investment. The preferred way of getting information is company websites and financials and brokers. Majority of women tends to hold their investment for 1 to 4 years.
- Women with saving objective as safety of investment saves on regular basis so as to ensure low risk and safety of amount.
- 63% women that is 95 women states that they would like to go for modern investment trends, rather than traditional ones. Whereas, 37% women wants to continue with traditional investment avenues.
- The pearson Chi-square is 0.041 at 5% level of significance Therefore, null hypothesis is rejected and alternate hypothesis is accepted. There is an association between background and gold preference. Non working and self employed prefer gold as highly important than working women.
- The pearson Chi-square is 0.018 at 5% level of significance. Therefore, null hypothesis is Rejected and alternate hypothesis is Accepted. There is association between background and Equities. The earning women are preferring equities rather than the non working.
- The pearson Chi-square is 0.014 at 5% level of significance. Therefore, null hypothesis is REJECTED and alternate hypothesis is ACCEPTED. There is association between AGE AND CHIT FUNDS. Chit funds are considered as important investment avenue by all age groups but the women above 40 are preferring chitfunds as compared to the all other age groups.
- The Pearson Chi-square is 0.000 at 5% level of significance. Therefore, null hypothesis is REJECTED and alternate hypothesis is ACCEPTED. There is association between LEVEL OF INCOME AND EQUITIES. Women ranging in the monthly income group of 20000 to 30000 are preferring equities rather than the other income groups.
- The Pearson Chi-square is more than 0.05 at 5% level of significance. Therefore, null hypothesis is ACCEPTED and alternate hypothesis is REJECTED. There is no association between other demographics and investment preferences.

#### **FINDINGS AND CONCLUSION:**

- The whole research study is based on preference of various investment avenues by different classes of women investors on the basis of working, non working and self employed. There are 5 demographic factors which shows an association with investment preference. The

study shows majority of women tends to invest in gold, fixed deposits and life insurance.

This study shows the following:

- There is an association between background and gold preference, background and equities, age and chit funds, and level of income and equities.
- There is no association between other demographics and investment preferences.

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- [https://www.researchgate.net/publication/264356205\\_Investment\\_preferences\\_of\\_salaried\\_individuals\\_towards\\_financial\\_products](https://www.researchgate.net/publication/264356205_Investment_preferences_of_salaried_individuals_towards_financial_products)

## **7. A study on tax literacy & its impact on their investment decisions of salaried individuals in Ulhasnagar.**

- Rahul Wadhvani

### **Abstract:**

In personal financial planning, tax management plays a very important role. An individual should have thorough knowledge of various aspects of taxes and tax policies, which would help him to understand how much he can save even after paying taxes. Those people who have not taken any formal course on taxation finds it difficult to understand the issues related to determination of tax liability, tax filling and tax saving. Findings of the study suggest that overall tax literacy level of respondents is not very high. The results suggest that level of tax literacy varies significantly among respondents. Also tax literacy level gets affected by gender, age, education, income, nature of employment and place of work whereas it does not get affected by geographic region. Findings of this paper suggest that government should adopt more aggressive approaches to educate taxpayers, thereby raising the level of tax literacy among them.

### **Introduction:**

Taxes are levied by governments on their citizens to generate income for undertaking projects to boost the economy of the country and to raise the standard of living of its citizens. The authority of the government to levy tax in India is derived from the Constitution of India, which allocates the power to levy taxes to the Central and State governments. All taxes levied within India need to be backed by an accompanying law passed by the Parliament or the State Legislature.

Taxes in India are levied by the Central Government and the state governments. Some minor taxes are also levied by the local authorities such as the Municipality.

The payment of tax is beneficial on multiple levels including the development of nation, betterment of infrastructure, the up liftmen of the society, and even for welfare activities for the nation. Taxation, imposition of compulsory levies on individuals or entities by governments. Taxes are levied in almost every country of the world, primarily to raise revenue for government expenditures, although they serve other purposes as well.

Income tax refers to the tax you pay directly to the government depending on your income or profit. The money collected by direct tax route is used by the government for infrastructural development and also to pay employees of central and state government bodies.

In modern economies taxes are the most important source of governmental revenue. Taxes differ from other sources of revenue in that they are compulsory levies and are unrequited—i.e., they are generally not paid in exchange for some specific thing, such as a particular public service, the sale of public property, or the issuance of public debt. While taxes are presumably collected for the welfare of taxpayers as a whole, the individual taxpayer's liability is independent of any specific benefit received. Tax is imposing financial charges on individual or company by central government or state government. Collected Tax amount is used for building nation (infrastructure & other development), to increase arms and ammunition for defense of country and for other welfare related work. That's why it is said that "Taxes are paid nation are made".

Taxation, a word itself means an imposition; imposition of compulsory levies on individuals or entities by governments. Taxes are levied in almost every country of the world, primarily to raise revenue for government expenditures, although they serve other purposes as well.

### **Literature review:**

Financial literacy and its impact across various demographics have been widely studied in the developed economies. Olivia et al (2007) study corroborates that financial literacy is important for an individual to make appropriate short term and long term financial decisions. Young and old are less financially literate and individuals at the middle of life cycle are comparatively more financially literate. Also people have high financial literacy when they are working and vice versa & this is because literacy is provided by the employers at work place. There are four traditional approaches to financial education – employer based, school based, credit counselling and community based, all of these approaches have no clear results about their effectiveness (Gale and Levine, 2010). Post-mortem analysis of any financial crisis throws interesting insights into the level of financial literacy.

### **Research Methodology:**

**Research Problem:**

The extent of taxpayer knowledge can have a major impact on the degree of compliance with taxation rules and regulation. Low knowledge creates uncertainty about requirements of the tax regulation and can lead to high degree of involuntary non-compliance. This study highlighted the importance of taxation knowledge by measuring Ulhasnagar's tax payers' tax literacy rate taking into consideration the following criteria:

- 1) Individual ability to fill the tax return form independently,
- 2) Taxpayer's interest in learning about tax

To analyze the effect of income on the choice of investment instruments, questionnaires were used in this study to ascertain the tax literacy rate. The results indicate that among the respondents, professionals group has the highest percentage of tax literacy and the formers have the lowest percentage. Majority of the salaried paid for services for filling tax return forms and high rank officers are the highest among the group for not employing others for filling the tax forms. People of Ulhasnagar are unaware about ITR forms, they are not keen interested in saving tax, with a motive to increase their returns.

**Objectives of research:**

The main objective of this study is to analyze the tax literacy & culture of tax to be followed by the resident of Ulhasnagar. In order to achieve the main objective, the specific objectives are as follows:

- To determine the level of tax literacy among salaried individuals.
- To find out the relationship between tax literacy and selected various investment avenues.
- To examine the effect of age on Tax Planning.

**Research Hypothesis:**

1. Education & Literacy level

Null hypothesis: There is no association between education & tax literacy level of individual

Alternate Hypothesis: There is association between education & tax literacy level of individual

2. Age & Literacy level

Null hypothesis: There is no association between age & tax literacy level of individual level

Alternate Hypothesis: There is an association between age & tax literacy level of individual

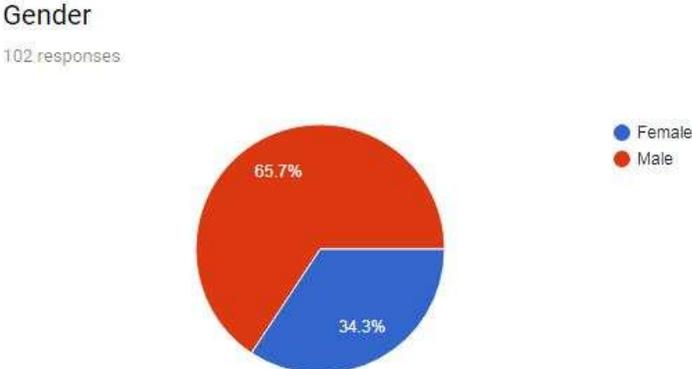
3. Income & Literacy level

Null hypothesis: There is no association between income & tax literacy level of individual level

Alternate Hypothesis: There is an association between income & tax literacy level of individual.

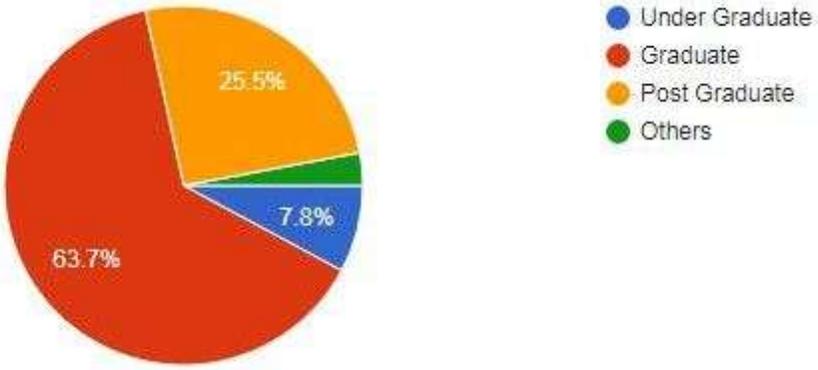
**Data Analysis and Interpretation**

Q1. Gender Analysis



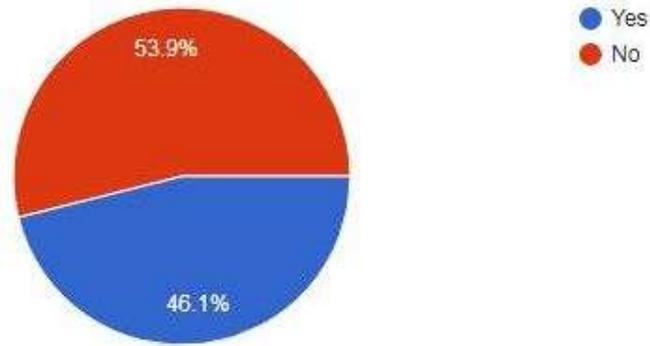
Almost 65% are male and rest 35% are female in the responses for tax literacy.

Q2. Qualification



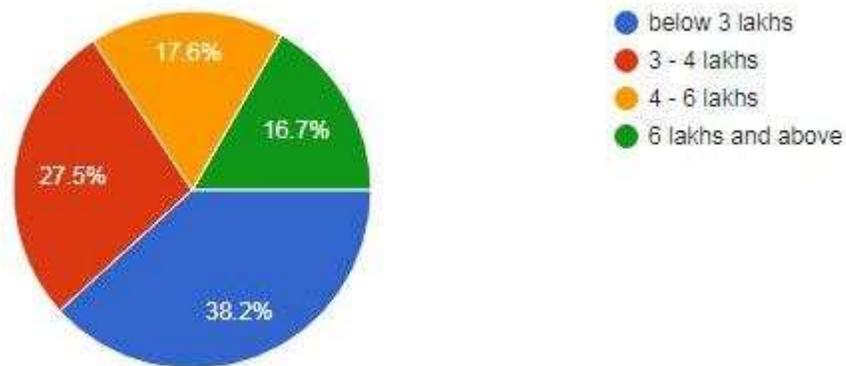
Majority of the respondents were graduates, followed by post graduates, under graduates & others.

Q3. Awareness about 80(c) to 80(u) under taxation



About 54% people are not aware about the 80(C) to 80(u), tax experts should create awareness among people.

#### Q4. Income

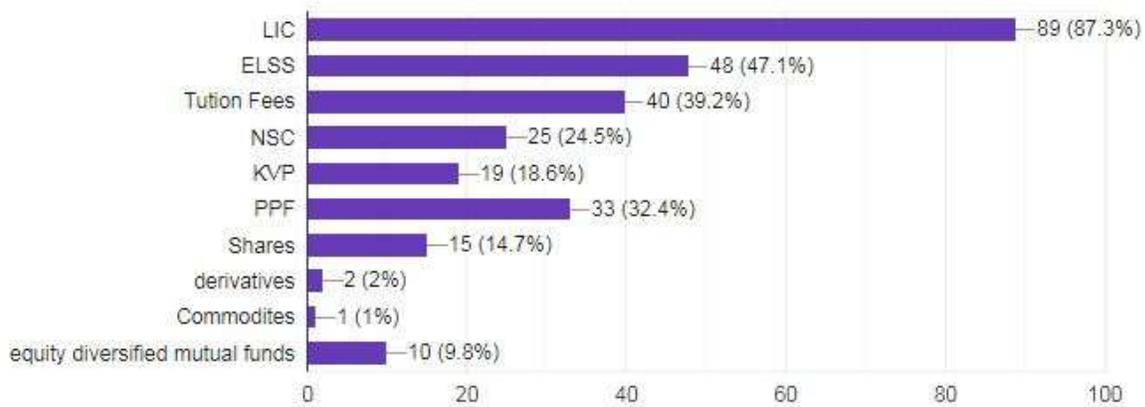


Income of people is uneven in this area. Income of people will directly affect the tax collection, people with higher earnings are aware about tax returns.

#### Q5. Exemption under 80 (C)

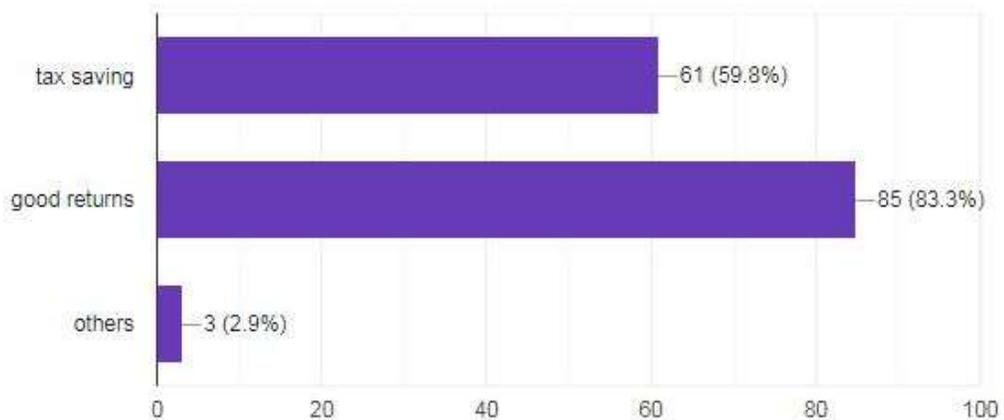
## Which of the following exemptions fall under 80(C)?

102 responses



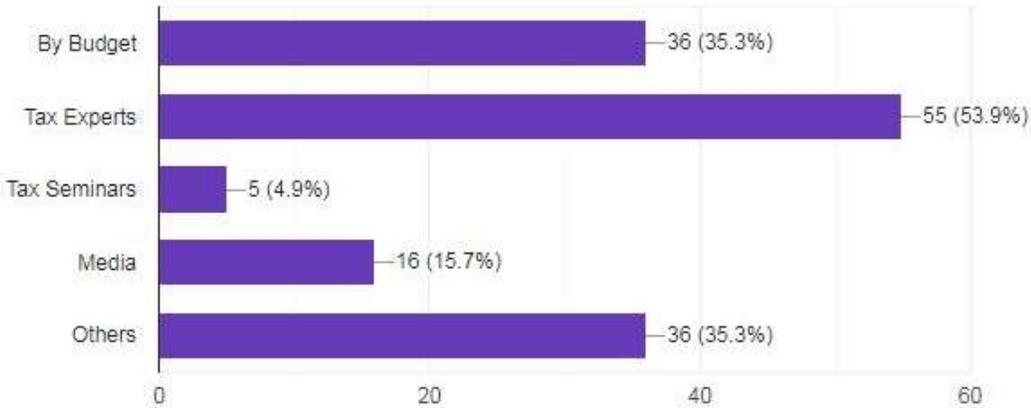
From the above chart many people are aware which exemptions are included in the 80(c), even some responses cannot distinguish between investment avenues and tax exemptions.

## Q6. Motive of investment



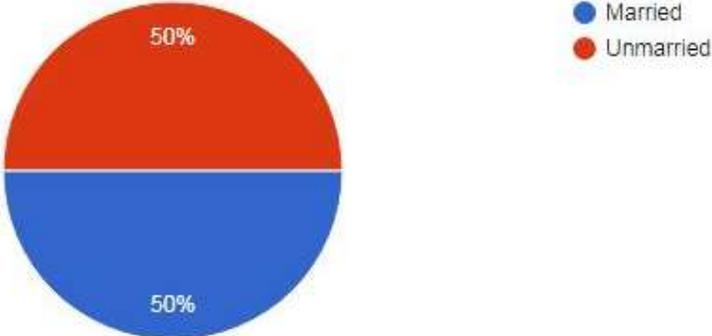
The motive of most of people is good returns and tax saving, people want to invest their money as well as save tax.

Q7. Enlarge your knowledge related to tax related



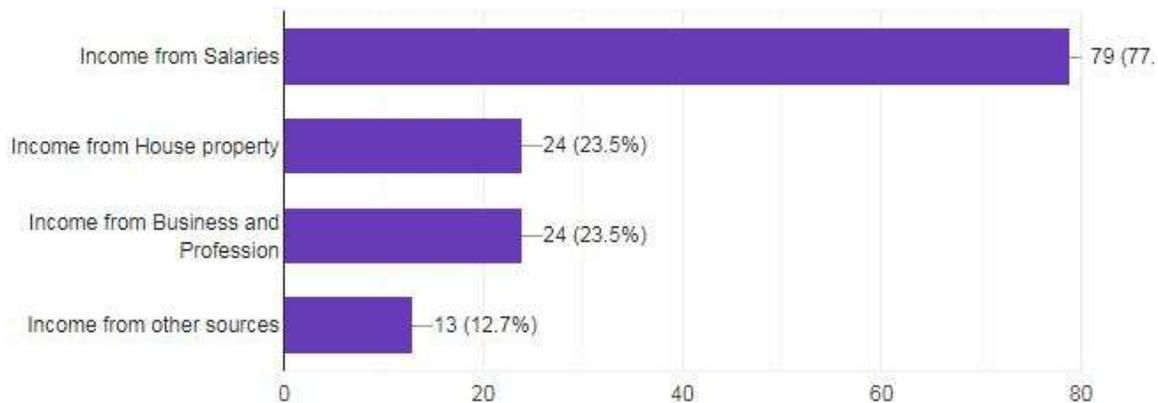
People over here are not aware about seminars which are been conducted in the city, they usually contact either hired tax experts.

Q8. Martial Status



50 % people are married and 50% people are unmarried total out of responses collected.

Q9. Income head



About 77% people whose income falls under salaried with other income. Income from house and income from business as their secondary income.

### Findings

- Tax literacy level of males is higher than that of females and the difference is statistically significant.
  - Level of tax literacy is positively related to the age, education and gender
- Tax literacy level increases with age, education and income.
- Employees working in urban areas are more tax literate as compared to those working rural areas.
  - The employees working in non-government jobs are more tax literate as compared to those in government
  - People are ready to save tax but are unaware about schemes available in the market.

### Suggestion

- Respondents suggested that government should take steps to organize the tax saving awareness seminars should be conducted at large with help of local body.
- Respondents gave suggestion to publish tax filing process on public i.e. publish on newspaper.
- People should make tax campaign as priority basis to educate salaried people mostly government salaried.

## **Conclusion**

From the above analysis it can be concluded that overall tax literacy level of 45% among all respondents is not encouraging. This shows that in our city people are still not much aware about their personal taxation related issues. The results suggest that level of tax literacy varies significantly among respondents on the basis of various demographic and socio-economic factors. Also the level of tax literacy gets affected by gender, age, education, income, nature of employment and place of work whereas it does not get affected by geographic region.

Overall it can be concluded that tax literacy level is very low in our country and necessary measures should be taken by government to increase awareness about tax related matters amongst the population.

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- [https://www.researchgate.net/publication/277243815\\_Tax\\_Literacy\\_Rate\\_Among\\_Taxpayers\\_Evidence\\_from\\_Malaysia](https://www.researchgate.net/publication/277243815_Tax_Literacy_Rate_Among_Taxpayers_Evidence_from_Malaysia)
- Determining Tax Literacy of Salaried Individuals - An Empirical Analysis Puneet Bhushan1, Yajulu Medury Dept. of Humanities and Social Sciences, Jaypee University of Information Technology, India. 2 Chief Operating Officer, Jaypee Education System, India.

## **8. Study on Impact of selected Macroeconomic Variables on Sector Indices of BSE**

-Ms. Vinita Lalwani

## **Abstract**

## Purpose

The purpose the study is to analyze the impact of macroeconomic variables on 10 sector specific indices of BSE Sensex. In 2018, Indian economy faced a lot of challenges like rupee falling, crude oil prices shooting up, IL&FS fiasco, etc. which had a significant impact on the Indian Stock Markets. This study will help the investors to understand which macroeconomic variables have a major impact on which particular sector index of BSE. An investor will be able to make a wise investment decision in a company belonging to a particular sector after analyzing the impact.

## Methodology-

In this study statistical tools like regression and correlation are used in order to test the impact and relationship between the macroeconomic variables and the sector indices of BSE. A time span of 5 years has been chosen for the study which is from April 2014 to March 2018. Further, The 8 macroeconomic variables selected are Call Money Rate, Consumer Price Index (CPI), Crude Oil Prices, Dollar-Rupee Rates, Foreign Institutional Investment (FII), Gold Prices, Gross Domestic Product (GDP) and Index of Industrial Production (IIP).

The 10 sector indices of BSE are S&P BSE Basic Materials, S&P BSE Consumer Discretionary Goods & Services, S&P BSE Energy, S&P BSE Finance, S&P BSE FMCG, S&P BSE Healthcare, S&P BSE Industrials, S&P BSE Information Technology (IT), S&P BSE Telecom and S&P BSE Utilities.

**Keywords:** Macroeconomic variables, Correlation, Regression, Impact, Call Money Rate, Consumer Price Index (CPI), Crude Oil Prices, Dollar-Rupee Rates, Foreign Institutional Investment (FII), Gold Prices, Gross Domestic Product (GDP) and Index of Industrial Production (IIP).

## Introduction

Nowadays stock market have become a key driver of modern market based economy and is one of the major sources of raising resources for Indian corporate, thereby enabling financial development and economic growth. In fact, Indian stock market is one the emerging market in the world. In India the two famous Stock Exchanges where most of the trading takes place are Bombay Stock

Exchange (BSE) & National Stock Exchange (NSE). Form 3,739.69 points on March 31st 1999, with in nine years; Bombay Stock Exchange (BSE) Sensitivity Index (SENSEX) had reached to 21,000 level points in January, 2008. But this impact doesn't last long as it was affected by the recent global financial crisis of 2008-09 and emerging euro-crisis. Currently BSE is around 36,000 points.

The Indian economy is one of the fastest growing economies. But it faces lot of challenges which results in overall changes in the macroeconomic parameters. As seen last year i.e. 2018, the economy has gone through various financial downturns like Indian rupee weakening, rising of crude oil prices, trade war, etc. which had a remarkable impact on the performance of the Indian Stock Market. It was also observed that many retail investors were worried about their investments in Equity & specifically in Debt market. An investor should know which macroeconomic parameter would cause a major impact on which particular sector comprising of the company in which the investment is done. This project will help the investors to know which macroeconomic variable have a minor or major impact on the Sector Indices of BSE.

### **Literature Review**

Ahuja Avneet , Makan Chandni and Chauhan Saakshi (2012), On the basis of overall analysis and sectoral analysis it can be concluded that three out of seven variables are relatively more significant and likely to influence Indian stock market. These factors are exchange rate, foreign institutional investment and call rate. There is a positive relation between FII and Sensex, call rate and Sensex whereas exchange rate and Sensex shows a negative relation. The result has been concluded on the bases of the granger causality test in which call rate has been seen as affecting BSE in almost all the sectors (except FMCG sector) and regression analysis in which exchange rate and FII is affecting all the sector.

Sibel Karina Arnes, Copenhagen Business School (2014), This study had as its aim to provide an investigation of the relationship between returns on the Istanbul Stock Exchange and changes in various national macroeconomic variables, in order to help both investors and policy makers in their future decision making.

Dr.Venkatraja.B Assistant Professor-Economics (2014), the aim of this paper is to study the impact of macroeconomic variables on Indian stock market. From the study it appears that the combined influence of WPI, IIP, FII, GP and REER on BSE Sensex is very strong. It is also noted that any variation in the value of WPI, IIP, FII and REER has strong positive influence on the BSE stock market performance. While, an increase in gold price is found causing crash in stock market and vice versa. Further, of the five variables, the coefficients of all the variables except IIP are statistically significant. This leads to the conclusion that inflation, inflow of foreign institutional investment, exchange rate and gold price impact the Indian stock market performance significantly.

### **Research Methodology**

#### Research Problem:

From the past centuries, it has been observed that macroeconomic parameters have gone through many changes which leads to direct or indirect changes to various markets in the country. The changes may or may not be favorable for the investors. It is important for the investors to understand various aspects connected to the investment they make in the stock market. The study in this project will help the investors to know that how & which macroeconomic variables have an impact on sector indices of BSE.

#### Objectives of Research:

To study the impact of macroeconomic variables on 10 sector indices of BSE & BSE Sensex.

To examine whether there is a relationship between the macroeconomic variables and sector indices of BSE.

#### Data Collection, Sampling and Defining Variables:

Data is collected from authentic sources like <http://mospi.nic.in>, [www.bseindia.com](http://www.bseindia.com), & [www.rbi.org](http://www.rbi.org). The data collected is of past 5 years which is from April 2014 to March 2018.

The sample selected for the study includes selection of 8 macroeconomic variables & 10 Sector Indices of BSE on judgmental basis.

#### Defining Variables:

All the selected 8 macroeconomic variables are the independent variables & 10 sector indices are the dependent variables.

Macroeconomic Variables (Independent)	
Call Money Rate	Annual Average for 5 years which is from the year 2014-2018
CPI	
Crude Oil Prices	
Dollar-Rupee Rate	
Foreign Institutional Investment (FII)	
Gold Prices	
Gross Domestic Product (GDP)	
IIP	

a. Research Hypothesis:

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Null Hypothesis

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H0 1: There is no significant impact of Macroeconomic variables on S&P BSE Basic Materials

H0 2: There is no significant impact of Macroeconomic variables on S&P BSE Consumer Discretionary Goods & Services

H0 3: There is no significant impact of Macroeconomic variables on S&P BSE Energy

H0 4: There is no significant impact of Macroeconomic variables on S&P BSE Finance

H0 5: There is no significant impact of Macroeconomic variables on S&P BSE FMCG

H0 6: There is no significant impact of Macroeconomic variables on S&P BSE Healthcare

H0 7: There is no significant impact of Macroeconomic variables on S&P BSE Industrials

H0 8: There is no significant impact of Macroeconomic variables on S&P BSE IT

H0 9: There is no significant impact of Macroeconomic variables on S&P BSE

## Telecom

H0 10: There is no significant impact of Macroeconomic variables on S&P BSE

## Utilities

H0 11: There is no significant impact of Macroeconomic variables on BSE Sensex

### Data Analysis and Interpretation

Regression: (Significant relationship indicates rejection of Null Hypothesis)

Independent ↓	Dependent							
	Call Money Rate	CPI	Crude Oil Prices	Dollar-Rupee	FII	GDP	Gold Prices	IIP
	Relationship							
S&P BSE Basic Materials	Insignificant	Insignificant	Insignificant	Insignificant	Significant	Insignificant	Significant	Insignificant
S&P BSE Consumer Discretionary Goods & Services	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Energy	Insignificant	Insignificant	Significant	Insignificant	Significant	Insignificant	Significant	Insignificant
S&P BSE Finance	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE FMCG	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Healthcare	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Industrials	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Information Technology	Significant	Insignificant	Significant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Telecom	Significant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
S&P BSE Utilities	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
BSE Sensex	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

From the above table we observe that:

- Call Money Rate has a significant impact on Sector Indices of S&P BSE IT and S&P BSE Telecom
- Crude Oil has a significant impact on Sector Indices of S&P BSE Energy and S&P BSE IT.
- FII has a significant impact on Sector Indices of S&P BSE Basic Materials and S&P BSE Energy.
- Gold Prices has a significant impact on Sector Indices of S&P BSE Basic Materials and S&P BSE Energy.

## **Findings and Conclusion**

As macroeconomic variables are uncontrolled variables one should consider its effects on the stock market as it is quite volatile and sensitive. Sensex the name itself refers to Sensitivity Index. According to the study, out of 8 selected macroeconomic variables only 4 have a significant impact on the sector indices of BSE which are Call money rate, Crude oil prices, Gold Prices & FII. In this study, Correlation & Regression are the tools used to examine the impact of macroeconomic variables. But apart from correlation & regression an investor can make use of other tools to study the impact of macroeconomics to get a better picture of the changes which affects the particular index or stock.

The results of this analysis should not be treated as conclusive for an investment. Apart from understanding Indian stock market based on the contributions of the significant variables, there remain other important issues that affect the return generating process. These issues are the cost of equity capital, asset valuation, industry analysis, a firm's management and operational efficiency analysis, and so on. Any investor should consider all relevant sources of information when making an investment decision. There is a scope that this study can used to determine the effect of macroeconomics on commodity market & derivatives

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9.

- Simran Sawlani

**ABSTRACT:-**

The research adopts an exploratory research by a survey data of 100 online and social media shoppers. It was found that as social network use continues to increase, an important question for marketers is whether consumers' online shopping activities are related to their use of social networks and, if so, what the nature of this relationship is. On the one hand, spending time on social networks could facilitate social discovery, meaning that consumers “discover” or “stumble

upon” products through their connections with others. Social media provided businesses with many social commerce benefits that contributed in overcoming most of the ecommerce inhibitors.

## **INTRODUCTION:-**

Are We Entering The Era Of Social Shopping?

Brands are treating social media as a sales platform now more than ever. Nearly 25% of business owners are selling through Facebook and 40% are using social media as a whole to generate sales. Not only does social media influence what people buy through recommendations (23%), a fully 30% of consumers say they would make purchases through Pinterest, Instagram, Twitter, or Snapchat. It appears as if customers are ready for the social shopping experience. Let’s take a look at the efforts some social media platforms are making to give users what they want.

Instagram shoppable posts let sellers create a seamless shopping experience:-The new Instagram shopping feature, launched in March 2018, allows brands to tag up to five products in a post. Then, when users click on the tags they can see additional information about the product. This includes an image, product description and price information. Most importantly, shoppers are given a direct link to the company’s website where they can finalize the purchase. Since making this feature available, one brand has already increased its revenue by 8%.

Snapchat pioneers with shoppable AR experience:-Snapchat removed any doubt about their commitment to AR with their release of Lens Studio in December of 2017. Continuing in this vein, they have recently introduced shoppable AR experience. The set of newly released features includes Website, Video, and Install to the company’s AR lens. There’s a significant convenience factor here. Customers who are ready to move down the funnel or who want to learn more have a direct path to doing so. No opening new tabs or windows and looking things up. Instead, the app takes them right where they need to go.

Brands with a Pinterest for Business account can sell with ‘Buy Now’ pins

## **RESEARCH METHODOLOGY**

### **STATEMENT OF PROBLEM**

This study looks at the problem of identify the driving forces behind shift in the way consumers discover and purchase products online. And the importance of online presence of various brands to give the consumers convenience of buying products on social media platform's like Instagram, Facebook, Snapchat, Pinterest. And whether various brands and companies make an effort to shift their retail to social media.

## OBJECTIVES OF RESEARCH

The objectives of this project are:-

1. To identify the factors influence the customers to purchase products through social media
2. Why do these platforms appeal to the consumers more than a retail store?
3. To find out the reason behind the change in path to purchase for the consumer.
4. To analyze the post purchase behavior of consumers on social media
5. How does this affect the branding strategies of apparel companies?

## DATA COLLECTION AND SAMPLING.

Exploratory research is conducted for a problem that has not been studied more clearly, The sampling design used for this project is random selection. Sources of data collection were primary data where a number of questionnaire surveys is to be conducted and later analyzed with random selection of the sample size of 100, and Secondary data where a couple of Television commercial clips, media articles, magazines, websites and various social media channels to understand the social shopping better

## HYPOTHESIS

Ho1:- The attitudes of consumers towards online shopping has changed because it is not convenient, attractive and trendy.

H1: The attitudes of consumers towards online shopping has changed because it is more convenient, attractive and trendy.

Ho2:- Consumers pursue the option of purchasing from platforms like Snapchat, Pinterest, or Instagram because they don't like retail store

H2: Consumers pursue the option of purchasing from platforms like Snapchat, Pinterest, or Instagram because they like the convenience of it.

Ho3: Consumer are opting social media platforms as a path to purchase not because of the reviews, comments, advertisements, post, tags and shares.

H3: Consumer are opting social media platforms as a path to purchase because of the reviews comments advertisements post tags and shares.

Ho4: Consumers are not satisfied that the companies and brands are giving them options of purchase on social media platforms.

H4: Consumers are satisfied that the companies and brands are giving them options of purchase on social media platforms.

Ho5:- Shopping on social media do not affect the branding strategies of apparel companies

H5: Shopping on social media affect the branding strategies of apparel companies

#### **DATA ANALYSIS AND INTERPRETATION:-**

- Out of 100 respondents 69% of the respondents have purchased apparel from social media platforms, 31% of respondents have not purchased anything from social media platforms.
- Out of the 69% of the respondents who purchase apparel from social platforms, 14% of the respondents made a purchase from Facebook. 29% of the respondents made a purchase from Snapchat, 48% of the respondents make a purchase from Instagram, and 9% of the respondents made a purchase from Pinterest. This shows that Instagram is the most popular for social shopping.
- Out of the 69% of the respondents who purchase apparel from social platforms, 36% of the respondents prefer it because of the ease of purchase. 16% of the respondents prefer it because of the Accessibility, 18% of the respondents prefer it because of the price, 4% of the respondents prefer it because of the speed of delivery and 26% of the respondents prefer it because of the choice and variety available to them.

- Out of the 100 of the respondents 76% of the respondents think that it is important for apparel business or retail businesses to have a social media presence and the other 24% of the respondents it is not important for apparel business or retail businesses to have a social media presence.

## **FINDINGS AND CONCLUSION:-**

Brands and e-commerce nowadays are heavily reliant on digital platforms to reach their audience. In an age where everyone is glued to their screen, the most effective method to engage with them is through these devices.

**JUDGE A BRAND BY ITS SOCIAL PRESENCE:-**This is evident when you look at the statistics surrounding internet and social media usage. In 2018, the number of internet users worldwide is 4.021 billion which is up 7 percent. The number of social media users worldwide is 3.196 billion up 13 percent. The number of mobile phone users is 5.135 billion up 4 percent.

**CHANGE THE WAY TO REACH AND ENGAGE:-**Paid advertisements are the current trend in social commerce. Given Facebook's incredible level of customization (age, geography, preferences, and more), brands are flocking to use the platform's ad features,

**SOCIAL COMMERCE THE FUTURE OF E-COMMERCE:-**Simply put, shopping through social media – often termed social commerce – may well be the future of e-commerce. It combines the fun nature of social media – the ability to share, recommend and show products to friends and peers – with the actual purchase activity, making the shopping experience fun, easy and seamless

**MAKE THEM FEEL SECURE:-**Its job now is to convince e-commerce players and retailers that social shopping is the way forward, as shoppers will always want a better, more accessible experience.

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[https://www.researchgate.net/publication/316281044\\_Factors\\_Influencing\\_Consumer\\_Intention\\_in\\_Social\\_Commerce\\_Adoption](https://www.researchgate.net/publication/316281044_Factors_Influencing_Consumer_Intention_in_Social_Commerce_Adoption)

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## **10. A study on Impact of stress in motivation in Border Security Services**

**CHS LTD**

- Ashwini Lad

### **ABSTRACT:**

Work stress has emerged as one of the important and focal areas for research in present day organizations. It is considered as an important phenomenon affecting the organizational health and health of its members. It affects the behavior of employees of employees worship in the organizations. It has far reaching impact on motivation and satisfaction of employees. The productivity of employees and overall productivity of organization is affected by levels of stress and motivation.

The study has been conducted on 100 employees, consisting of officers and clerks, randomly selected sample for organization. The study revealed that clerical grade employees experience more stress than officers and there is strong relationship between stress and employee motivation. On the basis of findings of the study the suggestions and recommendations to improve overall motivational level of the employees.

### **Introduction:**

Stress is an increasing problem in present day organizations; it does not affect the employees work life only, but has far reaching impact on employee's family life as well. Stress refers to the pressure or tension people feel in life. Stress leads to various Physiological, psychological and behavioral difficulties. It affects the health of employees. It causes various psychological problems like anger, depression, anxiety, irritability and tension. Job stress is the outcome of various organizational and individual stresses. Dublin (1977) defines motivation as a "Complex of forces starting and keeping a person at work in an organization". Dalton E. Farland (1974) defines motivation as "The way in which urges, desires, aspirations, striving or needs direct, control or explain the behavior of human beings". Motivation promotes job satisfaction and increases productivity.

Keeping in view the effects of job stress and importance of motivation for organizational growth and growth of employees, this study is an attempt to understand the Impact of stress on employees motivation interface. Therefore, the present study helps to ascertain the Impact of Stress on Motivation in Border Security Services at Titwala.

### **Review of Literature**

Kavitha in her research titled —Role of stress among women employees forming majority workforce at IT sector in Chennai and Coimbatorel (2012), she has focuses on the organizational role stress for the employees in the IT sector.

P.S. Swaminathan, & Rajkumar S. in their work on —Stress levels in Organizations and their Impact on Employees' Behaviorl (2013). They have conducted a study that focused on the levels of stress among the age group, profession, different varieties of jobs, hours of work and the influence

of work environment on the degree of stress faced by employees. Stress in an employees' individual in nature.

Satija S. & Khan W. in their research work titled —Emotional Intelligence as Predictor of Occupational Stress among Working Professionals (2013). According to them Occupational Stress is as same as Job Stress that needs to be controlled at the workplace otherwise it will negatively affect on employee's work attitudes & behavior.

Amir Shani and Abraham Pizam (2009) —Work-Related Depression among Hotel Employees have conducted a study on the depression of work among hotel employees in Central Florida.

Viljoen and Rothmann have investigated the relationship between —occupational stress, ill health and organizational commitment (2009).

Schmidt, Denise Rodriguez Costa; and et al, in their work on —Occupational stress among nursing staff in surgical settings.

Li-fang Zhang have conducted a study on titled —Occupational stress and teaching approaches among Chinese academics (2009).

According to Lockley (2012) offering training and development programs that effectively contributes to personal and professional growth of individuals is another effective employee motivation strategy.

Daschler and Ninemeier (1984) said “Motivation is a state or force within an individual that makes the employee act in a way designed to achieve some goal. Taking this broad definition and putting it into the context of supervision, motivation is what the supervisor does to encourage and influence other people to take necessary action”.

Steers (1987) stated that “a comprehensive theory of motivation at work must address itself to at least three important sets of variables which constitute the work situation” i.e. the characteristics of the individual, the characteristics of the job and the characteristics of the work environment. Steers points out that, at present, no model exists that accounts for variables from each of the three major areas.

**Objectives:-**

- ✓ To study the stress level of employees at Border Security Services CHS Ltd.
- ✓ To study the motivation level of employees at Border Security Services CHS Ltd.
- ✓ To study the relationship between stress and Motivation at Border Security Services CHS Ltd.

- I. Research design : Exploratory Research
- II. Sampling design : Random Sampling
- III. Sample size : 100
- IV. Data type : Primary Data & Secondary Data
- V. Instrument used : Questionnaire & Interviews
- VI. Analytical Tools : Correlation, Regression, Anova.

**Hypothesis**

- i.  $H_0$  = There is no significant relationship between stress and motivation.
- $H_1$  = There is significant relationship between stress and motivation.
- ii.  $H_{02}$  = There is no significant difference in variables according to gender.
- $H_{12}$  = There is a significant difference in variable according to gender.
- iii.  $H_{03}$  = There is no significant difference in variables according to level of management.
- $H_{13}$  = There is a significant difference in variable according to level of management.
- iv.  $H_{04}$  = There is no significant difference in variables according to experiences.
- $H_{14}$  = There is no significant difference in variables according to experiences.

**Findings**

Demographic

- Gender: - 69% of employees are male and remaining 31% employees are male category.
- Age : - 41% of employees are from

the age group of 18-25, whereas 26% of employee's falls are from group of 26-35. 19% of employees are from the age group of 36-45 and 8% of employees are from the 46-55age group & remaining 6% are above 55age.

- *Qualification:* - 51% employees are graduates; 37% employees are hold 10<sup>th</sup> -12<sup>th</sup> qualification. And only 12% employees are Illiterate.
- *Level of Management:* - 63% employees are at the middle level management, 21% employees in the company are at the top level of management and 16% employees are at the low-level management.
- *Experience:* - 22% employees have 6-10 years & 11-15 years' experience. 19% employees have less than 1 year of experience, 26% employees have experience between 1 to 5 years and remaining 11% employees have more than 16 years of experience.

## Stress

- *I have lot of work and fear that very little time to do it:-* 87% employees disagrees for the statement. 12% employees were neutral while answering the statement. Whereas, is only 2% employees agreed that they have lot of work and fear about the job
- *I feel so burdened that even a day without work seems bad:* - 91% employees disagree for the statement. 7% employees were neutral while answering the statement. Whereas, only 3% employees agreed that they feel so burdened of their work.
- *I have lot of work and fear that very little time to do it:-*87% employees disagrees for the statement. 12% employees were neutral while answering the statement. Whereas, is only 2% employees agreed that they have lot of work and fear about the job.
- *I feel so burdened that even a day without work seems bad:-* 91% employees disagrees for the statement. 7% employees were neutral while answering the statement. Whereas, only 3% employees agreed that they feel so burdened of their work.
- *Many people at my office are tired of the company demand:* - 45% employees strongly disagree for the statement. 50% of employees disagree with the same & only 6% of employees were neutral while answering the statement.
- *Many times, my job becomes a big burden:* - 86% employees disagree for the statement. 12% employees were neutral while answering the statement. Whereas, is only 2% employees agreed that they feel burden of their job.

- *I feel bad when I take leave:* - 94% employees agree for the statement. 5% employees were neutral while answering the statement. Whereas, only 1% employees disagreed that they feel bad when they take leave.

Motivation: -

- *My work gives me a feeling of personal accomplishment:* - 96% employees agree for the statement. 3% employees were neutral while answering the statement. Whereas, only 1% employees disagreed with the above statement.
- *My job makes good use of my skills and abilities:* - 63% of the employees are strongly agree with the statement. 36% are agrees for the same, and only 1% peoples are neutral while answering the question.
- *I am enthusiastic about my job:* - 49% of the employees are strongly agree with the statement. 48% are agrees for the same, and only 3% peoples are neutral while answering the question.
- *I am proud of the work that I do:-* diagram 58% of the employees are strongly agree with the statement. 40% are agrees for the same, and 1% peoples are neutral while answering the question & only 1% from the entire population are disagree.
- *I am motivated to work beyond the usual call of duties:* - 44% of the employees are strongly agreed with the statement. 46% are agrees for the same, and only 10% peoples are neutral while answering the question.
- *Our management is really interested in motivating the employees:-*64% of the employees are strongly agree with the statement. 33% are agrees for the same, 2% peoples are neutral while answering the question & only 1% of the employees are disagree with the above statement.
- *Effective promotional opportunities are provided on equal basis in the organization:-*52% of the employees are strongly agreed with the statement. 48% are agrees while answering the question. Entire populations of employees are agreeing with the promotional activities provided equally by the company.
- *I think that the incentives and other benefits influence my performance at work:* - As per the above diagram 62% of the employees are strongly agree with the statement. 38% are agrees while answering the question.

- *Management involves us in decision making which are connected to our department:* - 62% of the employees are strongly agree with the statement. 37% are agrees for the same, and only 1% peoples are neutral while answering the question.
- *I have had opportunities to learn and grow:-* 85% of the employees are strongly agree with the statement. 13% are agrees for the same, and only 2% peoples are neutral while answering the question.

## **Hypothesis Testing**

### *1. Hypothesis 1:-*

$H_0$  = There is no significant relation between stress and motivation

$H_1$  = There is a significant relation between stress and motivation.

Outcome:

The outcome from the analysis was, there is a negative significant relationship between stress and motivation in Border Security Services CHS Ltd.

### *2. Hypothesis 2:-*

$H_0$  = There is no significant difference in variables according to Gender.

$H_1$  = There is a significant difference in variable according to Gender.

Outcome:

The outcome from the analysis was, there is no significant difference in stress and Gender, also there is no significant difference in motivation and Gender.

### *3. Hypothesis 3:-*

$H_0$  = There is no significant difference in variables according to level of management

$H_1$  = There is a significant difference in variables according to level of management.

Outcome:

The outcome from the analysis was, there is significant difference in stress and level of management and there is no significant difference in motivation and level of management.

#### *4. Hypothesis 4:-*

$H_0$  = There is no significant difference in variables according to experience.

$H_1$  = There is a significant difference in variables according to experience.

Outcome:

The outcome from the analysis was, there is significant difference in stress and experience. There is significant difference in motivation and experience.

#### . Analysis Of Objectives

*Objective 1:- To study the stress level of employees at Border Security Services CHS Ltd.*

→ The stress level at Border Security Services CHS Ltd is 40.9144%.

*Objective 2:- To study the motivation level of employees at Border Security Services CHS Ltd.*

→ The motivational level at Border Security Services CHS Ltd. Is 90.92%.

*Objective3:- To study the relationship between stress and motivation at Border Security Services CHS Ltd.*

→ There is a significant relationship between stress and motivation.

→ The stress level impacts 26.32% on motivation. 41.8236 level of motivation will still among employees.

## **Conclusion:**

The most pervading type of finding is that occupational stress in Border Security Services CHS Ltd. So we may conclude that an emotionally intelligent individual is a consistent and dedicated employee; open to everything new, even in the most uncertain prospects and sudden changes. Such people tend to perceive stress as a new opportunity rather than as a threat to personal safety. Emotionally intelligent individual can keep the strike in the worst circumstances, never surrender and fall into panic but react carefully

The study also bring to a close that an investment in the emotional intelligence training program to develop the emotional intelligence level of employees' either manager or peer, might be beneficial not only to improve the individual performance but to also increase the organizational performance with motivating their employees. It is necessary to have the right balance of various stress and motivation level of the employees to help company in its growth.

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## **11.A study on impact of performance appraisal on job satisfaction at ICICI bank.**

## **Executive Summary**

Performance Appraisal is one of the key important factor which is practice by human resources management of every successful organization. In today's fast moving world, where employee wants quick promotion and wish to move career ladder quickly, performance appraisal is no longer an optional thing for a corporate. Performance appraisal helps to review the potentiality of employees so that their future capability is anticipated. For every organization employee satisfaction is very important to run the organization in a proper way. Lock and Lathan (1976) determine that employee job satisfaction is positive attitudes regarding performance appraisal which result bring good working environment and employee commit their self for achieving organizational goals and objectives.

In this research we shall study how performance appraisal impacts job satisfaction at ICICI bank. A number of 60 employees were surveyed about their satisfaction arising due to appraisal system used by the bank.

## **Introduction**

Performance appraisal is a review and discussion of an employee's performance of assigned duties and responsibilities. The appraisal is based on results obtained by the employee on the job, not on the employee's personality characteristics. The appraisal 2 measures skills and accomplishments with reasonable accuracy and uniformity. It provides a way to help identify areas for performance enhancement and to help promote professional growth. It should not, however, be considered the supervisor's only communication tool. Open lines of communication throughout the year help to make effective working relationships.

## **Literature Review**

Vroom (1964) sought to find out the casual relationship between job satisfaction and other factors such as employee attitude and behavior which consider at the time of appraise the employee. Job dissatisfaction create negative attitudes and job satisfaction positive and favorable attitudes. The data was collected through open handed questionnaire and the audience were the employees of Kenya commercial banks. The findings show that there is strong and positive relationship between performance appraisal and job satisfaction.

Vance (1992) examined that performance appraisal is one of important practice of human resources management in every sector of organization. The performance appraisal is existing since 1990s. At that time it was develop to support a top down and control style of management. Whereas performance appraisal system is an effective tool for developing effectiveness and efficiency of workers. The research is conducted from 110 employees by regression and correlation method.

## **Objectives of the study**

To understand the methods and ways of performance appraisal in the company.

To determine satisfaction level of employees.

To understand the impact of performance appraisal system on job satisfaction of employees.

To suggest certain measures of performance appraisal.

## **Sample Size**

Sample size means the number of individuals samples measured or observations used in survey or experiment. In this research paper 60 employees are surveyed.

## **Data Type**

Data can be primary and secondary. In this research both primary and secondary data is used for collecting, understanding and presenting data.

## **Hypothesis**

HYPOTHESIS-1 there exist significance relation between performance appraisal practices and Job satisfaction.

HYPOTHESIS-2 There is significant difference in variable according to gender of respondent

HYPOTHESIS-3 There is significant difference in variable according to age of respondent

HYPOTHESIS-4 There is significant difference in variable according to experience of respondent

**H<sub>0</sub>**- There doesn't exist significant relation between performance appraisal practices and Job satisfaction.

**H<sub>1</sub>**- there exist significance relation between performance appraisal practices and Job satisfaction.

**Correlation**

**Correlations**

		PA Score	JS score
PA Score	Pearson Correlation	1	.295*
	Sig. (2-tailed)		.021
	N	61	61
JS score	Pearson Correlation	.295*	1
	Sig. (2-tailed)	.021	
	N	61	61

\*. Correlation is significant at the 0.05 level (2-tailed).

There is a positive correlation between performance appraisal and job satisfaction. The P value=0.21, which is less than 0.05, therefore null hypothesis is not accepted.

**Regression**

**H<sub>0</sub>**- There is no significant impact between performance appraisal practices and Job satisfaction.

**H<sub>1</sub>** There is significant impact ion between performance appraisal practices and Job satisfaction.

## Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	54.815	11.092		4.942	.000
PA Score	.340	.143	.295	2.373	.021

a. Dependent Variable: JS score

$$y=a+bx$$

where, y= dependent variable, a= alpha, b= beta, x= independent variable Job satisfaction= 54.815+0.340\*performance appraisal

The performance appraisal impacts 34% on job satisfaction. 54.81 level of job satisfaction will still exist even if performance appraisal is absent.

## Findings

**1.** Performance system has helped the company in creating of job satisfaction in employees. Employees feel they are at right place and their work is been appreciated.

**2.** Majorly employees are appraised by supervisors. But in some areas customers, subordinates and colleagues also play their role as appraisers.

**3.** According to the needs 46% employees are appraised annually and 30% employees are appraised monthly. It is recommended to appraise performance according to the position and profile of

employees. For eg:- marketing employees would want to have monthly or quarterly appraisals than to wait for a year.

**4.** A proper rating system is necessary to adopt for appraising employees fairly. Therefore ICICI has followed merit rating system majorly. At certain positions verbal interview and written essay methods are followed to appraise employees.

**5.** It was seen that no employee was dissatisfied with performance appraisal criteria. Clarification of performance criteria is necessary before planning for appraisal. The company seems to have clear policies for that matter.

**6.** Proper combination of reward system has become necessary for companies to adopt, and this is why ICICI appraises by way of promotion, non-monetary gifts, increments bonus etc. a important point to be noticed here was no category was more or less than the other. Therefore we can see that employees were appraised according to the needs of motivation drive of employees.

## **Conclusion**

The objectives of research were achieved. There was positive relation between performance appraisal and job satisfaction. Three tests were done to get the results:- correlation, regression and Annova. It was found that performance appraisal gives 34% impact on job satisfaction through regression analysis.

By conducting this research it founds that organization must focus on developing ways to make the performance appraisal system more effective so that it will enhance the employee satisfaction level towards their job. Some of the employee feedback shows that effective performance appraisal system is not only the source to make the employee satisfy but it is considered one of the important factor which affect employee satisfaction.

## **12. A study on impact of Coworkers support on Employee Engagement**

– Piyusha Chitnis

### **Abstract :**

Objective of the study is to extent of coworkers support at Reliance HR Services also to study level of employee engagement at Reliance HR Service and to study relationship between coworkers support and employee engagement. Questionnaires are based on objectives, 50 samples were collected. Data type which used is primary and secondary data. Instruments which have been used are questionnaires, and analytical tools used are Correlation, Regression and Annova. Hypothesis was taken on basis of three factors gender, levels of management, and years of experience. By analyzing data it is been found that in Reliance HR Services there is significant relations hip between Coworkers Support and Employee Engagement, there is significant positive impact of Coworkers Support on Employee Engagement and there is significant difference in variables on basis of levels of management and years of experience. The senior employees having more experience and from top and middle level management have more coworkers' support a n d employee engagement.

### **Introduction**

Human resource management, HRM, is the department of a business organization that looks after the hiring, management and firing of staff. HRM focuses on the function of people within the business, ensuring best work practices are in place at all times. For better work coworkers support is very important, because if coworkers have good support between each other work will be perform better and comfort zone will be there.

Employee Engagement also plays vital role in human resource management, while if employees are

properly engaged to work then their performance will be better. Coworkers support and employee engagement plays important role in Human Resource Management. Workplace relationships improve when there is proper co-workers support. Having proper co-workers support encourages creativity and improves decision making in workplace. Supervisor support and coworker support are critical influencers of innovative behavior. These components include the responsibility, courtesy, honesty, good communication and respect that you would expect to find in a good co-worker at any level. Employees which are more engaged have greater satisfaction which can lead to greater profitability. An "engaged employee" is the one who is fully absorbed

by and enthusiastic about their work and takes positive action to further the organization's reputation and interest.

## **Research Methodology**

### **Objectives:**

- To study in detail about Coworkers Support and Employee Engagement
- To study the extent of co-workers support at Reliance HR Services.
- To study the level of employee engagement at Reliance HR Services.
- To study the relationship between co-workers support and employee engagement at Reliance HR Services.

### **Review of literature:**

#### **Research paper: Coworkers Support And Employee Engagement**

Research By James Mark In 2016

The purpose of this Research is to determine relationship between Coworkers Support and Employee Engagement. On reading the Research Paper, it is found that coworkers support is independent variable. By using correlation it is shown that there is positive relationship between coworkers support and employee engagement.

#### **Data Collection and Sampling:**

**Data type used:** Primary Data and Secondary Data

##### **Primary Data**

Data collected from first hand sources by using methods like surveys, interviews or experiments.

##### **Secondary Data**

Data collected by someone else who is someone other than user is called as Secondary Data.

**Research Design used:** Exploratory research

**Sample Design used :** Universal Sampling Design

**Sample Size :** 50

#### **Hypothesis:**

**H<sub>01</sub>** – There is no significant relationship between co-supervisor and employee engagement.

**H<sub>11</sub>** – There is significant relationship between co-supervisor and employee engagement.

**H<sub>02</sub>** – There is no significant difference in variables on the basis of gender.

**H<sub>12</sub>** – There is significant difference in variables on the basis of gender.

**H<sub>03</sub>** – There is no significant difference in variables on the basis of years of experience.

**H<sub>13</sub>** – There is significant difference in variables on the basis of years of experience.

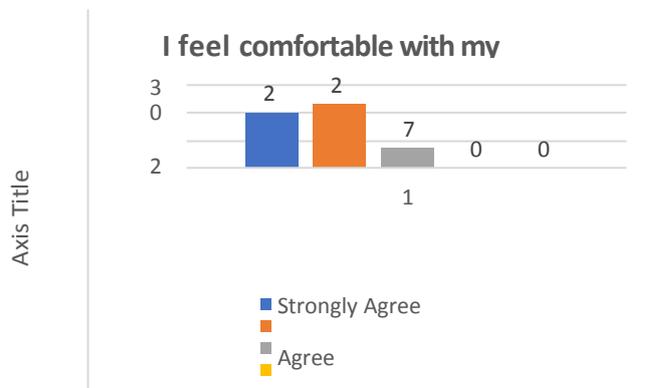
**H<sub>04</sub>** – There is no significant difference in variables on the basis of level in management.

**H<sub>14</sub>** – There is significant difference in variables on the basis of level in management.

### Data Analysis and Interpretation

#### I feel comfortable with my co-workers

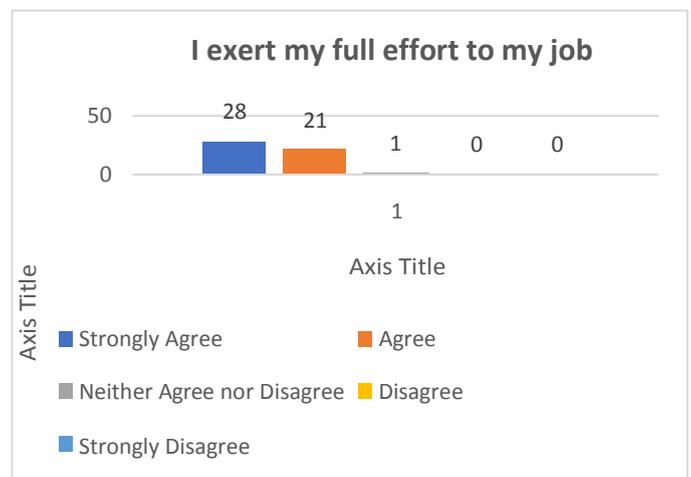
<b>Strongly Agree</b>	<b>20</b>
<b>Agree</b>	<b>23</b>
<b>Neither agree nor disagree</b>	<b>7</b>
<b>Disagree</b>	<b>0</b>
<b>Strongly Disagree</b>	<b>0</b>



**Interpretation :** Based on above graph, it is seen that 20 employees have strongly agreed, subsequently 23 employees have agreed, while 7 have neither agreed nor disagreed this means majority of employees says that they are comfortable with their coworkers.

#### 12. I exert my full effort to my job

<b>Strongly Agree</b>	<b>28</b>
<b>Agree</b>	<b>21</b>
<b>Neither agree nor disagree</b>	<b>1</b>
<b>Disagree</b>	<b>0</b>
<b>Strongly Disagree</b>	<b>0</b>



**Interpretation**

Based on above graph, it is seen that 28 employees have strongly agreed, subsequently 21 employees have agreed, while 1 have neither agreed nor disagreed this means majority of employees says that they exert their full effort to their job.

## **Findings**

1. 86% employees says that they feel comfortable with their coworkers whereas 14% employees are neutral with this statement.
2. 88% employees say that they receive full help and support from their coworkers whereas 12% employees are neutral with this statement.
3. 98% employees says that they exert their full effort to their job while 2% employee is neutral to this statement.
4. 96% employees say that they feel positive about their job while 4% are neutral to this statement.
5. Coworkers Support and Employee Engagement have significant positive impact and relationship on each other.
6. There is significant difference in variables on basis of levels of management
7. There is significant difference in variables on the basis of years of experience.
8. The employees who have more experience accordingly which are from top level management and middle level have more coworkers support and employee engagement.

## **Conclusion**

The study has highlighted and explained many concepts of coworkers support and employee engagement which will be useful in future. Purpose for study was to relationship between coworkers support and employee engagement and also level of employee engagement at Reliance HR Services. On basis of data it is explained that there is proper support between coworkers, mostly all of employees are properly engaged towards work and especially the employees who have more experience accordingly which are from top level management and middle level have more coworkers support and employee engagement.

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### **13. A Study On Impact Of Motivation On Job Satisfaction**

- Nikita Motwani

#### **ABSTRACT**

A project work entitled on “A STUDY ON IMPACT OF MOTIVATION ON JOB SATISFACTION” is mainly conducted to identify the impact of motivation strategies on employees and their satisfaction at Manik Confectionery Works and also to find the job satisfaction level of employees and to study the Motivation and Satisfaction strategies.

Manik Confectionery Works have a huge Manufacturing and wholesale business of confectionery and sweeteners like chocolates, sugar boiled candies, toffees and cakes. They are into manufacturing business. They also export the quality sweetener products to the other cities and sell all the confectionery candies and chocolates with a huge variety and have maintained their goodwill in the market.

The study is done with the help of primary and secondary data. Questionnaires are used to find out Motivation and Job satisfaction level. Hypothesis test is done with the help of analytical tools like ANNOVA, CORRELATION and REGRESSION. The findings of the study conclude that there is a significant relationship between Motivation and Job Satisfaction. There is a positive relationship between Motivation and Job Satisfaction.

#### **INTRODUCTION**

##### Motivation

Motivation is the force that makes us do things; this is a result of our individuals needs being satisfied (or met) so that we have inspiration to complete the task. These needs vary from person to person; everybody has their individual needs to motivate themselves. Depending on how motivated we are, it may further determine the effort we put into our work and therefore the standard of output. Motivation can have effect on the output of your business and concern both

quality and quantity.

## Job Satisfaction

Job satisfaction refers to a person's feeling of satisfaction on the job which act as a motivation to work. It is not the self-satisfaction, happiness or self-contentment but the satisfaction on the job. Satisfaction does mean the simple feeling state accompanying the attainment by an impulse of its objective. Research workers differently described the factors contributing the job satisfaction and the job dissatisfaction. Job satisfaction is a result of employees' perception of how well their job provides those things that are viewed as important. It is generally recognized in the organizational behavior field that job satisfaction is the most important and frequently studied attitude.

Job satisfaction is an important indicator of how employees feel about their job and a predictor of work behaviour such as organizational citizenship, Absenteeism, Turnover. Job satisfaction benefits the organization includes reduction in complaints and grievances, absenteeism, turnover, and termination; as well as improved punctuality and worker morale.

## **REVIEW OF LITERATURE**

The Impact of Rewards and Motivation on Job Satisfaction in Water Utility Industry.

Overview: This study aimed to examine the impacts of rewards and motivation on job satisfaction between public and private water utility organization in Malaysia using Perceived Amount of Rewards, WPI and JSS models. A total of 689 employees from both sectors participated in this study. The gap analysis was utilized to determine the significant differences on the level of rewards, motivation and job satisfaction between both sectors.

Outcome: Public organizations made an effort to offer more extrinsic rewards to increase extrinsic motivation of public employees. This is important as public water utility employees are served with different objectives to meet public demands. Thus, rewards must be realigned to strategically fit the organization objectives to boost employee's motivation to perform well and satisfy with the jobs.

Impact Of Employees Motivation On Job Satisfaction And Organizational Commitment At Balco

Overview: The study helps to identify the factors that effects employee motivation and examining its impact on job satisfaction and organizational commitment. The study employed a survey research method to collect research data from employees belonging to different

functional level at BALCO where a sample of 100 respondents were selected based on the judgment of researcher and data is collected with the help of questionnaire.

Outcome: This study shows that the various dimensions or factors of motivation discussed above impacts the organizational commitment of employees of BALCO by 78% and job satisfaction by 69%. Some new factors were emerged which were considered as most influential motivator factors and able to creates a variance of about 64% on motivation level of employees of BALCO.

## **RESEARCH METHODOLOGY**

Research design: The research design is Exploratory and Descriptive.

Sampling method: Universal sampling has been followed in this project.

Data type: The Primary data will be collecting by using questionnaires. For Secondary data, the articles, books, journals and research papers will be used.

Analytical Tools: The analytical tools used in this study report are Correlation, Regression, ANOVA based on the information collected during the survey.

MOTIVATION: According to Edwin B Flippo, "Motivation is the process of attempting to influence others to does their work through the possibility of gain or reward."

JOB SATISFACTION: Kreitner and Kinicki described, "Job satisfaction is an affective or emotional response toward various facets of one's job. This definition means job satisfaction is not a unitary concept."

### **Hypothesis:**

#### Hypothesis 1

H<sub>0</sub>: There is no significant impact of motivation on job satisfaction

H<sub>1</sub>: There is significant impact of motivation on job satisfaction

#### Hypothesis 2

H<sub>0</sub>: There exists no significant relation between Motivation and Job Satisfaction.

H<sub>1</sub>: There exists significant relation between Motivation and Job Satisfaction.

### Hypothesis 3

H<sub>0</sub>: There is no significant difference in motivation and job satisfaction according to level of management of respondent.

H<sub>1</sub>: There is significant difference in motivation and job satisfaction according to level of management of respondent.

## DATA ANALYSIS AND INTERPRETATION

### i. LEVEL IN ORGANISATION

H<sub>0</sub>: There is no significant difference in motivation and job satisfaction according to level of management of respondent.

H<sub>1</sub>: There is significant difference in motivation and job satisfaction according to level of management of respondent.

#### Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Entry level	23		
Middle level	40	38.9638	2.31130	.36545	38.2246	39.7029	34.29	44.29
Top level	7	39.7957	3.02545	1.14351	36.9976	42.5938	37.14	44.29
Total	70	39.4076	3.36680	.40241	38.6048	40.2104	34.29	60.00
Entry level	23	35.9435	6.88731	1.43610	32.9652	38.9218	26.67	60.00

Middle level	40	34.5010	3.58533	.56689	33.3544	35.6476	26.67	43.33
Top level	70	37.6200	3.16972	1.19804	34.6885	40.5515	33.33	43.33
Total	70	35.2869	4.93128	.58940	34.1110	36.4627	26.67	60.00

ANNOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.763	2	9.382	.823	.443
Within Groups	763.375	67	11.394		
Total	782.138	69			
Between Groups	72.724	2	36.362	1.518	.227
Within Groups	1605.183	67	23.958		
Total	1677.907	69			

Interpretation

The P- value is greater than 0.05 hence the null hypothesis (Ho) is accepted.

There is no significant relationship between Motivation and Job Satisfaction

ii. CORRELATION

H<sub>0</sub>: There exists no significant relation between Motivation and Job Satisfaction.

H<sub>1</sub>: There exists significant relation between Motivation and Job Satisfaction.

Correlations

		JBSCORE	MSCORE
JBSCORE	Pearson Correlation	1	.495**
	Sig. (2-tailed)		.000
	N	70	70

MSCORE	Pearson Correlation	.495**	1
	Sig. (2-tailed)	.000	
	N	70	70

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

#### Interpretation

There is a positive significant relationship between Motivation and Job Satisfaction level of employees. The P- value is less than 0.05, the null hypothesis (Ho) is Not accepted. So, here we can say there exist significant relationship between motivation and job satisfaction.

## **FINDINGS**

Out of 70 populations, 82% are Male whereas rest 18% are Female employees which means the number of Male employees are more than Female employees working in Manik Confectionery Works.

The numbers of employees are more between the age groups of 18-25 yrs i.e. 52%, 34% are between the age group of 26-30 yrs, 10% are between 31-45 yrs and 4% employees are above 45 yrs.

26% of employees strongly agree that they feel happy when their work goes up to the usual standard whereas 54% agree and 20% neutral with this statement. So, the company should work on 20% of employees and should motivate them.

23% of employees strongly agree that there are no conditions concerning their job which needs improvement whereas 71% agree and 6% are neutral. So, the company should improve the conditions for 6% employees.

## **CONCLUSION**

The findings suggest that there is a significant relationship between Motivation and Job satisfaction which means that if there is Motivation strategies followed by the organization, employees feel more satisfied as they get ease of operations and authority to manage their work. Motivation and Job Satisfaction are related to each other, Motivation level will directly impact on Job satisfaction level of employees in Manik Confectionery Works.

We can observe that Motivation has a significant impact on Job Satisfaction. When people are self managing at work, they have a greater sense of job satisfaction. With this comes increased motivation drive to do a great job and fulfil the responsibility and they also becomes more productive.

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## **14. Impact of work life balance on job satisfaction**

– Karuna Udani

### **ABSTRACT**

The core purpose of this study is to analyze the impact of work life balance on employee job satisfaction in ICICI Bank. The current context of globalization and the changing nature of work have provided the impetus for this topic. Intensification of work and technology that blurs the boundary between work and the rest of life provides challenges for one and all. Competition and customer pressure have forced companies to rationalize and restructure, and as a consequence less people have to do more work.

The need to research on work/life balance was realized by scholars and analysts during 1980s and 1990s when development of policies pertaining to benefits provided to the families of employees started surfacing. Organizations allows individual to spend more and more time with their families for their personal interest other than work (Kanter, 1977). Due to the changing work environment it is becoming obvious for human resource managers to seek solutions for proper work life balance and make strategies for the proper execution as the impact of these policies will be high commitment, increased employees performance and productivity, improving motivation, morale and satisfaction of the employees. Keeping pace with workplace trends and retaining employees with valuable knowledge is a concern for all employers.

### **INTRODUCTION**

Now-a-days managing work life balance is becoming difficult for both the employer and the employees particularly in service industry where the employees are loaded with work at workplace and at the same time they have to balance their personal life. Work life and personal life are two sides of the same coin. Greenhaus et al. (2003) operationalized the concept of work-family balance as comprising three components. These are:

- Time balance, whereby equal amount of time are devoted to work and family.
- Involvement balance, whereby equal amount of psychological involvement in work and family roles exist; and
- Satisfaction balance, whereby an equal level of satisfaction is derived from work and family roles.

In considering the impact of work life balance on employee job satisfaction it is at the core of issues central to human resource development. It is a measure of how happy employees are with their job and working environment. Keeping the morale high among employees can be of tremendous benefit to the company, as employees would be more likely to produce more, take fewer days off, and stay loyal to the company. The current work scenario is marked by intense pressure, constant deadlines, changing demographics, fast pace of change, increased use of

## REVIEW OF LITERATURE

- 1) **Effects Of Work Life Balance Practices On Employees Job Satisfaction: A Case Of Kenya Wildlife Service-** Esther Mutheu, Abraham Kiflemariam And Thomas Ngui: The purpose of this study was to determine the effects of work life balance practices on job satisfaction of employees at Kenya Wildlife Service. The study is important to the policy makers, since it provides useful information which can be used for government leaders when they make policy decisions regarding the implementation of work life balance practices. This study had three specific objectives. The first objective was to establish how job design has influenced job satisfaction at the Kenya Wildlife Service. The second objective was to determine the influence of flexi time to employees' job satisfaction at the Kenya Wildlife Service while the third objective was to examine how fringe benefits plan has influenced job satisfaction at the Kenya Wildlife Service. The study is guided by Structural Functionalism theory, Compensation Theory and Work enrichment Theory. This research used a descriptive survey whose target population consisted of KWS headquarters employee's in top management, middle management and support staff. The survey questionnaire was administered randomly to employees at the headquarter offices of Kenya Wildlife Service. Out of the 141 questionnaires distributed for this research, 105 questionnaires were returned giving a response rate of 74.5%. Data was analyzed in SPSS (Statistical Package for Social Sciences) and presented by use of means, standard deviations, correlations and regression coefficients. From the findings, the study established that work life balance practices positively impacted on job satisfaction of employees at Kenya Wildlife Service. Therefore the study recommends that the management at Kenya Wildlife Service to should formulate and implement work life balance practices that enhanced employee job satisfaction and should be escalated to all departmental levels. This study only concentrated on Kenya Wildlife Service thus the researcher recommends that a similar study be conducted especially on how work life balance practices has impacted on the job satisfaction of employees of other corporations for comparison of results.
  
- 2) **Impact Of Working Environment On Job Satisfaction-** Abdul Raziq And Raheela Maulabakhsh: In the modern era, organizations are facing several challenges due to the dynamic nature of the environment. One of the many challenges for a business is to satisfy its employees in order to cope up with the ever changing and evolving environment and to achieve success and remain in competition. In order to increase efficiency, effectiveness, productivity and job commitment of employees, the business must satisfy the needs of its employees by providing good working conditions. The objective of this paper is to analyse the impact of working environment on employee job satisfaction. The study employed a quantitative methodology. Data was collected through a self-administered survey questionnaire. The questionnaire is adopted from a previous validated survey. The target population consists of educational institutes, banking sector and telecommunication industry

operating in the city of Quetta, Pakistan. Simple random sampling is used for collection of data from 210 employees. The results indicate a positive relationship between working environment and employee job satisfaction. The study concludes with some brief prospects that the businesses need to realize the importance of good working environment for maximizing the level of job satisfaction. This paper may benefit society by encouraging people to contribute more to their jobs and may help them in their personal growth and development. Hence, it is essential for an organization to motivate their employees to work hard for achieving the organizational goals and objectives

## **RESEARCH METHODOLOGY**

### **1) OBJECTIVES OF STUDY**

- To study work life balance practices in the company.
- To find out job satisfaction level of employees.
- To find the impact of work life balance on job satisfaction.
- To suggest necessary measures for managing work life balance practices and job satisfaction.

**2) SCOPE OF STUDY:** To know the work life balance initiatives and its impact on job satisfaction of employees.

**3) RESEARCH DESIGN:** Exploratory Research.

A research design is a systematic approach that a researcher uses to conduct a scientific study. It is the overall synchronization of identified components and data resulting in a plausible outcome.

Just as the word implies, it explores, that is to find out about something by answering the question in “what” or “How” manner. This seeks to explain the subject matter being researched and tries to answer the question what, how and why.

**4) SAMPLE DESIGN:** Random Sampling.

Sampling means the process of selecting part of population. It is difficult for a researcher to study whole population due to limited time, resources and energy. There are Probability and non-probability type of sampling. It has sub-types inside it.

In this research, Random sampling is a part of the sampling technique in which each sample has an equal probability of being chosen. A sample chosen randomly is meant to be an unbiased representation of the total population..

**5) SAMPLE SIZE:** 60 employees of ICICI Bank

Sample size measures the number of individual samples measured or observations used in a survey or experiment. In this research 60 employees are surveyed.

**6) DATA TYPE:** Primary and Secondary Data

Data can be primary and secondary. In this research both primary data is used for studying the impact of work life balance on job satisfaction of employees at ICICI Bank.

**7) INSTRUMENTS USED:** Questionnaire

Questionnaires are taken from employee to know the satisfaction of job in the organization. The questionnaires filled by employees have the proper analysis of the satisfaction.

**8) ANALYTICAL TOOLS:** Pie charts, correlation, regression and Annova are being used to show the impact of work life balance on the job satisfaction of the employees at ICICI Bank.

**9) LIMITATIONS OF THE PROJECT**

- The area of interest is limited only to Ulhasnagar.
- The first hand information is collected using sample size of 60.
- The secondary data that is used in this study is based on the previous research done on the same or similar concepts by various researchers.
- The scope of the study is limited only to one bank i.e. ICICI Bank

**10) RESEARCH HYPOTHESIS**

***HYPOTHESIS-1:***

- H0- There exists no significant relation between work life balance and job satisfaction.
- H1- There exists significant relation between work life balance and job satisfaction.

***CORRELATION TEST***

**Correlations**

		Work Life Balance Score	JobSatisfaction Score
Work Life Balance Score	Pearson Correlation	1	.930**
	Sig. (2-tailed)		.000
	N	60	60
JobSatisfactionScore	Pearson Correlation	.930**	1
	Sig. (2-tailed)	.000	
	N	60	60

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

**INTERPRETATION:**

There is positive correlation between work life balance and job satisfaction.

The P value= .000 which is less than 0.05, therefore null hypothesis is not accepted.

**HYPOTHESIS-2:**

- H0- There exists no significant impact between work life balance and job satisfaction.
- H1- There exists significant impact between work life balance and job satisfaction.

**REGRESSION TEST**

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-8.180	74.582		-.110	.913
	Work Life Balance Score	.974	.050	.930	19.310	.000

a. Dependent Variable: Job Satisfaction Score

**INTERPRETATION:**

$Y=a+bx$

Where y=dependent variable

a=alpha

b=beta

x=independent variable

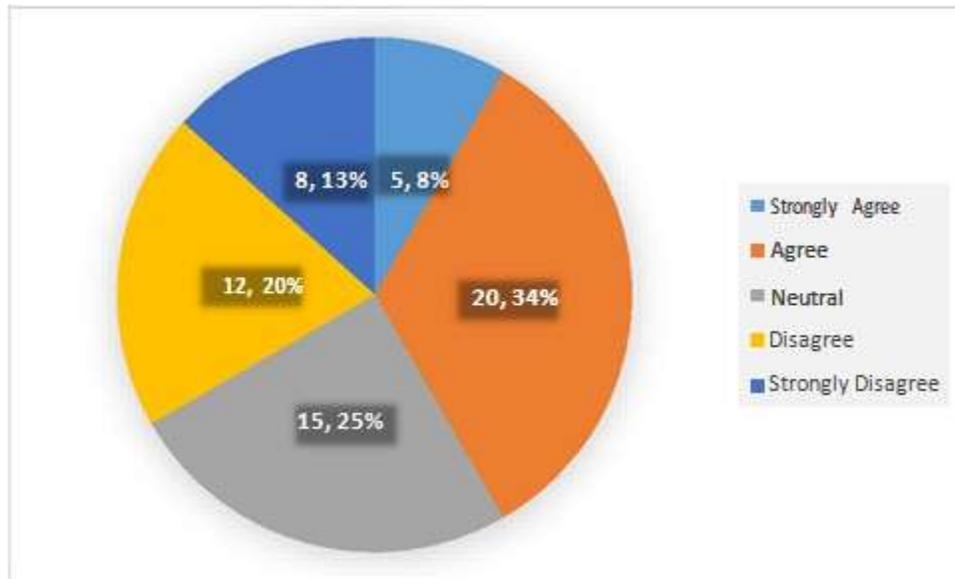
Job satisfaction= -8.180+.974\*work life balance.

The work life balance impacts 97% on job satisfaction.

-8.180 level of job satisfaction will still exist even if work life balance is absent.

## DATA ANALYSIS AND INTERPRETATION

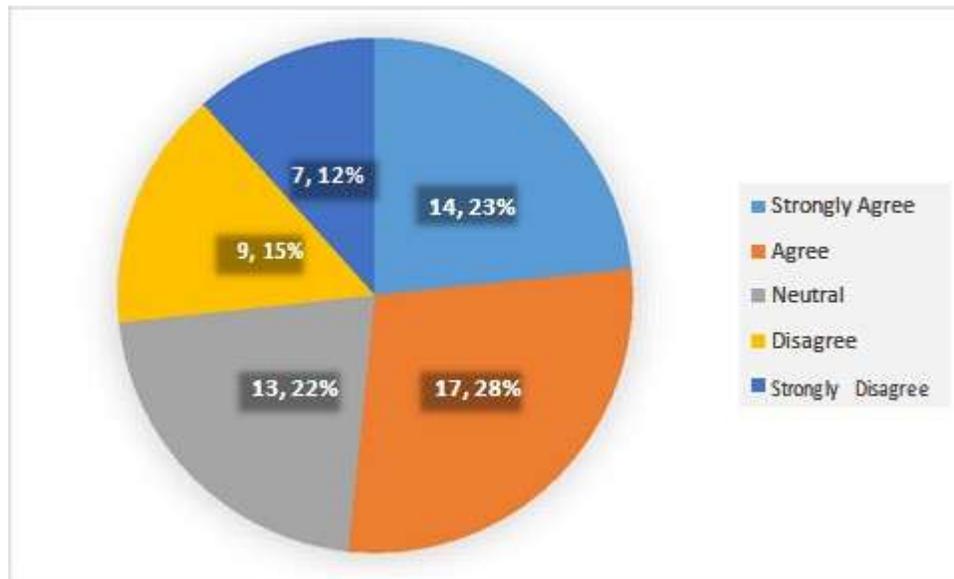
### 1) I CAN MAKE ENOUGH TIME FOR MYSELF BY PRESERVING THE BALANCE BETWEEN MY PROFESSIONAL LIFE AND FAMILY LIFE:



### INTERPRETATION:

- 8% employees strongly agree and find the time for themselves striving the balance between their personal and professional life.
- Whereas 34% employees agree with the statement of preserving the time for themselves and striving the balance between their personal and professional life.
- 25% of employees neither agree nor disagree with the given statement.
- While 20% of the employees disagree with the statement and find it difficult to manage there personal and professional life.
- And 13% of employees strongly disagree with the above statement.

## 2) I FEEL GOOD ABOUT WORKING AT THIS COMPANY:



### INTERPRETATION:

- 23% of the employees strongly agree the statement and feel very good about working in the company.
- While 28% of people agree the given statement.
- 22% employees neither agree nor disagree the given statement.
- 15% of the employees disagree the statement and do not feel good about working in the company.
- And 12% of employees strongly disagree the above statement.

## **FINDINGS**

- While conducting a survey, 35% employees were at executive/administration/management level, while 5% and 7% were clerical/secretarial or service/maintenance respectively. 17% and 13% are skilled craft and technical employees respectively. And 23% employees are at some other level. Therefore the highest respondents are executive/administrative/management employees.
- Nearly 40% of employees were satisfied and can handle the situation or conflict that arise from there family or job. Whereas 33% of the employees were still striving hard to manage the conflict and situations arriving from there personal and professional life.
- According to the correlation test, there is a significant relationship between work life balance and job satisfaction.
- There is 97% of impact of work life balance on job satisfaction, according to the regression test.

## **CONCLUSION**

Work life balance is not “one-size-fits-all” type of trend; rather it is a trend which is viewed differently by everyone because people have unique perception of their achievements and enjoyments. Also, work life balance is changing on a daily basis, and there is no universal formula on how to achieve a perfect balance between work and life. Rather work life balance is focused more on how to achieve something in order to enjoy something. Work life balance is all about providing employees with more flexibility when it comes to their working hours. The level of job satisfaction for each person is different; it depends on the perception of how they understand and value the job. Many aspects that affects it; and the more aspects that meet the employees expectations, the level of employees job satisfaction will be higher. Also, if the aspect that an employee expects is less than their expectation, the level of employees job satisfaction will be lower, which then will be reflected in their work performance and achievement, discipline and their work morale. So in conclusion, job satisfaction is the individual insight about how their job can fulfil their needs and expectation. The insight will

be reflected in the work. If the insight is good, which means the job satisfaction is good, the work performance and attitude will be good. And so is the opposite.

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