ISSN 2347-2839

International Journal of Applied Management Research

Vol. 5, No. (1 & 2), 2019

Department of Management, North- Eastern Hill University,
Tura Campus, Tura- 794002, Meghalaya, India

International Journal of Applied Management Research

Vol. 5, (No. 1 & 2), 2019

Published by:
Department of Management, North- Eastern Hill University, Tura Campus (India)

ISSN: 2347-2839

International Journal of Applied Management Research

Journal of Department of Management, NEHU, Tura Campus, Meghalaya (India)

Volume 5, Number 1 & 2

CONTENTS **PAGE NO.**

Editorials

It is indeed a matter of our great pride to present before you these combined issues (number one and two) of volume five of the *International Journal of Applied Management Research.* The present volume of the journal supported and enriched by prominent research scholars which will certainly provoke the desired research motivation to the potential researchers and readers interested in the subject.

Research is game of thinking persons to build up critical thinking. The problem solving and critical thinking refers to the ability to use knowledge, facts, and data to solve the problems effectively. This doesn't mean one need to have an immediate answer, it means researcher is able to think on his feet, judge the problems and find solutions. The ability to develop a well thought out solution within a reasonable time frame is a skill that researcher value judgmentally. These skills include critical thinking and problem solving which ultimately aggravate a researcher to develop critical thought process in their cognizance. Critical research thought process is the ability for an individual to be exposed to a subject, and be able to objectively form a rational conclusion. The thinkers must gather facts, concepts, points of view and other related issues to form an unbiased opinion about the subject of investigation. With this end in view, the current volume is a collection of research papers which after the review process have found a required place in the present volume of our journal. These papers addressed diverse issues of implication relating to management sciences. In our academic pursuit for enthusiastic cause to bring about an uprising management research work and keeping in view the business research requirements, editorial board have evolved self-motivated and positive efforts in the publication process. The acceptance and support of the entire process has entailed prominent research workers which need to be acknowledged. The publication of this volume could have been possible because of tireless support by our advisory board members and thoughtful efforts rendered by our esteemed colleagues of the department and the editorial board members.

I would like to place on record my indebtedness to the scholars and research workers who have contributed their valuable research papers and who have shown overwhelming response and passion to associate with us as our esteemed reviewers. As a matter of fact, the activities on the way to wisdom of the department assist our dreams and vision. The editorial board has acknowledged the enormous obligation of persistent commitment to the cause of academics and looking forward the valuable and applied suggestions to reach near to our endeavour.

With warm wishes.

(J. U. Ahmed)
Chief Editor, IJAMR

Cover

ISSN 2347-2839

International Journal of Applied Management Research

Vol. 5, No. (1 & 2), 2019

Department of Management, North- Eastern Hill University,
Tura Campus, Tura- 794002, Meghalaya, India

Editorial Board

Guidelines for Authors

The Journal

International Journal of Applied Management Research (IJAMR) is a bi-annual, peer-reviewed international journal published by the Department of Management, North- Eastern Hill University, Tura Campus, Meghalaya (India) and is committed in providing a platform to the academicians and practitioners of the globe to present their academic understanding and development in management and its allied areas to their counterparts across the globe.

Publication Process

The manuscript (research papers/articles/case studies etc.) submitted by the authors for publication will be initially reviewed by a review committee for its suitability. The committee reserves the right to reject/return any manuscript if it is found not suitable for publication without specifically mentioning the reasons for doing so. Manuscript found suitable will be sent to two or more reviewers for blind review. The compiled comments of the reviewer will be sent to the first author (unless otherwise specified) to make necessary corrections and modifications. The revised paper should be resubmitted within one month for publication. On publication each author will receive a copy of the journal free of cost.

Submission Guidelines

1. The paper should be original and unpublished work of the author(s). The paper should not be under consideration elsewhere for publication
2. Paper should focus on management and its allied areas with sound and rigorous methodology and analysis. The paper should be either concept based or empirical with practical applicability or policy implications.
3. The author(s) should send a soft copy of the manuscript in MS Word to journalmbanehu2012@gmail.com
4. The manuscript with 1.5 spacing must be typed on a standard A-4 size paper, with 12 font size and in Times New Roman. The margin should be 2.5 cm on all sides.
5. The first page of the article should have only the title of the article; name, designation, affiliation, address and contact details of the author(s). Except first page author's reference should not be found on any other page.
6. Second page should have title of the article and an abstract (not exceeding 250 words) clearly depicting the theme, objective, methodology and key findings and policy implications of the research. Around 5- 6 key words of the article should be written below the abstract.
7. All tables, figures, pictures, illustrations should be clearly numbered and should be placed immediately below its reference in the text of the article.
8. For all bibliographical citations and references, APA style of referencing should be followed.

Copyrights

All the copyrights of the manuscript rest with the Department of Management, NEHU, Tura Campus. Authors are required to transfer all the copyrights of the manuscript to the department as well as certify that all the copyright requirements relating to the material used (directly and indirectly) in the manuscript have been duly met by them. The responsibility of the views expressed in the manuscripts (research papers/articles/case studies etc.) of this journal will lie with the respective author(s) and will not reflect the opinion of the department and the university.

International Journal of Applied Management Research

The Department

The Department aspires to be an eminent Institution in the field of Education and research in the Region, engaged in building and promoting contemporary Management knowledge, Development of Management skills and inculcating professional attitude among motivated individuals of North-East in particular and of other parts of country in general for preparing them to assume positions of responsibility and leadership in all walks of mercantile endeavors. This spirit is very much enshrined in its beautifully crafted mission. The Department is established with an objective to provide the students with an appropriate combination of conceptual framework and practical insight into managerial challenges and business opportunities for grooming Managers of 21st Century. The issues relating to faculty, research and quality education constitute the core of an educational process. Management Education is no exception. The competency and dedication of teachers, the constant upgradation of the syllabus, the level and quality of inputs, performance levels are some of the basic determinants putting litmus to our performance. Department continuously invites business academics and professionals from industries to update our students with the latest happenings in more holistic perspectives

In its continuous effort to enrich the management discipline, the department introduces IJAMR with the following objectives :

Objectives of IJAMR:

* To promote empirical research in various functional areas of management
* To provide a platform to researchers/practitioners of management and its allied areas to disseminate new management models and theories.
* To develop and reorient management thought process from inter and trans- disciplinary perspective.
* To encourage research towards developing culture and nation specific management interventions.

Address for Correspondence :

Managing Editor
International Journal of Applied Management Research (IJAMR)
Department of management,
North- Eastern Hill University, Tura Campus- 794002
E- mail: journalmbanehu2012@gmail.com

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 1 - 10

IPO under Pricing and Its Determinants: The Case of Dhaka Stock Exchange

Tasmina Chowdhury Tania[1] , Rabab Fatema[2] & Md. Hassan Uddin[3]

[1]Assistant Professor, Department of Business Administration, Shahjalal University of Science & Technology, Sylhet, Bangladesh; [2]MBA, Department of Finance, University of Chittagong, Chittagong and [3]Associate Professor, Department of Finance,Patuakhali Science and Technology University, Patuakhali, Bangladesh

Mail: hasan14860@gmail.com

ABSTRACT :

This paper aims to investigate determinants of IPO underpricing in the Stock market of Bangladesh. For this purpose, this paper applies multiple regressions for a data set of 75 companies which have been listed with DSE during January 2011 to July 2017. This paper finds that subscription ratio and timing of offer significantly affect underpricing of IPOs in DSE. On the other hand, age and size of the firm, floated shares and premium are found insignificant in DSE.

Key Words : Bangladesh, Initial Public Offering (IPO), Dhaka Stock Exchange (DSE), Underpricing.

INTRODUCTION :

The initial public offering (IPO) is a crucial part in a firm's life and a central issue in corporate finance (Thakur, 2015). That's why this issue has become an attractive issue in the most of literature. The underpricing of initial public offering (IPO) which indicates high initial return is a common phenomenon to most stock markets in both developed and emerging economics (Islam, Ali, and Ahmad, 2010) and (J.R, 1984). A common understanding is that underpricing of IPOs is an irrelevant to efficient market hypothesis. Underpricing may hamper emerging firms raising capital for expansion. According to Ritter (1984), the period a firm chooses to go public largely affected the level of underpricing. Most of the IPO's in Bangladesh are oversubscribed that creates high demand of IPO among investors. This high demand is created because there is a chance to earn high return on first trading day. This situation is referred as underpricing in Initial Public Offering. The underpricing degree differs from one related variable to another. There were several studies on Malaysian new stock offers such as those by Dawson (1987), Othman Yong (1991 and 1996), Sufar (1987), Ku Ismail *et al*. (1993), Yeap (2006), Taufil (2007) indicate at the time of initial listing there are effective returns received by investors. Hoque and Musa (2002) found that the IPOs of DSE during the period between 1994 and 2001 was largely underpriced (285.21%).

The goal of this study is to pursue the factors affecting the IPO underpricing in Bangladesh and to locate the most effective factors which can help the investors before taking rightful investment decision. The study also finds the price behavior of IPO of DSE(Dhaka Stock Exchange) in Bangladesh during Jan 2011 to July 2017. In Bangladesh, IPO has a dual listing characteristic in both DSE and CSE(Chittagong Stock Exchange). Thus, the study will be interesting to know about the IPO underpricing as well as price behavior of initial offerings.

2.0 **LITERATURE REVIEW :**

Initial public offering(IPO) is the recent most researched issues in the area of "finance. Many evidence documented that the IPOs' tendency provides an abnormal returns to investors who purchased at initial offering. Evidence also documented that the US market mostly faced an abnormal initial returns. In Asia and Latin America, the underpricing tendency in IPO had been particularly diffusive.

The levels of underpricing in initial public offerings (IPOs) and its determinants of Dhaka Stock Exchange (DSE) as well as key trends in the levels of underpricing and overpricing are pointed out on a year to year and industry to industry basis through multiple regression model (Islam*et al,* 2010). Author took underpricing/overpricing, age of the firm, size of the firm, size of the offer, timing of the offer and types of industry as a variable to determine the level of underpricing at initial public offering. The study found out the price behavior of IPOs of the Dhaka Stock Exchange(DSE) through various predictors during the period of 1995-2005. The study found that the level of underpricing in Bangladesh is comparatively high rather than that of other Asian and advanced stock market.The IPO performance is examined by Younesi, Ardekani and Hashemijoo (2012) in Malaysian IPO's during year 2007 to 2010 and also strived to decode if there any correlation existed between return and its determinants. The author applied correlation analysis method to conduct this study and found that underpricing existed in the first day of trading during particular period, but the degree of under-pricing was dramatically decreased in comparison with that was shown in previous studies and Malaysian IPOs followed anarchy when their performances were not predictable by return determinants for the period from 2007 to 2010. The study took age of the firm, size of firms, total shares offered, shares offered price and Kuala Lumpur Composite Index as variables. The analysis result between Age of firms, Size of firms, Total unit offered, Offering price and KLCI index movement and IPO initial return have no significant relationship.

Beatty and Ritter (1986) argue that expected underpricing is an increasing function of uncertainty. IPO underpricing of a better-known firm is lower. A large firm is usually better known than a smaller one. So, firm size can be an effective matter for the underpricing situations.

Welch, Teoh and Wong(1998), studied that positive accruals could report earnings to the issuers of initial public offerings(IPOs) in excess of cash flows and main variables were discretionary current accruals(DCA), INDC, IDLA, INDLA. The author used Panel regression model as a method for finding the higher discretionary accruals in the IPO which had poorer stock return performance to the issuers. The studied mainly found that discretionary current accruals were under the control of management and proxy which are high around the IPO relative to the non-issuers.Bansal and Khanna (2012), conducted research in India at Bombay stock exchange during April 2000 to December 2011. Multiple linear regressions were used to differentiate between the relationship with several independent variables and dependent variable i.e. independent variables were firm's age, issue size, market capitalization, offer timing, subscription rate, number of shared offered, ownership structure, private firms(dummy variable), IPO year(dummy variable), pricing mechanism(dummy variable) and dependent variable was level of underpricing. The study found that Investors should not hold new issues very long as the highest component of the initial returns was found on the first day of trading and that the average original returns turn negative on the fourth day of trading.

Popescu and Zhaojin(2011), studied that initial public offering(IPO) liquidity improved through the co-managers "information" services by taking a sample of IPOs from the beginning of 1993 to the end of 2005. The author conducted the research through descriptive statistics and panel regression model. The paper found a high number of co-managers in the syndicate were involved in a lower spread, lower adverse selection costs, and a lower probability of informed trading. Ritter and Welch (2002) argued that asymmetric information is not the primary driver of many IPO phenomena and no rational and agency conflict explanation could be helpful for this.

Kayani andAmjad (2011), examined the relationship between initial underpricing and investor interest before and after the IPO date in the Pakistan capital market and also assessed the trading volume in the Pakistan Secondary market. Regression analysis method was used to find the aforementioned relationship. Finally, the author found that initial underpricing is positively related to firm size, float, ex-uncertainty, and market volatility and offer size is negatively related with initial returns.

The degree of under pricing in initial public offering in Bangladesh both initial returns(IR) and market adjusted initial return(MAIR) by using multiple regression model and functional model (Khan and Chowdhury, 2017). The study found that issue price, oversubscription, market return and size of the firm had impact on underpricing and they had also a significant relationship with market adjusted initial return in Bangladesh.

Islam, Malik andUddin(2011), conducted a study to describe the price performance of IPO according to terms i.e. both long run and short run and documented that there was outperformance in short run as well as underperformance in long run of IPOs in the secondary market of Bangladesh. Major variables were size of IPO issue, initial return and sponsor capital. Descriptive model was used to analyze those major variables. The author tried to find the degree of performance in both long run and short run. There was much higher underperformance for IPOs issued in some year, the industry and market significantly outperformed which IPOs were belonging to bank and non-bank financial institutions.

The behavior of IPO underpricing in Bangladesh was analyzed by Thakur (2015) through descriptive statistics and regression analysis model by introducing some new variables such as transaction size multiple(TSM), matching firm effect(MFE), deliberate underpricing from the average uniformed value of IPO(DelUP), the natural logarithm of investor sentiment factors(LnISenti) and the IPO initial return. The author found the existence of abnormal return in market, the relative size of issue and the deliberate underpricing by issuers could explain as well as contribute to abnormal initial returns on IPOs.

Zheng and Stangeland (2007) took adjusted actual growth rate in sales, EBITDA, earnings, IPO underpricing, retention ratio, the log of market value, sustainable growth rate, the intensity of RandD relative to sales, high-tech industry(dummy) as variables to conduct research on the relationship between the IPO underpricing which related to post IPO growth in sales and EBITDA. The author used the regression model as a method to analyze the relationship and found there was a positive relationship with IPO underpricing related to growth in sales and EBITDA.

Asymmetric information, premarket book-building process and the management's stakes in the offering were important to IPO underpricing and also affected the level of underpricing.Mutual IPOs appeared more underpriced than stock insurance IPOs, but this difference was related to the differences in pre-issue managerial ownership (Wang and Ligon, 2009).

Kutsuna, Smith and Smith(2009) studied that the price formation process of JASDAQ IPOs is more transparent than in the United States. The methods used in this study were descriptive statistics, correlation analysis and also panel data regression model and found that under adjustment of offer prices was substantially reserved in the aftermarket.

Islam(1999) analyzed the behavior of IPO underpricing in Bangladesh in his research paper. To show the relationship between dependent and independent variables [i.e. Transaction size multiple(TSM), Matching firm effect(MFE), Deliberate underpricing from the average uniformed value of IPO(DelUP), The natural logarithm of investor sentiment factors (LnISenti) and The IPO initial return] author employed regression Analysis and descriptive Statistics as analyzing tool. There was an existence of abnormal return in the market, the relative size of the issue and the deliberate underpricing by issuers are implied an abnormal initial returns on IPO.

Singh and Kumar (2008) analyzed short and long run underpricing of IPOs in the Indian Capital markets by looking at different factors affecting them. The study proposed a model of underpricing taking oversubscription variables along with age and issue size. They have performed industry wise analysis from the time period of Jan. 2006 to Oct.2006 by taking 116 IPOs. The study showed that Indian Capital markets were found to follow industry specificwaves. The sectors which were performing well were more underpriced in short run as well as perform well in long run.

3.0 METHODOLOGY :

This study will conduct to find the determinants of underpricing of IPO in Bangladesh capital market through examining new companies which were listed in DSE for the period Jan 2011 to July 2017. This study tries to examine the various factors which can determine the underpricing in Bangladesh capital market. Among those factors age of the firm, size of the firm, timing of offer, floated share, subscription ratio, premium have been considered in this research. All data that will be used are secondary data and these data are collected from: DSE, CSE and SEC website, Prospectus, DSE library and Annual Reports of the listed companies. The research has been conducted on 75 newly listed companies, taken from 93 companies which were listed on DSE over the period of 2011 to 2017.

Table 1
Selected IPOs for the Study

Year	No. of Total IPOs Issued		No. of Selected IPOs
	Fixed Pricing Method	Book BuildingMethod	
2011	12	2	7
2012	14	0	10
2013	17	0	15
2014	17	0	17
2015	12	2	13
2016	10	1	9
2017	6	0	4
Total	**88**	**5**	**75**
Total IPO issued	93		

Note : Among 93 companies 18 companies will not be considered due to lack of information that required in this analysis.

3.1 METHOD :

To reach the goal of the study, all secondary data used that were available in website for the period from Jan 2011 to July 2017 are included in the sample. The sample of the study comprises 75 companies from the study period and mutual fund IPOs are ignored in the study.

Based on data, the relationship between underpricing of IPOs, age of the firm, size of the firm, timing of offer, floated share, subscription and premium are analyzed by cross-section analysis. To test the relationship between underpricing and the different factors related to price, first considers mean underpricing through descriptive analysis and then analyzed underpricing/overpricing through regression model. To detect the model six predictors are employed in this study. The study considers Multiple Regression Model to show the relationship between underpricing and different factors that indicates the level of underpricing/overpricing in IPOs.

The proposed hypotheses are following as-

H_1: IPOs listed in DSE are underpriced.

H_2: There is a positive relationship between age of firm and degree of underpricing.

H_3: The larger the size of firm, the lower the underpricing.
H_4: There is a relationship between timing of offer and degree of underpricing.
H_5: There is a positive relationship between floated shares and underpricing.
H_6: There is a positive relationship between subscription rate and degree of underpricing.
H_7: There is a positive relationship between premium and the degree of underpricing.

3. 2 MODEL :

$$UND = \alpha + \beta_1 AOF + \beta_2 SOF + \beta_3 TOF + \beta_4 FS + \beta_5 SR + \beta_6 PRE + \varepsilon$$

Where, UND is the Under pricing/Overpricing which is determined by the difference of the closing price at the specific date with the offering price and divided by the offer price.This underpricing is actually indicates initial return of the stocks.

$$R_{j,t} = [P_{j,t} - P_{j,0}] / P_{j,o}$$

AOF is the age of the firm which determines the Number of years has taken from the date of incorporation to the date of IPO. Size of the firm (SOF) is the Total Asset (TA) of the company at the time of issuance and then taking log transmission of the variable.

$$SOF = LOG(TA)$$

Timing of the offer (TOF) is the difference between the date of listing and the date of offering (Singh and Mittal, 2003 and Taufil, 2007). The floated share (FS) is calculated by the number of share issued in the IPO divided by total number of shares of the company after IPO. SR is the subscription ratio which is calculated by the number of shares demand divided by the number of issued shares. Premium (PRE) is the difference between offer price and face value. Premium has an effect on the price of initial offerings so the study considers this variable (Khan & Chowdhury, 2017). ε is the error term of the model.

4.0 RESULT AND INTERPRETATION :

The sample data is considered newly listed companies in DSE between the period of 2011 to 2017. Table 2 identifies the degree of underpricing for every single period as well as the whole period from 2011 to 2017. The highest degree of underpricing is provided in the year 2017 (mean 454.3% with the standard deviation 457.8% and the maximum to minimum range is 1108.0% to 108.0%) and the lowest degree of underpricing was apparent in the year 2015 (mean 162.15 with the standard deviation 125.8% and the maximum to minimum range is 384.0% to 2.0%). For the whole study period, the average level of underpricing has been documented 234.1% with the standard deviation 261.9% which ranges from -5.0% to 1531.0%. The maximum degree of underpricing indicated 1531.0% in the year 2012 and the minimum level of underpricing was -0.5% in year 2012 (overpricing).

Table 2
IPO Underpricing for Individual Year from 2011-2017

Year	NO. of IPOs	Mean	Std. Deviation	Minimum	Maximum
2011	7	215.5%	274.1%	213.0%	274.1%
2012	10	230.2%	468.4%	-0.5%	1531.0%
2013	15	234.4%	192.1%	2.5%	721.0%
2014	17	274.5%	221.8%	132.0%	673.0%
2015	13	162.1%	125.8%	2.0%	384.0%
2016	9	182.1%	163.4%	-5.0%	501.0%
2017	4	454.3%	457.8%	108.0%	1108.0%
Total	75	234.1%	261.9%	-5.0%	1531.0%

Source : Authors' calculation

4.1 UNDERPRICING/OVERPRICING STATUS :

This section represents the level of underpricing and overpricing in the Dhaka Stock Exchange. Table 3 showing the overall level of underpricing at Dhaka Stock Exchange was 243.95% with the standard deviation 262.79% and the level of overpricing was 1.97% with the standard deviation 2.62%. There were 72(96%) IPOs underpriced and only 3(4%) IPOs overpriced.

Table 3
IPO Underpricing/Overpricing during 2011(Jan) to 2017(July)

	No. of Companies	Mean level of Underpricing	Standard Deviation	Minimum	Maximum
Underpricing	72	243.95%	262.79%	2.0%	1531.0%
Overpricing	3	1.97%	2.62%	-5.0%	0.00%
Total	75	234.1%	261.9%	5.0%	1531.0%

Source : Authors calculations

The maximum level of underpricing was 1531.0% at the DSE and the minimum level of underpricing was 2.0%. The maximum level of overpricing was 0.00% and the minimum level of overpricing was -5.0%.

4.2 REGRESSION ANALYSIS :

Multiple regression analysis was used to find out whether age of the firm, size of the firm, timing of offer, floated shares, subscription ratio and premium have any significant effect on the degree of underpricing or overpricing at Dhaka Stock exchange.

Table 4
Co-linearity Statistics

Independent Variable	Tolerance	VIF
Age of the firm (AOF)	0.844	1.185
Size of the firm(SOF)	0.547	1.763
Timing of offer(TOF)	0.887	1.127
Floated share (FS)	0.694	1.441
Subscription ratio (SR)	0.512	1.954
Premium (PRE)	0.535	1.870

Source : Authors calculations

Multicolinearity has been checked for every model of the study for finding the linear relation between two or more independent variables. Variance inflation factor (VIF) is used to measure the strength of the multicolinearity. Table 4 shows that VIF result is less than 10 suggested no multicolinearity problem in the independent variables. The tolerance result is near to 0 (0.1-1) indicates no multicolinearity problem in the regression model. Tolerance and VIF lies in acceptable range so there is no multicolinearity problem in this regression model.

Table 5
Determinants of POU nderpricing

Independent Variable	Beta	*t*-test	*P*value
Constant	-0.124	-0.019	0.985
Age of the firm	-0.023	-0.724	0.471
Size of the firm	0.286	0.435	0.665
Timing of offer	-0.078	-2.214	**0.030**
Floated share	0.560	0.309	0.758

Subscription ratio	0.066	3.891	**0.000**
Premium	-0.030	-1.901	0.062
R		0.637	
R^2		0.407	
Adjusted R^2		0.354	
F-statistics	7.732		0.000
Durbin-Watson	1.858		

Source : Authors calculation

Note : Underpricing is measured through Initial Returns of initial public offerings (IPOs) which is indicated as .

Table 5 represents the regression analysis results, age of the firm found to be insignificant with a negative beta at 5% level of significance (P= 0.471) that indicates a negative relationship between age of the firm and the degree of underpricing at DSE during the study period. Therefore hypothesis 2 is not substantiated. Size of the firm is found to be insignificant at 5% level of significance (P= 0.665) that indicates there is a positive relationship between size of the firm and degree of underpricing. Therefore, hypothesis 3 is also not substantiated. The floated shares (P= 0.758) and premium (P= 0.062) is also found to be insignificant at 5% level of significance. This indicates that there is a negative relationship between floated shares and the degree of underpricing and same effect on premium. Therefore, hypothesis 5 and 7 are not substantiated. Timing of the offer is found to be significant at 5% level of significance (P = 0.030) with a negative beta. This indicates that there is a positive relationship between timing of offer and the degree of underpricing as well as implies that when the timing of offer increases the degree of underpricing also increases. Subscription ratio has also found to be significant at 5% level of significance (P = 0.000[a]) with a positive beta. This indicates that the higher the subscription ratio the higher the degree of IPO underpricing, consistent with the study of Chahine (2007), Sohail and Raheman (2009). Therefore, the hypothesis 4 and 6 are substantiated.

The R Square is 40.7% which implies that the independent variables (age of the firm, size of the firm, timing of offer, floated shares, subscription ratio and premium) can explain 40.7 % variations of the degree of underpricing at Dhaka Stock Exchange. This indicates that there are some other factors that may explain 59.3% variations of the degree of underpricing at Dhaka Stock Exchange. The adjusted R Square is 35.4% which is lower than R Square(40.7%) that implies the good fitness of the model. The F value is 7.732 found to be significant at 5% level of significance (Sig. t = 0.000[a]). This indicates the regression model is significant with the dependent variable and independent variables. The Durbin

Watson also lies in the acceptable range (DW = 1.858). If DW is less than 2 that indicates there is no auto correlation or serial correlation in the data. This study has no auto correlation problem in data.

5. CONCLUSION :

This study examines the degree of underpricing and factors influencing the underpricing of initial public offering (IPOs). Out of 93 initial public offerings, 75 IPOs have been selected from 2011 to 2017 for the study.

The results concluded that IPOs are underpriced at DSE in Bangladesh capital market during the study period. Hoque and Musa (2002) find that during the period between 1994 and 2001, the IPOs of DSE was largely underpriced at 285.21 percent. At the same period the degree of underpricing in Malaysia was 46.44% (Yeap, 2006), Singapore and Turkey were 31.4% and 13.6% respectively (Tim et al., 2000), India was 96.56% (Singh & B, 2003) and in US market was 22% (Lowry et al., 2006). The study concludes that the highest degree of underpricing has been observed in year 2017 when market was in the bullish trend. And the minimum level of underpricing is observed in year 2015 when the market was in the bearish trend. The average under picing is 234.1%for the period 2011 to 2017. Out of 75 companies 72 companies are underpriced and 3 companies are overpriced.

The study considers six predictors to examine the effect of those predictors on the underpicing of initial offerings. The predictors are age of the firm(AOF), size of the firm(SOF), timing of offer(TOF), floated shares(FS), subscription ratio(SR) and premium(PRE). The study finds that subscription ratio and timing of offer have significant effect on underpricing of IPO in DSE. Other predictors are age of the firm, size of the firm, floated shares and Premium have found no significant effect on underpricing of IPO. From this study it can be conclude that subscription ratio and timing of offer has positive impact on underpricing of initial public offering in Bangladesh Capital market.

This study does not address the deviations in the market environment, investor behavior, macroeconomic phenomena, shifting and implementation of Government and regulatory framework, sector of the company while formulating the model.

REFERENCE :

Bansal, R., and khanna, A. (2012). Determinants of IPOs initial return: Extreme analysis of indian market. *Journal of Financial Risk Management*, 1,(.4), 68-74.

Beatty, Randolph P., Ritter, Jay R., (1986). Investment banking, reputation, and the underpricing of initial public offerings. J. Financ. Econ. 15, 213–232.

Chahine, S. (2007). Investor interest, trading volume, and choice of IPO mechanism in France. *International Review of Financial Analysis*, 16, 116– 135.

Islam, D. M. (1999). The behaviour of IPO underpricing in Bangladesh. *Journal of Finance and Banking,* 5,1 and2.

Islam, M. A., Ali, R., and Ahmad, Z. (2010). Underpricing of IPOs: The case of Bangladesh. *Global Economy and Finance Journal*,. 3 (1), 44-61.

Islam, M. S., Malik, M., and Uddin, M. R. (2011). Long run price performance of IPO stocks in Bangladesh. *Journal of Finance and Banking*; 9, (2) .

Islmail, K. N., Abidin, F. Z., and Zainuddin, N. (1993). Performance of new stock issues on the KLSE. *Capital Market Review*, 1, (1), 81-95.

J.R, R. (1984). Signaling and the evaluation of unseasoned new issue: A comment. *The Journal of Finance,* 39, 1231-1237.

Kayani, S., and Amjad, S. (2011). Investor Interest, under-pricing and trading volume in Pakistan secondary market. *Business and Economics Journal*, 3.

Khan, F. A., and Chowdhury, T. S. (2017). Modeling of IPO underpricing in Bangladesh. *International journal of business and social research*, 07, (07,), 01-10.

Lowry, M, Micah S. Officer and G. William Schwert, (2006), The variability of IPO initial returns. Working Paper, University of Southern California, Los Angeles, CA 90089.

Kutsuna, K., Smith, J. K., and Smith, R. L. (2009). Public information, IPO price formation, and long-run returns: Japanese evidence, *The Journal of Finance*, 64, (1), 505-546.

M, D. S. (1987). Secondary stock market performance of initial public offers: Hong Kong, Singapore and Malaysia, *Journal of Business Finance and Accounting*, 65-76.

M, Popescu, M., and M, Z. X. (2011). Co-managers, information, and the secondary market liquidity of initial public offerings, *Journal of Financial Management*, 40, (1), 199-218.

MK, S., and A, R. (2009). Determinants of under-pricing of IPOs regarding financial and non-financial firms in Pakistan. *European Journal of Economics, Finance and Administrative Sciences,* 15, 62-73.

Mohd, K. T. (2007). *The long run performance of initial public offerings in Malaysia*. MFA 9th Conference,. Kuala Lumpur.

Ritter, Jay R., Welch, Ivo, 2002. A review of IPO activity, pricing, and allocations. *Journal of Finance* 57 (4), 1795–1828.

Singh, B., and B, P. M. (2003). Underpricing of IPOs: Indian experience. *The ICFAI Journal of Applied Finance*, 9 (2), 29.

Singh, p., and Kumar, B. (2008). *Short run and long run dynamics of initial public offerings : Evidence from India.* Working Paper Series IIM Ahmadabad .

Teoh, S. H., Welch, I., and Wong, T. J. (1998). earnings management and the long run market performance of initial public offerings. *The journal of finance*, LIII, (6).

Thakur, P. (2015). A research paper on the impact of regulatory framework on IPO underpricing. *Journal of Business Management and Social Sciences Research*, 4, (2).

Tim, L., and Ritter, J. R. (2002). Why don't issuers get upset about leaving money on the table in IPOs? *Review of Financial Studies*, 15, 413-443.

Wang, Q., and Ligon, J. A. (2009). The underpricing of insurance IPOs. *Financial Managemen*t, 38, (2), 301-322.

Younesi, N., and Ardekani, A. M. (2012). Performance of Malaysian IPOs and impact of return determinants. *Journal of Business Studies Quarterly*, 4, (2), 140-158.

Zheng, S. X., and Stangeland, D. A. (2007). IPO underpricing, firm quality, and analyst forecasts. *Financial Management*, 36, (2), 45-64.

Yeap, M. (2006). *An empirical investigation into the underpricing of IPOs in the new millennium in Malaysia*. An unpublished MBA thesis, Nottingham Trent University, UK.

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 14 - 24

Work-life Balance of New Age Women Professionals (Evidence from National Capital Region (NCR) of India)

Rao Kushagra Yadav[1] and S. S. Khanka[2]

[1]211 Civil Lines, Gurugram 122 001, Haryana & [2]University School of Management & Entrepreneurship (USME), Delhi Technological University, East Delhi Campus, Delhi ,

Email: sskhanka2@gmail.com

ABSTRACT :

Women in India are no longer abla i.e. weak and pitiable. They now coming out of four walls have been joining in ever increasing numbers at all positions in almost all professions. However, there has been research evidence to believe that women by nature have been caring for others and hence, have been experiencing the problem of what is termed as work-life balance. It is against this backdrop, the present study makes a modest attempt to investigate into matters relating to work-life balance of new age women employees working in NCR. The study finds that women especially belonging to middle working age have been experiencing more work-life imbalance and suggest measures to be taken to properly balance work and life (home) by both women employees and employers.

Keywords **:** Work-life Balance, Stress, Absenteeism, Dual Roles, Gender Stereotype, Social Beliefs.

1. INTRODUCTION :

Work-life balance has emerged as an ever research engaging topic in the recent times. The reasons attributed for this include the increasing women literacy, ever increasing integration of women in workplace, ever rising number of working couples, transformation of family structures from joint to nuclear, etc. However, women employees have also been experiencing conflicting roles as employee and home maker (Conlin2000). This, in turn, affects their work life and home life with different manifestations. This has been found harmful for both women employees and employer (Buddhapriya2009: 3-10). Hence, there has been a need for striking a good balance, to the extent possible, between work life and home life of women employees.

It is against this backdrop, the present study has been conducted to investigate into various aspects relating to work-life balance of women employees in NCR of India.

Objectives of the Study :

The main objectives set for the study are to :

* Investigate into the factors causing work-life imbalance of women employees across professions.
* highlight the effect of work-life imbalance of women employees on their work and home lives.
* suggest measures how to strike a balance between work life and home life of women employees.

Hypotheses :

The study sets the following hypotheses to be tested :

H0 : there is negative relationship between work and home life of women employees.

H1 : work-life balance adversely affects performance of women employees both at work and home.

H2 : married women experience more imbalance in their work-life compared to their unmarried counterparts.

H3 : cooperation from family helps women employees better cope with work-life imbalance.

RESEARCH METHODOLOGY :

The universe of the study is National Capital Region (NCR) of India. The size of the sample is 540 working women. Selection of sample is based on random sampling method. The study is based both on secondary and primary data. The secondary data is collected from published sources like research papers, research monographs, individual studies and websites. The primary data is collected through a structured questionnaire personally administered by the researchers. Based on other studies, a total of 10 variables have been included in the questionnaire.

The primary data collected has accordingly been tabulated and analysed by using simple statistical tools like percentage, mean, averages, correlation, and Alpha Test.

RESULTS AND DISCUSSION :

Reliability Analysis : The data were subjected to Alpha tests of reliability and they had acceptable (0.778) Cronbach's Alpha value which indicates a good level of internal consistency for the scale with the particular sample used for the study.

The data obtained from the filled in questionnaires was subjected to both reliability and validity tests for all sector employees. The reliability of the scale was tested using Cronbach alpha and Cronbach's alpha coefficient of the factors ranged from 0.656 to 0.897 for Academic employees, from 0.81 to 0.889 for Health care employees and from 0.618 to 0.924 for IT employees. The alpha values for numerous scales are quite high and so might be used for additional analysis. Finally, Cronbach's alpha value for the overall perception scale was 0.897 for Academic, 0.889 for health care and 0.924 for IT samples and indicates its high reliability. Thus, it can be concluded that the designed instrument could be used with confidence to measure the constructs defined.

Profile of the Respondents : Among the 540 married working women, maximum number of respondents belonged to the age group of 30-40 (38.9%). Many respondents (65.0%) had two children. In terms of Spouse's Profession, 18.9% were engaged in business, 17.2% within the educational sector and then on severally.

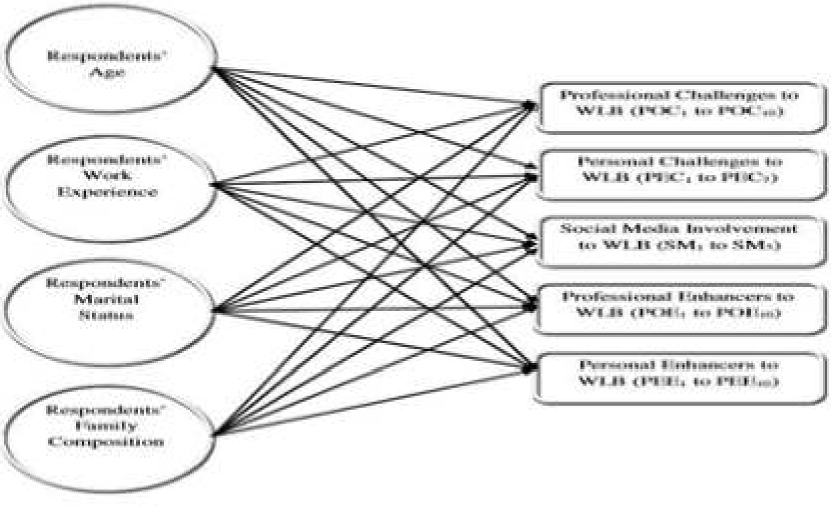


Figure 1: Theoretical model for Multivariate Analysis of Variance (MANOVA)

Table 1
Demographic Characteristics of the Respondents

Demographic Characteristics of Respondents	Frequency	Percentage
Age group of Respondents:		
Under 30 years	150	27.78

30 to 40 years	201	37.22
Over 40 years	189	35.00
Total	540	100
Spouses profession		
Business	102	18.89
IT industry	90	16.67
Health care	75	13.89
Academic	93	17.22
Insurance	54	10.00
Marketing	69	12.78
Others	57	10.55
Total	540	100
No. of Children		
None	75	13.89
One	81	15.00
Two	351	65.00
Three or more	33	6.11
Total	540	100

Percentage Analysis : It is found that there's a robust predominance of 'A' that signifies that work-life balance warrants attention. The strong predominance of 'A' for all the work life balance related statements except taking work home in most evenings suggest that working women in NCR face the problems of work-life balance in their livings irrespective of their standards of living.

Mean and Standard Deviation : The mean and standard deviation of respondents' responses are presented in Table 2.

Table 2
Mean and Standard Deviation of Respondents' Responses

Sl. No	Statements	N	Mean	S.D
Q1	At the instant, because the job demands it, I usually work long hours	540	2.58	0.747
Q2	There isn't abundant time to socialise/relax with my partner/see family within the week	540	2.53	0.78
Q3	I even have to require work home most evenings	540	2.03	0.765

Q4	I typically work late or at weekends to manage work while not interruptions	540	2.03	0.898
Q5	quiet and forgetting concerning work problems is difficult to try and do	540	2.21	0.837
Q6	I worry concerning the impact of labor stress on my health	540	2.57	0.702
Q7	My relationship with my partner is suffering due to the pressure or long hours of my work	540	2.39	0.808
Q8	My family is missing out on my input, either because I don't see enough of them/am too tired	540	2.65	0.744
Q9	Finding time for hobbies, leisure activities, or to maintain friendships and extended family relationships is difficult	540	2.76	0.657
Q10	I would prefer to cut back my operating hours and stress levels, but feel I have no control over the current situation	540	2.63	0.732

As is seen from Table 2, the statement 9 was rated the highest, with a mean score of 2.76, which implies that married working women experience 'time squeeze' and find it hard to have time for themselves. The statements 8 and 10 with mean scores of 2.65 and 2.63 respectively suggest that the married women's difficulty because of non-availability of required time to look after their family chores effectively. The statements 1 and 2 in that order also suggest the non-availability of time to women employees causing stress and, in turn, imbalance in their work life and home life.

FREQUENCY DISTRIBUTION AND PERCENTAGE ANALYSIS :

(A) The responses of the respondents to the statement "I am able to balance my personal and professional life well" are tabulated in terms of frequency distribution and percentages in Table 2.

Table 2
Frequency Distribution of Responses

Responses	No. of Respondents	Percentage
Yes	96	17.78
No	444	82.22

It is evident from Table 2 that 4 out of 5 women (82.22%) found it difficult to strike a balance between their two roles as work life and home life. This warrants attention for women and employers.

(b) That married women experience more work-life imbalance then their unmarried counterparts is substantiated as many as 70.56% married women face problem of work-life balance (Khanka 2019: 678-693).

6 out of every 10 women realize that maintaining balance in work life and home life facilitates quality of good life.

On the whole, the date shows that the majority of women employees find it difficult to strike a good balance between their work life and home life. This adversely affects the both fronts of their lives. There is research evidence to believe that imbalance between work life and home life of women employees is disadvantageous both for women employees and their employers as well. Hence, this underlines the need for balance between work life and home life of women employees.

Comparison of Mean Scores : One better indicator giving idea about work-life balance problem might be comparing the mean scores of all variables taken into consideration (see table 3).

Table 8 represents the comparison of means scores of the ten Work-Life Balance related statements from the checklist manual and the industry/sector in which the 540 respondents were employed.

Table 3
Comparison of Mean Scores

Industry/ Sector		Q1 Working Long hours	Q 2 Less time to socialise/ relax	Q3 Taking work home in the evenings	Q4 Working late/ at weekends	Q5 Forgetting about work issues is difficult
Academic	Mean	2.43	2.53	2.15	2.05	2.2
	N	180	180	180	180	180
	S.D	0.789	0.769	.685	.91	.84
Healthcare	Mean	2.6	2.5	1.67	2.07	2.22
	N	180	180	180	180	180
	S.D	.764	.813	.752	.918	.846

IT	Mean	2.7	2.55	2.27	2.32	2.2
	N	180	180	180	180	180
	S.D	0.671	.769	.733	.854	.84
Total	Mean	2.58	2.53	2.03	2.14	2.21
	N	540	540	540	540	540
	S.D	.747	.78	.765	.898	.837

Industry/ Sector		Q6 Worry about the effect of work stress on health	Q7 Relationship with partner suffering	Q 8 Family missing out on input	Q 9 Finding time for hobbies, leisure activ- ities etc. Is difficult	Q 10 Want to reduce work hours but have no control over it
Academic	Mean	2.55	2.37	2.63	2.77	2.58
	N	180	180	180	180	180
	S.D	0.723	0.843	0.78	0.647	0.787
Healthcare	Mean	2.53	2.42	2.62	2.73	2.67
	N	180	180	180	180	180
	S.D	.724	.809	.783	.686	.705
IT	Mean	2.62	2.4	2.7	2.77	2.65
	N	180	180	180	180	180
	S.D	.666	.785	.671	.647	.709
Total	Mean	2.57	2.39	2.65	2.76	2.63
	N	540	540	540	540	540
	S.D	.702	.808	.744	.657	.732

In conformity with the findings of other studies (Khanka 2016: 3-10 and Malhotra and Sachdeva 2005: 37-42), it is seen from Table 3 that it is the women working in IT sector experience the maximum work-life imbalance (score 2.7). The reason is not difficult to seek. IT professionals are required to work both longer and off-hours like night shifts. Women working pursuing academic profession are found experiencing the lowest level of work-life imbalance for understandable reasons as they enjoy less work hours and days, holidays and vacations, etc.

Most of women irrespective of their age report difficulty faced in maintaining balance between their two lives at work and home. As regards the profession of spouses, it is found that women with spouses in service profession generally experience less problems of work-life imbalance. On the contrary, those having spouses with business as profession experience relatively more problem of work-life imbalance.

Women having children and relatively small children experience more work life imbalance compared to their counterparts having either no children or having grown up children. This is understandable as small and more children require more time to be given especially by mothers for looking after them.

Table 4 presents data on sector-wise responses from women employees relating to their ability to balance their work life and home life.

Table 4
Sector-wise Ability of Women Employees to Balance Their Work and Home Lives

Sectors		**Responses**		
		No	**Yes**	**Total**
Academic Sector	Number	144	36	180
	% within industry or sector	80%	20%	100%
Healthcare Industry	Number	138	42	180
	% within industry or sector	76.67%	23.33%	100%
IT Sector	Number	162	18	180
	% within industry or sector	90%	10%	100%
Total	Number	444	96	540
	% within age group	82.22%	17.78%	100%

Expectedly, women working in IT sector experience the most difficulty in balancing their work life and home life followed by women working in academic and healthcare sectors in that order.

ACCEPTANCE/REJECTION OF HYPOTHESES :

H0: there is negative relationship between work and home life of women employees. **Accepted**

H1: work-life balance adversely affects performance of women employees both at work and home. **Accepted**

H2: married women experience more imbalance in their work-life compared to their unmarried counterparts. **Accepted**

H3: cooperation from family hardly helps women employees better cope with work-life imbalance. **Rejected**

LIMITATIONS OF THE STUDY :

Since the scope of the study is limited to NCR and to only three sectors, hence the findings of the study cannot be generalized for all sectors in the entire country.

What Women Professionals Want Employers' Supportto Balance Work and Life?

Views from women professionals on what employers should do to help balance work and life are summarized in the following Table 5.

Table 5
Women Professionals' Expectations from Employers

Types of Support	Strongly Agree	Agree	Agree to Some Extent	Disagree	Strongly Disagree
Flexible Working Hours	54	39	16	7	3
Working from Home / Telecommuting	27	31	29	30	2
Childcare Facilities	53	39	18	10	0
Support for Non-work Commitment	21	27	21	0	1
Employee Assistance Programmes	12	36	17	1	1
Wellness and Personal Development Programmes	39	31	7	3	3

It is evident from Table 5 that majority of women professionals expect employers' should come forward to support them to balance their work and life. Nonetheless, the majority of them expect support in terms of flexible working hours(109 / 119), childcare facilities (110 / 120), wellness programmes (77 / 83), and working from home in that order (87 /119) . The responses are also suggestive of the fact that women professions realize to balance work and life is not only their responsibility but employers also.

CONCLUDING REMARKS :

Employees join work to ultimately live a fulfilled life. Hence, it becomes imperative to balance one's roles so as to perform the roles satisfactorily and effectively. This requires skills to properly prioritize between "work" (career and ambition) and "life" (pleasure, leisure, family and spiritual development/meditation) of an individual. Because people have different priorities and different lives, work-life balance is obvious to vary from individual to individual. It is well confirmed that work-life imbalance of employees, in general, and of women professionals, in particular, is harmful for both employees and employers (Sophi 1995: 6-15). Hence, this calls for suitable initiatives and measures to be taken by both employees as well as employers. Sooner and better the both realize it, the better will be work-life balance of women professionals and, in turn, more good for the both: women professionals and employers.

REFERENCES :

Buddhapriya, Sanghamitra (2009). Work-family challenges and their impact on career decisions: a study of Indian women professions, Vikalpa, 34, (1).

Conlin, M. (2000). The new debate over working moms, Business Week, November 18.

Khanka, S. S. and S. K. Gupta (2016): Work-life balance of medical professionals in India (A Study of Doctors of Ram Manohar Lohia (RML) Hospital, New Delhi), MMU Journal of Management Practices, (9).

Khanka, S. S. (2019). Human Resource Management (Text and Cases), Chapter 35: Work-life Balance, S. Chand Publishing, New Delhi.

Malhotra, Sunita and Sapna Sachdeva, (2005). Social roles and role conflict: an Inter professional study among women, Journal of the Indian Academy of Applied Psychology, (31),1-2.

Sophie Romay(1995): Work-Family Conflict and Strain: An Impression Perspective, Journal of Applied Psychology, (80).

Stone, Pamela (2013): Opting out: challenging stereotypes and creating real options for women in the professions, Harvard Business Review.

https://www.ijser.org/researchpaper/A-Study-On-Impact-of-Work-Life-Balance-of-Married- Women-on-Human-Resource-Development.pdf http://www.ijirset.com/upload/2014/october/62__work%20life%20balance.pdf

http://www.journalijdr.com/sites/default/files/issue-pdf/10326.pdf

https://www.thebalancecareers.com/inspirational-quotes-about-work-life-balance-20628507

https://www.thebalancecareers.com/work-life-balance-1918292

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 25 - 34

Enterprise Development Training Programmes in Garo Hills Districts of Meghalaya- An Analysis

Dan A Sangma[1] & Dr. Kh. Devananda Singh[2]
[12]Research Scholar & [2]Assistant Professor,
Department of Management, NEHU Tura Campus

ABSTRACT :

Enterprise training institutions are the most important elements of enterprise development. In their absence, it is not possible to talk about the enterprise growth. The present paper focuses on the training provided by such institutions in the five districts of Garo Hills of Meghalaya and found that the training provided is very less in regard to the existing enterprises in the study area.

Key Words : Garo Hills, North Eastern Region, Support Institutions and Training.

INTRODUCTION :

The institutions providing training for the development of microenterprises are the boon for the development of enterprises in the community. Support Institutions (SIs) is the key element for the development of enterprises. In this study, those institutions which provide training to the enterprises are considered as SIs. There is immense necessity of SIs to small entrepreneurs in India. The contributions of institutions in determining income level of an enterprise have positive and direct impact on the overall organisational growth (Jütting, 2003). (Singh, 2012) opined that SIs play an abundant role in enterprise development. Starting from the initial stage of finding out the various entrepreneurial opportunities; there exist the needs for such institutions. In the absence of these agencies/ institutions the entrepreneurial activities are neither efficient nor successful. Therefore, SIs and development of an enterprise are interdependent to each other and cannot be separated.

The present study focuses on the enterprise development training programmes in five districts of Garo Hills, Meghalaya.

REVIEW OF LITERATURE :

Considering the lack of training imparted by the SIs, Wettenhall, (1992) highlighted that small states suffer from an inadequate supply of appropriate educational & training institutions and programmes. It results that, in some technical areas, it may simply not be possible to locate anyone with basic training.

Singh (2012) emphasised on the entrepreneurship development training programmes conducted by Micro, Small and Medium Enterprises (MSME) in North Eastern Region (NER) of India. The study concluded that the number of entrepreneurship training programmes should be increased and also to be distributed to all the districts of the region to meet the demand of existing and prospective entrepreneurs. In the words of Prasain, Singh and Lalhriatchhungi (2013), an enterprise requires various resources including finance. The small businesses need to have all these resources in their own hands. Here lays the need of District Industries Centres (DICs) as one of the institutional support of MSMEs. The study also stated that, the central as well as the state government should not only provide the needs of support but also see that whether the schemes, subsidy and any other assistance are utilised to the fullest. The study found that entrepreneurs and beneficiaries of any of the government schemes are reluctant to attend training programmes conducted by SIs.

Ezzahra, Mohamed, Omar and Mohamed (2014) stated that training is more than ever a key factor in the development of human capital and raising the level of the enterprise. The human resources skills and adherence becomes a crucial key to the competitiveness of business goals and also to ensure its success. Training could become a source of competitive advantage for the enterprises in the long run as well. That is why training for the enterprises is an integral part of its growth and performance. Haider, Asad and Aziz (2015) stressed that when training is provided to entrepreneurs, it enhances their managerial and administrative skills which ultimately improve their performance and is reflected through high survival rates or low failure rates.

Again, Rabie, Cant and Wiid,(2016) in their study pointed out that training is one of the most important factors in the business world, as training assists in the development of competencies and efficiency of both the employee and the organisation. The performance and productivity of employees rely on many factors, the most important being employee training and development. Singh and Paliwal (2017) in their study also observed that skilled labour in India is scarce and needs to capitalise on its unique demographic dividend by imparting training. It is also suggested that training can be provided by a range of institutions.

From the above reviews, it is acclimatised that training is one of the most important factors for enterprise development and sustainability of the same.

OBJECTIVE :

The primary objective of this paper is to find out the share of training available to the existing registered enterprises in five Garo Hills Districts of Meghalaya.

METHODOLOGY :

(a) Population and Sampling Frame

The study covers the institutions providing training to the enterprises in Garo Hills of Meghalaya, having its existence in the community at least for the last 13 (thirteen) years. Under these criteria, the following SIs were found to be the sample size for the present study.

Table 2
The Sample of Support Institutions

Sl. No.	Name of Support Institutions	No. of Branches/Offices
1	District Commerce and Industrial Centre (DCIC)	5
2	Khadi and Village Industries Board (KVIB)	2
3	Br., Development Institute, Micro, Small and Medium Enterprises (Br., DI, MSME)	1

Source : Field Survey

(b) Data collection

Data was collected from the officials of DCIC, KVIB and Br., DI, MSME.

(c) Selected variables for the study

In order to examine the various training initiatives, the number of training programmes conducted and the number of participants in such programmes have been considered.

PERIODICITY OF THE STUDY :

The study covered a period of 13 (thirteen) years from 2004-05 to 2016-17. For the sake of comparison and gathering information, some data relating prior to the study period were also considered.

ANALYSES AND DISCUSSIONS :

The following Table 2 highlights the training programmes conducted in the area of study.

Table 2
No. of Trainings Organized by Support Institutions (SIs)

Name of the SIs	Districts	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Total for Whole Year
KVIB	WEST	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EAST	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SOUTH	1	1	1	1	2	1	1	1	1	11	1	1	1	**24**
	NORTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SOUTH WEST	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SUB TOTAL	**1**	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**11**	**1**	**1**	**1**	**24**
DCIC	WEST	-	-	-	-	-	-	-	7	7	7	7	7	7	42
	EAST	-	-	-	-	-	3	3	3	3	3	4	4	4	27
	SOUTH	1	1	1	1	-	4	4	4	4	4	10	4	4	42
	NORTH	-	-	-	-	-	-	-	-	-	-	5	5	4	14
	SOUTH WEST	-	-	-	-	-	-	-	-	-	-	-	10	12	22
	SUB TOTAL	**1**	**1**	**1**	**1**	**1**	**7**	**7**	**14**	**14**	**14**	**26**	**30**	**31**	**148**
MSME	WEST	*	*	*	*	*	*	2	5	-	-	-	3	1	11
	EAST	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SOUTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	NORTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SOUTH WEST	**	**	**	**	**	**	**	**	**	**	**	**	**	**
	SUB TOTAL							**2**	**5**				**3**	**1**	**11**
Year wise Total		**2**	**2**	**2**	**2**	**3**	**8**	**10**	**20**	**15**	**25**	**27**	**34**	**33**	**-**

Note : [0: There were no participants, *: Data not available, **: Not functioning in the district and -: There was no training provided that year].

Source : Field SurveyIn all the five districts of Garo Hills, KVIB, DCIC and MSME are providing training for enterprise development.

KVIB is located in West Garo Hills and South Garo Hills Districts only. But, training programmes were conducted in South Garo Hills only. In this district, during the year 2004-05 to 2012-13, the SI has conducted only one programme in each year except two programmes in 2008-09. In 2013-14, there were 11 programmes and it was followed by one programme each during 2014-15, 2015-16 and 2016-17 respectively.

DCIC is the SI functioning in all the five districts of Garo Hills. They have been promoting entrepreneurship through various programmes and trainings. During 2004-05 to 2010-11, there were no trainings conducted by the SI in West Garo Hills District. During 2011-12 to 2016-17, each year, seven training programmes were conducted in the district. In East Garo Hills District, there were no training conducted during 2004-05 to 2008-09. It was followed by three training programmes in each year during 2009-10 to 2013-14 respectively. Again, four training programmes were conducted in each year during 2014-15, 2015-16 and 2016-17 respectively. In South Garo Hills District, during 2004-05 to 2007-08, there was only one training programme conducted in each year. In the year 2008-09, no training was conducted. Then, during 2009-10 to 2013-14 there were four training programmes conducted in each year. 2014-15 saw the highest number of training programmes accounted to 10 in number. It is followed by four training programmes in each year during 2015-16 to 2016-17 respectively. North Garo Hills District have started the conduction of training programmes in 2014-15 and South West Garo Hills Districts in 2015-16 respectively. It is because, the two districts were bifurcated from the existing districts in 2012 (No.HPL.163/2012/59 dated 6/08/2012 and No. HPL. 179/2012/104 dated 26/07/2012). In North Garo Hills District, there were five trainings conducted each year during 2014-15 and 2015-16 respectively. It was followed by four training programmes in 2016-17. South West Garo Hills district has conducted 10 and 12 training programmes during 2015-16 and 2016-17 respectively.

There are only two Branch, Development Institute (Br. DI) of MSME in the whole of Meghalaya. One Branch is located in Shillong and the other is in Tura, West Garo Hills District. Therefore, it can be mentioned that MSME is functioning only in West Garo Hills District concerning to the area of present study. From 2004-05 to 2009-10, there were no data available for the training programmes conducted in the District. In the year 2010-11 to 2011-12, Br. DI, MSME have conducted two and five training programmes in each year respectively. In 2012-13 till 2014-15, there were no training conducted in the district. In 2015-16, there were three training programmes and it is followed by one training programme in 2016-17 respectively. Table 3 shows the number of participants in the above mentioned training programmes.

Table 3
No. of Participants in Various Trainings

Year		04-05		05-06		06-07		07-08		08-09		09-10		10-11		11-12		12-13		13-14		14-15		15-16		16-17		**Total for Whole Year**	
GENDER		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
DCIC	WEST	*	*	*	*	*	*	*	*	*	*	*	*	*	*	63	77	58	64	65	91	70	97	71	56	38	97	365	482
	EAST	*	*	*	*	*	*	*	*	*	*	60	90	45	105	72	78	51	99	82	68	85	115	95	105	78	122	568	782
	SOUTH	0	12	0	12	0	12	0	12	-	-	73	32	78	34	96	56	80	32	73	39	209	74	34	81	69	43	712	439
	NORTH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122	134	136	128	161	136	419	398
	SOUTH WEST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	55	13	77	18	132
	SUB TOTAL		12		12		12		12			133	122	123	139	231	211	189	195	220	198	486	420	341	425	359	475	**2,082**	**2,233**
KVIB	WEST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	EAST	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SOUTH	3	1	1	1	7	4	3	2	27	19	3	1	11	10	9	6	3	1	310	200	5	5	3	3	3	1	388	254
	NORTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SOUTH WEST	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SUB TOTAL	3	1	1	1	7	4	3	2	27	19	3	1	11	10	9	6	3	1	310	200	5	5	3	3	3	1	**388**	**254**
MSME	WEST	-	-	-	-	-	-	-	-	-	-	-	-	23	24	55	55	-	-	-	-	-	-	21	53	5	16	**104**	**148**
	EAST	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SOUTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	NORTH	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SOUTH WEST	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
	SUB TOTAL													23	24	55	55							21	53	5	18	**104**	**148**
		16		**14**		**23**		**17**		**46**		**259**		**330**		**567**		**388**		**928**		**916**		**846**		**861**			

Note : [0: There were no participants, *: Data not available, **: Not functioning in the district and -: There was no training provided that year].

Source **:** Field SurveyIn case of DCIC, in the year 2004-05 there were 12 participants in South Garo Hills District and all were female. This figure was repeated in the year 2005-06 with all participants being females again. This trend continued for the years 2006-07 and 2007-08 as well. Other districts did not conduct trainings during that period. In the year 2009-10, East Garo Hills had 150 participants participating in the training programmes. South Garo Hills in the year 2009-10 saw 105 participants. Other three districts did not conduct any training during the period. In the year 2010-11, East Garo Hills had 150 participants and South Garo Hills had 112 participants. West Garo Hills also conducted training in the year 2011-12 with 140 participants. East Garo Hills had 150 participants in the year 2011-12. South Garo Hills also saw an increase in the participants with 152 numbers. In the year 2012-13 West Garo Hills had 122 participants in the training programmes. East Garo Hills saw 150 participants in the same year. In South Garo Hills there were 112 participants in the training programmes in the year 2012-13. West Garo Hills in the year 2013-14 had 156 participants. In the same year, East Garo Hills had 150 participants whereas South Garo Hills had 112 participants in the training programmes. In the year 2014-15, West Garo Hills saw 167 participants, East Garo Hills with 200 participants and South Garo Hills had 283 participants respectively. North Garo Hills also started training programmes from the year 2014-15 and had 256 participants. In the year 2015-16, South West Garo Hills also started to organise training programmes and had 60 participants. West Garo Hills had 127 participants for the same year. East Garo Hills had 200 participants. South Garo Hills had 115 participants. North Garo Hills also had 264 participants in 2015-16 respectively. West Garo Hills saw 135 participants in the year 2016-17. East Garo Hills had 200 participants while South Garo Hills had 112 participants. North Garo Hills had 297 and South West Garo Hills saw 90 participants at the training programmes.

In the training conducted by Khadi and Village Industries Board (KVIB), there were four participants in the training conducted by KVIB in the year 2004-05 in South Garo Hills district. In the year 2005-06 there were two participants. 11 participants attended training in the year 2006-07 in the same district. There were five participants in the year 2007-08 and 46 participants in the year 2008-09. Less people participated in the year 2009-10 with four participants. The figure increased to 21 in the year 2010-11. In the year 2011-12 there were 15 participants and four participants in the year 2012-13. The highest number of participants was recorded in the year 2013-14 with 510 numbers. There were 10 participants in the year 2014-15. There were six participants in the year 2015-16 and four participants in the year 2016-17 respectively.

In the training programmes conducted by Br. DI. MSME, Tura, data was not available from the year 2004-05 to 2009-10 for the trainings conducted by MSME. In the year 2010-11 there were 47 participants and in the year 2011-12 there were 110 participants respectively in the training programmes. From the year 2012-13 till 2014-15 there were no trainings conducted. Trainings were conducted in the years 2015-16 and 2016-17 and the numbers of participants were 74 and 21 respectively.

From Table 2 and 3 above, Table 4 is drawn to fulfil the objective of the paper.

Table 4
Overall Promotional Initiatives in All Five Garo Hills Districts, Meghalaya

*No. of Registered Microenterprises (year wise) has been drawn out from DCIC of all Districts of Garo Hills.

			Year												
Sl. No.	**SIs**	**Participants**	**04-05**	**05-06**	**06-07**	**07-08**	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**	**13-14**	**14-15**	**15-16**	**16-17**
1	**KVIB, DCIC & MSME**	**Training Organised**	**2**	**2**	**2**	**2**	**3**	**8**	**10**	**20**	**15**	**25**	**27**	**34**	**33**
2	**N/A**	**No. of Participants**	**16**	**14**	**23**	**17**	**46**	**259**	**330**	**567**	**388**	**928**	**916**	**846**	**861**
3	**N/A**	***No. of Registered Microenterprises (year wise)**	**200**	**97**	**75**	**51**	**42**	**132**	**153**	**185**	**214**	**97**	**31**	**17**	**15**
4	**N/A**	**No. of Registered Microenterprises (Cumulative)**	**N/A**	**297**	**372**	**423**	**465**	**597**	**750**	**935**	**1149**	**1246**	**1277**	**1294**	**1309**
5	**N/A**	**Available percentage (%) share of Training to the Registered Microenterprises (non- cumulative)**	**1**	**2.06**	**2.67**	**3.92**	**7.14**	**6.06**	**6.54**	**10.81**	**7.01**	**25.77**	**87.10**	**200**	**220**
6	**N/A**	**Available percentage (%) share of Training to the Registered Microenterprises (cumulative)**	**1**	**0.67**	**0.54**	**0.47**	**0.65**	**1.34**	**1.33**	**2.14**	**1.31**	**2.01**	**2.11**	**2.63**	**2.52**

Source : Researchers' calculation

FINDINGS :

Table 4 shows the available percentage share of training to the registered microenterprises (non-cumulative and cumulative) for the study period in all the five districts of Garo Hills.

In the scenario of non-cumulative registered enterprises, in the year 2004-05, the percentage share was only 1 per cent. It was followed by 2.06, 2.67, 3.92, 7.14, 6.06, 6.54, 10.81 and 7.01 per cents during the years 2006-07 to 2012-13 respectively. In 2013-14 the percentage was 25.77. It is followed by 87.10, 200 and 220 percent in 2014-15, 2015-16 and 2016-17 per cents respectively.

The available percentage share of training to the registered microenterprises (cumulative) is accounted to 0.67 in 2005-06, 0.54 in 2006-07, 0.47 in 2007-08, 0.65 in 2008-09, 1.34 in 2009-10, 1.33 in 2010-11, 2.14 in 2011-12, 1.31 in 2012-13, 2.01 in 2013-14, 2.11 in 2014-15, 2.63 in 2015-16 and 2.52 in 2016-17 respectively.

CONCLUSION AND SUGGESTION:

Considering the number of year-wise training programmes conducted by the SIs and its percentage share to the number of year-wise and cumulative registered microenterprises, the study concluded that the number of training programmes conducted in the study area are "not satisfactory" during the study period. The finding is also aligned with the findings of Wattenhall (1992) and Singh (2012) .

Considering the less number of training programmes of SIs, it is recommended that the number of training programmes should be increased and distributed equally in the districts according to the number of registered and existing enterprises in each district.

REFERENCES :

Ezzahra, Mohamed, Omar & Mohamed (2014). *Training for effective skills in SMEs in Morocco*, Procedia - Social and Behavioural Sciences. 116, 2926- 2930.

Jütting, J. (2003*). Institutions and Development: A Critical Review, Working Paper No. 210, OECD Development Centre.* Retrieved on 18 th Sep., 2014. http://portals.wi.wur.nl/files/docs/SPICAD/Institutions_and_developmentOECD.pdf

Prasain, G. P., Singh, S.O., & Lalhriatchhungi (2013). Role of District Industries Centres (DICs) in promoting MSMEs - A case study of Churachandpur District, Manipur. *Kangleipak Business Review*, *VII* (nil), 92-99.

Rabie, Cant & Wiid (2016). Training and development in SMEs: South Africa's key to survival and success? *The Journal of Applied Business Research*, (4), 1009 -1024.

Singh & Minakshi Paliwal (2017). Unleashing the growth potential of Indian MSME sector, *Comparative Economic Research*, 20(2), 36-52.

Singh, K. D. (2012). Entrepreneurship in North Eastern Region of India-The MSME perspectives. *International Journal of Research in Commerce and Management, 3*(12), 111-115.

Syed Hussain Haider, Muzaffar Asad & Atif Aziz. (2015). A survey on the determinants of entrepreneurial training effectiveness among micro finance institutions of Malaysia. *Mediterranean Journal of Social Sciences. 6* (6), 396-403.

Wettenhall, R. (1992). Small States: Some Machinery-of-Government Considerations. In R. Baker (Ed.). *Public Administration in Small and Island States*. *Kumarian Press, West Hartford, Connecticut*

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 34 - 53

Linking Social Outreach and Portfolio at Risk: A Panel Data Analysis on Selected Indian Microfinance Institutions

Joyeeta Deb[1] & Samapti Nath[2]
[1]Assistant Professor & [2]Research Associate, Department of Commerce, Assam University, Silchar

ABSTRACT :

India has emerged as one of the fastest growing economies of the world as reflected by its GDP. Nonetheless, a large mass of population still live a susceptible life being excluded from the ambit of formal financial system. Thus, majority of them are bound to approach their last resort i.e. the private money lenders who charge exorbitant interest rates. Microfinance Institutions (MFIs) endeavour to address and tender solutions to the constraints that exclude the poor people from partaking in the financial sector. In the pursuit of making financial services approachable to the poor people and to release them from the predatory lending practices of the money lenders, MFIs provide collateral free micro credit and other related financial services to the self employed poor people. But when the MFIs target the poorest of the poor with an aim to achieve their social mission of deeper outreach, their risk profile also increases. The financial performance in the short run and the financial self-sufficiency in the long run gets hindered. There is a growing debate whether MFIs can be financially sustainable and risk free at the same time by serving the poor as it is likely to affect the riskiness of their advances. The present study is an attempt to study in Indian context, how increasing outreach is linked with the MFI's risk profile measured in terms of their portfolio at risk. The study uses secondary data from MIX Market on 55 number of Indian MFIs for 6 years period from 2009 to 2015 and makes use of statistical tools like averages, growth rate, panel data regression etc. for empirical analysis.

Key words : microfinance, social performance, financial self- sufficiency, outreach, risk profile.

BACKGROUND OF THE STUDY:

The strive towards financial inclusion in the developing countries has been the major objective of the policy makers. Micro finance has emerged over the years as an instrument to provide and expand financial services to the poor people and low income individuals who are outside the ambit of formal financial system and lack access to the modern commercial banking facilities.

The poorer section of the society, along with the host of other factors, does not have sufficient collateral. Consequently, they are waved out of the formal financial sector for credit purpose and majority of the poor people remain unbanked. Due to narrow access to the organised sector, the poor resort to the private money lenders in order to meet their immediate needs. This provides an opportunity to the money lenders and the indigenous bankers to charge exorbitant rates of interest that leads to repayment default and financial crimes. As a result, the growth and sustainability of the small and micro enterprises is also impeded. These kinds of constraints and inefficiencies of the formal and the informal sector led to the unfolding of micro finance in developing countries more than 30-40 years ago. The present day micro finance emerged in India sometime around 1980's in the form Self Help Groups followed by the development of Grameen Bank in Bangladesh by the founding father of micro-finance.

The MFIs aim to widen their social outreach while functioning as the traditional financial institutions. This duality in the mission of MFIs demands a trade off between social performance and financial performance. Since MFIs have become a very broad movement, a lot of different players (such as specialised microfinance banks, commercial banks etc.) with diverse goals have entered the market. As a result, it is observed that the MFIs drifted from their core mission of serving the poorest of the poor towards catering to the needs of the profitable poor borrowers or the less poor borrowers.(Krishnaswamy, k. 2007).

According to the Bharat Microfinance Report 2017-2018, MFIs currently operate in 29 states, 4 union territories and 563 districts in India. The reported 168 MFIs with a branch network of 10,233 and 89,785 employees have reached out to 29 million clients with an outstanding loan portfolio of 46,842crore. The average loan outstanding per borrowers stood at Rs 12,751 and 85% of loans were used for income generation purposes. Outreach fell by 26% and loan outstanding grew by 27% over the previous year. Outreach proportion of urban clientele has decreased significantly as against rural population. The government of India and the RBI have created conducive policy and regulatory framework for MFIs to operate in the country. This has further induced the MFIs to move towards commercialisation of their objective. It is, thus, seen that the simultaneous achievement of the contradictory goals of social performance and financial performance has become a great challenge for the MFIs.

Furthermore, the provision of financial services without any suitable guarantees to the poor clients poses greater risk to the MFIs and their portfolio at risk increases. Resultantly, this hampers their financial position in the short run. With the deterioration of the primary revenue earning source in the short run, there is a serious threat on their sustainability in the long run too. Therefore, the present study is an attempt to make an analysis in the Indian context as to how the increase in outreach is impacting the financial position and the credit risk profile of the MFIs measured in terms of their Portfolio at Risk.

CONCEPTUAL FRAMEWORK :

Thebasic and generalised concept of microfinance is quite simple, access to the financial services, which includes credit by the poor and the low income clients so as to improve their standard of living in the long run. The success of a microfinance institution can be judged on the basis of its outreach. Outreach can be mainly illustrated from two view points. First, the breadth of outreach and second the depth of outreach. Breadth of outreach refers to the potential of the MFIs to arrange better and improved finance services to a large mass of clients wide spread over a particular geographical area. Depth of outreach portrays the extent up to which the MFIs have been successful in earmarking the base level of the poorer section of the society. Although, embracing the poorest is the depth, but extending microfinance to a large number of people who may be comparatively less poor depicts the breadth of the outreach (Schreiner, M. 2002, Brau, J. C. & Woller, G. M. 2004).Schreiner, however, focussed on a more exhaustive view of outreach and suggested six dimensions of outreach i.e., depth of outreach, breadth of outreach, length of outreach, scope of outreach, worth of outreach, cost of outreach. Researchers and policy makers mainly focus on the breadth and depth of outreach in order to interpret the social performance of the MFIs.

The past two decades have seen swift growth and expansion in the microfinance industry in terms of its outreach, products and services, technology used, workforce etc. According to the Bharat Microfinance Report 2017-18, 56% increase in loan disbursements was seen in 2017-2018 over the previous year, there was also a 24% growth in the workforce during last one year. Again with adaption of technology, loan disbursement in the sector has greatly become cashless. Similar growth trend has also been reported in the Status of microfinance in India report 2017-18,where it is reported that loan outstanding of SHGs increased by 22.75% in March 2018 as against March 2017. With this rapid growth, the risk profile of the MFIs has also varied significantly. Along with the traditionally identified credit risk, the MFIs are vulnerable to various other kinds of risks-interest rate risk, foreign currency risk, liquidity risk, fraud risk, regulatory and legal compliance risk, governance risk etc., (Fernando, N. A. 2008). The credit risk inherent in microfinance operation has always been an issue of grave concern. Credit risk refers to the risk associated with non repayment as well as delayed repayment of loan obligations by the clients. It is magnified by lack of symmetrical information among the borrowers and lenders as well as lack of guarantees from the clients. Furthermore, growing competition and commercialisation in the microfinance sector in the recent years have summoned the problem of multifarious borrowings by the clients which in turn burdens them with heavy debt. These highly indebted clients show poor loan repayments, ultimately deteriorating the portfolio quality. (Assefa, E. et al. 2010).

In microfinance literature, various authors have measured the credit risk in terms of the MFIs Portfolio at Risk > 90 days and Portfolio at Risk> 30 days. (Abdullah and Quayes, 2016; Agier and Szafarz, 2013; Chikalipah,2017), which is also considered as the standard measure of credit risk and portfolio quality in banking sector.Portfolio at Risk > [xx] days implies the value of all loans outstanding that have one or more instalments of principal past due more than [xx] days. This includes the entire unpaid principal balance, including both the past due and future instalments, but not accrued interest. It also includes loans that have been restructured and rescheduled. (www.themix.org). A simpler expression of the term PAR>90 days represents quality of portfolio beyond 90 days and PAR>30 days depicts quality of portfolio after 30 days.

$$PAR > 30 = \frac{\text{loan outstanding for more than 30 days}}{\text{total Outstanding Gross Loan Port folio}}$$

$$PAR > 90 = \frac{\text{loan outstanding for more than 90 days}}{\text{total Outstanding Gross Loan Port folio}}$$

STATEMENT OF THE PROBLEM :

There are two dimensions associated with the Microfinance Institutions. On one hand, the MFIs aim to go deep in serving the poor clients. There are unanimous views in various empirical banking literatures that higher default risk is associated with smaller loan sizes. Thus, there is a general view that the poorer cannot be the good borrowers. This is because they cannot repay back the loan amount in time plus there are greater chances of default as they do not have fixed, promising and regular income sources of income.This amounts to poor loan recovery and the portfolio at risk of the MFIs increases. Delinquency in loan repayment poses a serious threat to the maintenance of the quality of the loan portfolio as well as squeezes the income of the microfinance institutions, thereby threatening their sustainability in long run.

On the other hand, the microfinance sector is mushrooming with a large number of players which provides wider choices to the borrowers seeking credit. Consequently, there arises the problem of double dipping and multiple borrowing on the part of the poor borrowers. As a result, the poor borrowers become over indebted and this poses greater threat to the MFIs' loan portfolio. Both the portfolio at risk>90 days and portfolio risk> 30 days increases implying a concern towards the risk position of the MFIs. Given, these two dimensions, it is necessary in Indian context to gauge whether MFI's role as a financer to the poor is justified and how their social outreach is associated with their risk profile measured in terms of the Portfolio at Risk, as the balance between the two goes in to a larger extent to determine the ultimate sustainability of the MFIs.

REVIEW OF LITERATURE:

Devi, P. S. and Shaikh, A. M. (2017) in the paper "Risk management practices of select microfinance institutions in Telangana State, India" attempted to identify the risk management practices of the MFIs in the Telengana State of India and to find whether any association existed among years of operation of the MFIs, active borrowers and loan portfolio. The study used both primary and secondary data considering six numbers of MFIs as the sample. The study discovered a positive relationship between risk management practices and the risk variables. Also the loan portfolios of the MFIs are open to various kinds of risk especially the credit risk. However, no association was found among years of operation of the MFIs, active borrowers and loan portfolio.

In the study entitled "Do Microfinance Institutions benefit from integrating financial and Non-Financial services?" conducted by Lensink, R et. al., it was revealed that provision of financial services neither affected the financial sustainability nor efficiency of the MFIs. The authors however acknowledged that theprovision of social services is linked with deeper outreach of the microfinance institutions which consequently improves their loan portfolio having lower portfolio at risk. The study used secondary data collected from rating agencies. The author used two indicators of the portfolio quality: Portfolio at Risk; 30 days and Write off ratio and three indicators of social outreach: Number of Clients, Average loan size and Percent of Female Borrowers to measure the social performance.
Another study conducted by Rosales T, Hockerts, K and Khorunzhina, N. (2014) identified that social outreach has negative impact on the Portfolio at Risk as the MFIs who cling to their social goals responsibly, have the quality of their portfolio even improved to a slight extent.

Shu, C. A. and Oney, B. (2014). In their study selected six MFIs in Cameroon in order to investigate if there exist a trade-off between performance and outreach. The authors identified that these institutions have a limited outreach. Also, these institutions are exposed to high default risk as they are not well efficient in their risk management practices. The authors, thus, did not make any direct attempt to study the impact of increased outreach on loan repayment rates.

Yet another study "Examining the Trade-off Between Social Outreach and Financial Efficiency:Evidence from Microfinance Institutions in South Asia." conducted by Huq, A. B. I. et.al (2017), examined the existence of a trade-off between financial performance and social performance and reveals that the MFIs drifted from their original mission of deeper social outreach due to an increase in their portfolio at risk.

Bassem, B. S. (2012) in the paper entitled "Social and Financial performance of microfinance institutions: Is there a trade-off?" found that a higher portfolio at risk is not necessarily linked with the poorer clients and thus, the study could not identify any contradiction towards the achievement of the twin aim of social outreach and improved financial position.

Chikalipah, S. (2018). In the paper "Credit risk in microfinance industry: Evidence from sub-Saharan Africa" conducted a study comprising of 632 microfinance institutions taken from 37 countries of the sub-Saharan African (SSA) region over the period 1995 to 2013.As opposed to the widely held views in various literatures that smaller loans are generally associated with high default risk and vice-versa; their study indicated a positive association between credit risk and loan size among microfinance institutions operating in SSA. Thus, the author acknowledges that this positive association confirms the conception that poor borrowers pay their loan obligations honestly.

OBJECTIVE OF THE STUDY:

The key objective of this paper is to *examine the association between social outreach (depth and breadth of outreach) and portfolio at risk* of the MFIs. In addition to this, the study aims:

(1) To study the trend in loan portfolio and the associated risk of the MFIs in India.
(2) To study the trend in social performance in terms of depth and breadth of outreach of selected MFIs in India.

DESCRIPTIVE STATISTICS OF KEY SOCIAL PARAMETERS

Inthis section the social performance of the micro finance institution is studied based on the two broader parameters as already discussed i.e., breadth of outreach and depth of outreach. However, prior to examining the social outreach of the select MFIs for the 7 years period, let us have a look at the gross loan portfolio and the portfolio at risk of the MFIs as reflected in Table 1.

Table-1 exhibits a positive growth rate in the Gross Loan Portfolio excepting the year 2011 where a remarkable negative annual growth rate of -19.08 is studied. This situation is associated with the Andhra crisis. Nonetheless, the situation recovered from 2012 onwards and the overall compound annual growth rate of Gross Loan Portfolio is estimated at

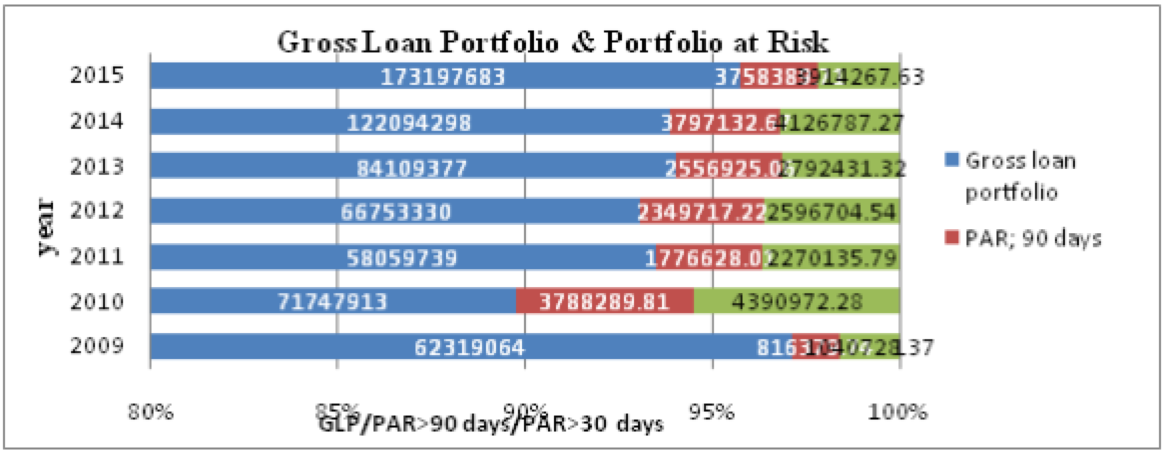
17.44%. Cross comparing the Gross Loan Portfolio and the Portfolio at Risk, it has been seen that in the initial years of study the Portfolio at Risk also showed a high positive growth rate, the situation reversed and a negative average annual growth rate of -42.05% and -36.11% is seen in the year 2011 for both Portfolio At Risk>90 Days and Portfolio At Risk>30 Days respectively. This is also probably due to the Andhra crisis which led to a fall in the Gross Loan Portfolio, consequently reducing the Portfolio at Risk.However, post crisis period attracted various regulations on the MFIs and they became risk cautious and gross loan portfolio got controlled. Consequently, their risk position revamped as mostly indicated by the negative average annualised growth rate in both the Portfolio at Risk>90 days and Portfolio at Risk> 30 days.

Table - 1
Descriptive statistics of gross loan portfolio and portfolio at risk

DESCRIPTIVE STATISTICS OF KEY PARAMETERS						
Year	**GLP**		**PAR;90 DAYS**		**PAR;30 DAYS**	
	Rs.	Growth Rate %	%	Growth Rate	%	Growth Rate
2009	62319064		1.31		1.67	
2010	71747913	15.13	5.28	303.05	6.12	266.47
2011	58059739	-19.08	3.06	-42.05	3.91	-36.11
2012	66753330	14.97	3.52	15.03	3.89	-0.51
2013	84109377	26.00	3.04	-13.64	3.32	-14.65
2014	122094298	45.16	3.11	2.30	3.38	1.81
2015	173197683	41.86	2.17	-30.23	2.26	-33.14
mean	**91183057.67**	**20.67**	**3.07**	**39.08**	**3.51**	**43.40**
SD	**42104554.91**	**23.32**	**1.22**	**130.98**	**1.42**	**125.61**
CAGR	**17.44**		**1.62**		**-1.57**	

Note : GLP= Gross Loan Portfolio, PAR= Portfolio at Risk,SD= Standard Deviation, CAGR= Compound Annual Growth Rate, PAR= Portfolio at Risk.

The following chart shows the proportion of Portfolio at Risk> 90 Days and Portfolio at Risk > 30 days in the Gross Loan Portfolio of each year from 2009-2015.



OUTREACH BREADTH :

The study further analyses the breadth of outreach of the 55 MFIs. Various measures can be employed to study the breadth of outreach. However, for simplicity, the present study considers the two widely used measures in the literature i.e., Number of Active Borrowers, Average Loan Balance per Borrower. **Table 2** shows that there is a consistent growth in the number of active borrowers excluding the year 2011 which was characterised by the Microfinance crisis. Average Loan Outstanding, when measured from social angle, indicates that the MFIs have shown a mixed trend in the growth rate. A portion of the Gross Loan Portfolio becomes outstanding loan which is yet to be repaid by the borrowers. The table shows that from 2010 to 2012 and from 2013 to 2015 there is positive growth in the Average Loan Outstanding which indicates that there is wider/broader outreach. However, from the risk point of view it is undesirable, as more outstanding balance indicates more credit risk associated with the advances.

Table 2
Descriptive statistics of Breadth of Outreach

Year	NOAB		ALO	
	no.	growth rate	Rs.	growth rate
2009	374207		141	
2010	457537	22.27	138.89	-1.50
2011	377805	-17.43	144.44	4.00
2012	414883	9.81	159.24	10.25
2013	503455	21.35	159.08	-0.10

2014	604130	20.00	175.15	10.10
2015	792435	31.17	184.62	5.41
MEAN	**503493**	**14.53**	**157.49**	**4.69**
SD	**150605.07**	**17.07**	**17.52**	**4.95**
CAGR	**11.68**		**5.01**	

Note : NOAB= Number of Active Borrowers, ALO=Average Loan outstanding, SD= Standard Deviation, CAGR= Compound Annual Growth Rate.

Now, it is of interest to know how the MFIs behave in terms of their scale of operations. From the following figure-I, which represents the annualized growth rate of variables, it can be seen that the small MFIs are very volatile than the medium and large MFIs. NOAB for all the MFIs rises during 2009-2010 and falls sharply from 2010 to 2011, followed by an increasing trend from 2011 onwards.

Figure-II shows that during the year 2011 to 2012 there is a sharp increase in the Average Loan Outstanding of all the MFIs and from 2012 to 2013 there is a sharp decline in the growth rate of all the categories of the MFIs. This is followed by a sharp increase in the trend for all the MFIs in 2013 and again a declining trend in the year 2014-2015. Thus, the growth in Average Loan Outstanding shows an erratic trend during the study period.

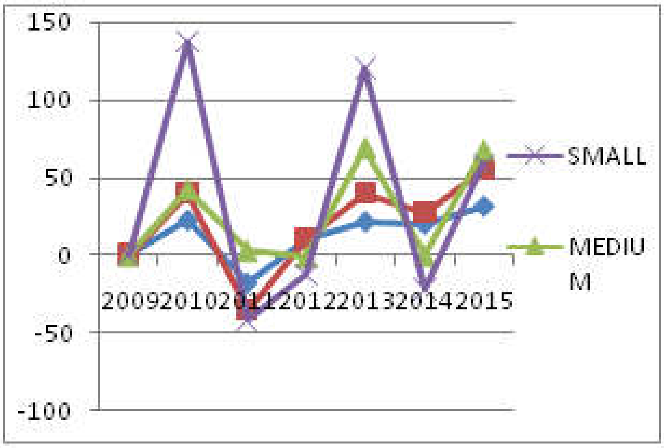


Fig. I : Average Annualised Growth Rate of Number of Active Borrowers

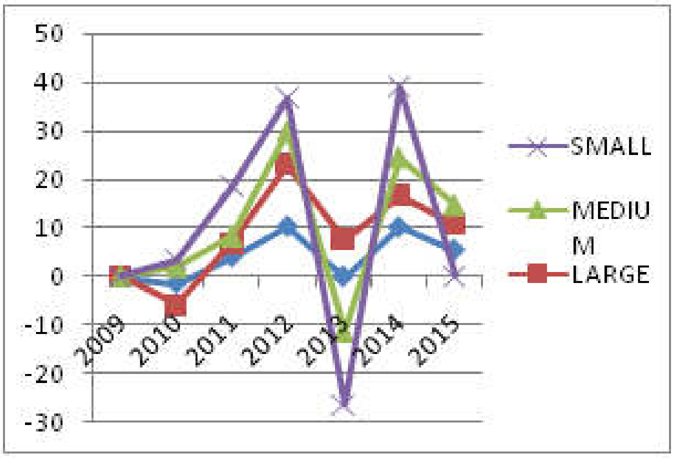


Fig. II- Average Annualised Growth Rate of Average Loan Outstanding

OUTREACH DEPTH :

For analysing depth of outreach, thepopular measures as used in various empirical literatures, Average Loan Balance per Borrower, Average Loan Balance per Borrower/ GNI per capita, and Percentage of Female Borrowers are taken into account. In Table 3, the study identifies that on an average the Average Loan Balance per Borrower shows an increasing trend. In the year 2010 there is a negative growth rate, however, in all the subsequent years there has been a positive growth rate, the maximum growth being found in the year 2014. This indicates that the MFIs have been concentrating more on the better of clients as against the poorest of the poor. The Compound Annual Growth Rate of the ALBPB/GNI per capita shows that out of the total loan portfolio, 1.98 percent of the loan is given to the poorest borrowers. In case of the Percentage of Female Borrowers, it is seen that MFIs have been almost consistent in targeting the female borrowers till 2014. However, a negative average annualised growth rate is studied in the year 2015. As a result, an overall negativecompound annual growth of -0.63% is studied in the percentage of female borrowers.

Table 3
Descriptive statistics of Depth of Outreach

YEAR	AVG LOAN BAL PER BORROWER		ALBPB/GNI per capita		PERCENT OF FEMALE BORROWERS	
	Rs.	Growth Rate	%	Growth Rate	%	Growth Rate
2009	146.65		12.71		96.27	

2010	142.55	-2.80	9.77	-23.13	96.44	0.18
2011	150.6	5.65	10.16	3.99	96.93	0.51
2012	163.58	8.62	11.04	8.66	96.65	-0.29
2013	169.83	3.82	11.32	2.54	97.04	0.40
2014	192.33	13.25	12.25	8.22	97.24	0.21
2015	198.96	3.45	12.66	3.35	90.22	-7.22
MEAN	**166.36**	**5.33**	**11.42**	**0.60**	**95.83**	**-1.04**
SD	**22.21**	**5.39**	**1.18**	**11.91**	**2.50**	**3.04**
CAGR	**6.01**		**1.98**		**-0.63**	

Note : ALBPB=Average Loan Balance per Borrower, POFB=Percentage of Female Borrowers, ALBPB/GNI per capita= Average Loan Balance per Borrower per Gross National Income per capita, SD= Standard Deviation, CAGR= Compound Annual Growth Rate.

When observed in terms of scale of operations of the MFIs, it can be observed that the small MFIs are more volatile than the large and the medium ones (similar to the breadth of outreach measures). In figure-III, it is seen that ALBPB for all the MFIs shows an overall increasing trend with minor decline in the ratio for the period 2012-13 and 2014-15. Figure-IV, however, reflects that growth rate of POFB shows an almost mixed trend except for the period 2014-15 where a sharp decline is noted.

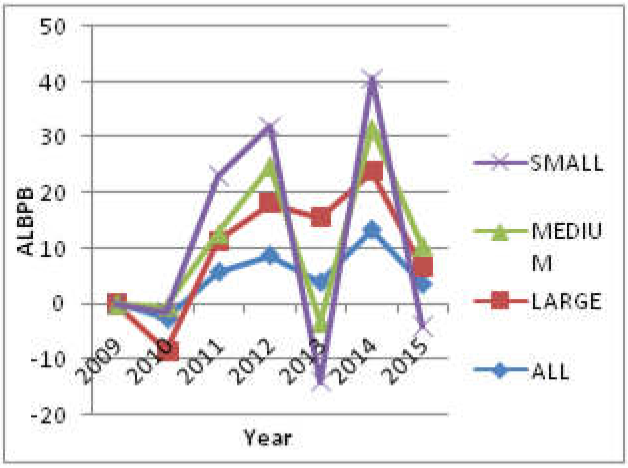


Fig. III :
Average Annualised Growth Rate of Average
Loan Balance per Borrower

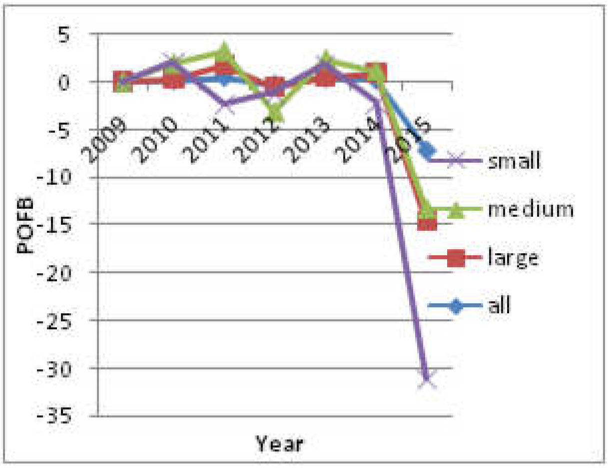


Fig. IV :
Average Annualised Growth Rate of
Percent of Female Borrowers

IMPACT OF MFIS SOCIAL PERFORMANCE ON THEIR PORTFOLIO AT RISK:

In order to ascertain the relation between the MFIs social performance and Portfolio at Risk, the study uses panel data regression analysis considering two models. In model 1, the dependent variable is PAR>90 days and in model 2, the dependent variable is taken as PAR>30 days which is more conservative in its approach and the explanatory variables for both the models are NOAB, ALO, ALBPB,ALBPB/GNI per capita, POFB, Scale, Regulation, Age, Competition, GDP, Inflation, Rural population growth.

Before proceeding for regression analysis, co linearity among the variables has been diagnosed. It is found that multi co linearity exists among the two variables viz. ALBPB and ALBPB/GNI, having VIF greater than 10. Hence, ALBPB is excluded from further regression analysis.

The following variables are taken as the dependent and independent variables in the regression analysis on the basis of review of the existing literature and author's judgement:

MODEL 1	MODEL 2
Dependent Variable: PAR>90 days	**Dependent Variable:** PAR>30 days

Explanatory Variables			
Variable Name	**Notation**	**Hypothesis**	**Sign**
Number of Active Borrowers	NOAB	Increase in the NOAB represents broader outreach. But this may succumb the MFIs to poor loan quality as correspondingly outstanding balance also increases. So, it is hypothesised that increasing NOAB will have a positive impact on the MFI's PAR.	(+)
Average Loan Balance per Borrower per GNI per capita	ALBPB/ GNI	ALBPB/GNI indicates the loan balance accounted by one person in relation to country's gross national income. It is hypothesised that an increase in the ALBPB/GNI will have a negative impact on the PAR. It is argued that increase in ALBPB/GNI implies that the MFIs are increasing their breadth of outreach by serving the better off clients who generally show less default inloan repayment. Beg, K. and Bashir, H. A.(2017)	(-)
Average Loan Outstanding	ALO	Average Loan Outstanding indicates loan amount due by one client which is hypothesised to have a positive impact on portfolio at risk of the MFIs; since increase in outstanding balance with the clients increases the default rate too.	(+)
Percent of Female Borrowers	POFB	It is hypothesised that increase in the POFB will have a negative impact on PAR as women are considered to be more disciplined borrowers who would make less default in repayment.Beg, K. and Bashir, H. A.(2017); Lassoued (2017); Mosbah, Slama and Mostorakis, (2008).	(-)
Scale of Operation	Scale	In relation to the scale of operation, is hypothesised that increase in the scale of operations of the MFIs will have a negative impact on their PAR as the large	(-)

		scale MFIs will be more efficient in loan management than the medium and the smaller ones.Beg, K. and Bashir, H. A. (2017)	
Regulatory Status	Regulated	Regulations on the MFIs will influence them to deepen their outreach to poor clientele. Since poor are subject to more default risk due to their low and irregular source of income, it is therefore hypothesised that regulations in force will have a positive impact on their PAR	(+)
Age	-	It is hypothesised that the Matured MFIs will stick to their core mission of deepening outreach than the new and the young MFIs , as such matured MFIs will have a positive impact on their PAR.	(+)
Gross Domestic Product	GDP	It is hypothesised that a positive GDP growth rate will have a negative impact on the PAR as a positive GDP growth rate indicates that the economy is expanding and so is the business, employment and income.	(–)
Inflation	**-**	Inflation decreases the purchasing power of a nation's currency thereby increasing the cost of living. Thus, it is hypothesised that a positive inflation rate will have a positive impact on the MFIs PAR.	**(+)**
Rural Population Growth	RPG	It is hypothesised that rural population growth has a positive impact on PAR. This is because as the percentage of rural population increases MFIs will go on serving more number of poor rural populations which is expected to result in more loan recovery problems.	**(+)**
Competition	competition	Competition is assumed to have a positive impact on Portfolio at Risk since with increasing competition, the problem of double dipping will cause more defaults in loan repayment, thereby degrading the portfolio quality and increasing the Portfolio at Risk of the MFIs.	**(+)**

EMPIRICAL RESULTS :

As the study is based on panel data of 55 MFIs for 7 years period, panel data regression model has been used to study the impact of commitment to social outreach on portfolio at risk of the MFIs.The results of regression, analysis and interpretation of the results are based on the most apposite model which is selected based on the result of F test in orderto determine the best model between pooled OLS and fixed effect model. Next, the Breusch pagan test is applied to choose between pooled OLS and randomeffect model. Finally, with a view to determine the fit model between random and fixed effect model, Hausman test is used.

It is found that in case of Model- I which takes Portfolio at Risk greater than 90 Days as the dependent variable, fixed effect model is found to be the best and in case of Model- 2 which takes Portfolio at Risk greater than 30 days as the dependent variable, random effect model is found to be the apt one. Accordingly, the results of regression analysis are shown below.

Table 4reports the results of regressiontaking Portfolio at Risk> 90 days as the dependent variable.It can be seen that none of the MFI specific variables are significant whereas among the macro economic variables Competition is significant but all the other variables are insignificant.

Table : 4
Model 1

Dependent Variable = PAR > 90			
Variable	Coefficient	Standard Error	p>t
ALBPBGNI	-0.315	0.222	0.156
POFB	-0.018	0.046	0.698
ALO	0.000	0.000	0.826
NOAB	2.26E	1.35E	0.094
SCALE	0.000	0.015	0.964
AGE	0.0225	0.015	0.146
COMPETITION	**-3.280**	**1.222**	**0.007**
GDP	0.000	0.003	0.893
INFLATION	0.001	0.003	0.704
RPG	-0.008	0.074	0.909

In model 2 which takes Portfolio at Risk; 30 days as dependent variable that is more conservative in its approach, it is observed that out of the MFI specific variables ALBPBGNI is significant where as others are insignificant. When it comes to macro economic variables, it is seen from the table that COMPETITION is significant.

Table : 5
Model 2

Dependent Variable = PAR > 30			
Variable	Coefficient	Standard Error	p>t
ALBPBGNI	**-0.5099**	**0.2305**	**0.028**
POFB	0.0183	0.0526	0.727
ALO	0.0000	0.0002	0.683
NOAB	1.25e	1.64e	0.445
SCALE	-0.0041	0.0177	0.815
AGE	0.0003	0.0191	0.986
COMPETITION	**-3.8789**	**1.3921**	**0.006**
GDP	0.0010	0.0033	0.747
INFLATION	-2.18e	0.0031	0.999
RPG	-0.0189	0.0745	0.799

DISCUSSION :

From the empirical analysis, it is seen that in both the models i.e., in Model-I and Model-II, **Competition** is found to be significant and has a negative impact on Portfolio at Risk. Thus, the finding rejects our preset hypothesis. The academic literature renders contrasting views and there is a duality of opinion as regards the impact of competition on the MFIs Portfolio at Risk. One school of thought argues that as competition intensifies in the microfinance sector, there are multiple borrowings by the clients and the rapid growing MFIs resort to heedless lending without appraisal of the credit worthiness of the clients. This multiple lending-borrowing structure puts the borrowers in a vicious circle of debt often resulting into non-payment of loan obligations. This in turn increases the Portfolio at Risk of the MFs, thereby, impeding their portfolio quality (Assefa. E, et al., (2010); McIntosh et al., (2005); Purkayastha. D, et. al. (2018)). Thus there is wide recognition among various academicians and practioners of the fact that Credit Information Bureaus need to be introduced in the microfinance sector in order to evade this plight of overlapping clients which is a stumbling block to the maintenance of portfolio quality of the MFIs. However, the other school of thought, in line with our findings, opines that with the increase in the competition among the MFIs, their portfolio quality ameliorates. (Kar. A, K, and Swain. R, B, 2014). This is probably becausean increase in competition in the sector provides wider choices to the clients, who may now resort to other MFIs for meeting their credit needs. This may consequently result in to decline in the market share of the MFIs. Thus, the MFIs in order to remain sustainable target the better off clients who generally have a better repayment capacity than the ones at bottom of the pyramid, thereby, improving their portfolio quality. Hence, with the increase in the competition amongst the MFIs, their Portfolio at Risk decreases.

In Model-II, apart from competition, it is seen that the MFI specific variable **ALBPB/ GNI per capita** is also significant and bears a negative association with the Portfolio at Risk of the MFIs. This implies that increasing Average Loan Balance per Borrower/GNI per capita reduces the portfolio at risk greater than 30 days. Thus, the study indicates that when the Indian MFIs concentrate on the better off clients, their loan repayment performance improves and consequently PAR decreases. This finding is in line with the findings of Beg, K. and Bashir, H. A. (2017) whose empirical analysis also revealed that increasing average loan size minimizes overdue loans of the MFIs.

CONCLUSION :

Asa whole it can be seen that the Indian Microfinance sector has shown a positive growth rate in their Gross Loan Portfolio. As such their PAR> 90 days also shows a positive compound annual growth rate of 2.17% over the 7 years period. However, when the MFIs follow a conservative approach in their loan recovery practices, it is seen that their Portfolio at Risk decreases as reflected by the negative compound annual growth rate of -1.57% in the Portfolio at Risk greater than 30 days. It is also seen that the MFIs have been broadening their outreach over the period as depicted by the positive compound annual growth rate of 11.68% in NOAB and 5.01% in ALO. Further, it is revealed that the MFIs are not much deepening their outreach as measured in terms of ALBPB, ALBPB/GNI per capita and as reflected by their negative compound annual growth rate in POFB.

The study concludes that the social outreach variables considered in the study have no significant impact on the portfolio at risk greater than 90 days of the MFIs. However, it is revealed that ALBPB/GNI per capita has a significant negative impact on the portfolio at risk greater than 30 days. Also, from the panel data regression analysis, it is evident that competition among the MFIs negatively impacts their portfolio quality as reflected by both portfolio at risk greater than 90 days and portfolio at risk greater than 30 days.

In a nutshell, the concerned study opines that the social outreach variables considered in the study do not have significant impact on the portfolio at risk of the microfinance institutions with the only exception that as the MFIs increase their breadth of outreach (as measured in terms of the increase in the ratio of ALBPB/GNI per capita) their portfolio at risk greater than 30 days decreases. Thus, it can be said that the Indian MFIs can go on achieving their social mission without affecting their portfolio quality.

REFERENCES :

Abdullah, S. ; Quayes, S. (2016). Do women borrowers augment financial performance of MFIs? Appl. Econ. 48 (57), 5593–5604.

Agier, I., Szafarz, A. (2013). Microfinance and gender: Is there a glass ceiling on loan size? World Dev. 42 (0), 165–181.

Assefa, E., Hermes, N., and Meesters, A. (2013). Competition and the performance of microfinance institutions, *Applied Financial Economics, 23(9),*767-782.

Bassem, (2012). Social and financial performance of the microfinance institutions: Is there a trade-off? *Journal of Economics and International Finance, 4(4),* 92-100

Beg K. and Bashir, H. A. (2017). An empirical analysis of factors affecting the loan repayment performance of microfinance institutions. *Pacific Business Review International, 10(2),* 150,151.

Brau, J. C. & Woller, G. M., (2004). Microfinance: A comprehensive review of existing literature. *Journal of Entrepreneurial Finance and Business Ventures*, 9(1), 1-26

Chikalipah, S. (2018). Credit risk in microfinance industry: Evidence from sub-Saharan Africa.

Devi, P. S. (2017). Credit risk management practices of micro finance institutions in Ethiopia – A brief literature review. *International Journal of Economics and Management Studies,* 4(1)

Fernando, N. A. (2008). *Managing microfinance risks: some observations and suggestions.* Mandaluyong, Philippines, Asian Development Bank (ADB). Glossary, https://www.themix.org/glossary(retrieved on 18th September, 2018 at 5:35 p.m.)

Huq, A. B. I. et. al (2017). Examining the trade-off between social outreach and financial efficiency : Evidence from micro-finance institutions in South Asia. *Global Business Review,* 18(3)

Kar, A. K. and Swain R. B. (*2014*). Competition, performance and portfolio quality in microfinance markets: *A study using global panel data, Department of Economics, Uppsala University, Working Paper, 8.*

Krishnaswamy, K. (2007). *Competition and multiple borrowing in the Indian microfinance sector.* Institute for Financial Management and Research, Centre for Microfinance. Working Paper .

Lassoued, N. (2017). What drives credit risk of microfinance institutions? Inter-national evidence, *International Journal Managerial Finance,* 13 (5), 541–559.

Lensink, R. et. al. (2017). Do microfinance institutions benefit from integrating financial and non- financial services? *Applied Economics.* 50(21), 2386-2401.

McIntosh, et. al. (2005). How rising competition among microfinance institutions affects incumbent lenders, *Economic Journal* 115(506). *Review of Development Finance*, 8, 38-48.

Mosbah, E., Slama, M. M. B., & Mastorakis, N. (2008). Micro finance institutions' behaviour: determinants of portfolio quality in MENA region. *Recent Advances on Finance Science and Management*, 68-71.

Purkayastha, D., Tripathy, T. and Das, B. (2018). Effect of competition and regulation on MFIs outcomes in India. *Theoretical Economics Letter,* 8, 1161-1178.

Rogers, C. R. (1961). *On becoming a person.* Boston: Houghton Mifflin.

Rosales, T. and Hockerts, K. (2014). *Microfinance: The effect of commitment to social goals.* An Empirical Analysis of Reverse Mission Drift in Microfinance. PhD diss.

Sa-Dhan (2017). *The Bharat Microfinance Report – 2017*, Nationnal Bank for Rural and Agricultural Development (NABARD) [online] http://indiamicrofinance.com/wp-content/uploads/2017/12/The-Bharat-Microfinace-Report-2017-Final.pdf. (accessed 15th September 2018).

Schreiner, M., (2002). Aspects of outreach: A framework for discussion of the social benefits of microfinance. *Journal of International Development, 14(5),* 591-603.

Shu, C. A. and Oney, B. (2014). Outreach and performance analysis of microfinance institutions in Cameroon *Economic Research,* 27(1) 104-119.

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 54 - 77

Filtering out Stocks with High & Low Price-Earning Ratio: A Study on CNX NIFTY Large Midcap 250 Index using Data Mining Technique

Shuvashish Roy[1] and Rajib Bhattacharya[2]
[1]Financial Advisor, Hazrat Khajar Bashir Unani Ayurvedic Medical College & Hospital Foundation, Jamalpur, Bangladesh. Email: shuvashishroy@gmail.com,
[2]Assistant Professor, Institute of Business Management, The National Council of Education Bengal, Kolkata, West Bengal, India.Email: rajib.conference@gmail.com

ABSTRACT :

Identifying stocks with highest potential for returns from the plethora of stocks in the market poses a crucial problem to the investors. The problem is increasingly getting aggravated due to the increasing complexity in the interrelations of the global macroeconomic variables and their combined effect on the financial performances of firms. A large volume of existing literature have tried to identify the factors which have high predictive accuracy and can filter out stocks which are better performers than the others. Most of the studies in this field has been done using the linear regression technique in various modified forms where either macro-economic factors or composite synthetic market or stock indicators or financial ratios or combination of any of these have been used as predictor variables to predict future returns from a stock. It has also been observed worldwide that investors look for stocks with low price-equity ratio in the anticipation of better returns in future. This study has taken a cue from this tendency of the market and has resorted to a different route. This study has used binary logistic regression to identify significant financial ratios to filter out the low Price-Earning stocks from the market as a whole across sectors. To test the consistency or otherwise of the identified significant financial ratios, this study has been done considering panel data for a time span of last five consecutive years for which annual reports are available i.e. from 31st March 2014 to 31st March 2018. This study has been done on the CNX NIFTY Large Midcap 250 index as a market proxy. The total debt to market capitalization, return on equity and fixed capital to sales ratios have been identified in this study to be statistically significant in segregating stocks into the high PE & low PE groups. The predictor variables have been able to explain 19.40% to 33% of the changes in the dependent variable. The diagnostic ability of the predictor variables, as measured by the area under curve of the receiver operating characteristic curve, have been in the satisfactory range from 0.747 to 0.838. The findings of this study may assist investors in filtering out high and low Price-earning stocks as per their respective requirements using financial ratios.

Key words : Price-earning Ratio, CNX NIFTY Large Midcap 250 Index, Binary Logistic Regression.

INTRODUCTION :

Using financial ratios to take investment decisions is a common practice among investors. Investors often try to identify high PE or low PE stocks to invest as per their respective investing philosophy. This paper attempts to use financial ratios of companies for the previous year to identify the low & high PE stocks. The benchmark for treating a PE ratio to be high or low may be set by the investor. This paper has considered the first decile of the distribution of the PE ratios of the CNX NIFTY Large Midcap 250 index to be the low PE stocks. Identifying investible stocks by predicting future returns thereon, has long remained one of the most researched topic in applied finance. Different statistical techniques from regression to time series analysis have been done on data from different capital markets across the globe. Various macro-economic variables, financial ratios, synthetic market indicators and various combinations of them have been used as predictor variables to predict future returns on stock. No single method has been found to be consistently effective for all stocks and in all markets. The approach in this study is a shift from the traditional endeavour to predict stock returns. Investors all over the globe tend to look for under-priced stocks characterized by low price-equity (PE) ratio in the anticipation of better returns from the stock in future. Thus there is a need for a tool which can identify the financial ratios which can divide the stocks in the market into dichotomous sections of low PE and high PE, the benchmark PE being decided by the investor. This study envisages to identify the financial ratios which are most prominent in determining whether a stock will be a low PE or a high PE one. Binary Logistic Regression technique has been used for the purpose.

SURVEY OF LITERATURE & IDENTIFICATION OF RESEARCH GAP:

Nissim & Penman (2001) found that the returns on common equity, returns on total assets and returns on net operating assets were useful in determining the valuation of common equity shares of organizations. Lewellen (2004) used linear regression to conclude that dividend yield was the prime predictor variable in predicting stock returns. Turk (2006) also used linear regression to test predictive power of financial ratios. He used data from 50 US companies and found that the ratios could not explain the variations in the stock prices as was evident from the low values of adjusted R^2 of models developed by him. Aono & Iwaisako (2010) constructed smoothed market price earnings ratios and examined their predictive ability by linear regression. They found that the empirical performance of the price earnings ratio in forecasting stock returns in Japan was generally weaker than both the price earnings ratio in comparable US studies and the price dividend ratio. Sehgal & Pandey (2010) used alternative price multiples for equity valuation purposes in the Indian context. They considered data from 145 large companies from 13 prominent sectors. They generated price forecasts based on each multiple by regressing the historical prices on different value drivers and concluded that historical price to earnings (P/E) is the best price multiple for developing price forecasts in the Indian environment. Taani et al (2011) examined the effect of accounting information on earning per share (EPS) by using five categories of financial ratios. They considered a sample of 40 companies listed in the Amman Stock Market to measure the impact of financial ratios on EPS. Multiple regression method was used by them considering profitability, liquidity, debit to equity, market ratio, total assets, and cash flow from operation activities as independent variables. The results show that profitability ratio (ROE), Market ratio (PBV), cash flow from operation/sales, and leverage ratio (DER) has significant impact on earning per share. Siminica et al (2012) studied the statistical correlation between the return on assets and some measures of financial balance. They chose the return on assets as dependent variable. As independent variables, they selected 24 indicators, calculated for 40 Romanian companies listed on Bucharest Stock Exchange. They found that indicators were better predictors than financial ratios. Borhan & Mohamed (2014) explored the impact of financial ratios on the financial performance of a chemical company. Current ratio, quick ratio, debt ratio, debt equity ratio, operating profit margin and net profit margin were used as predictor variables. A multiple regression model was used. The results shows that Current ratio, Quick ratio, Debt ratio and Net profit margin had a positive relationship while debt-equity ratio and operating profit margin had a negative relationship with the company's financial performance. Inyiama & Ugah (2015) examined the relationships between financial ratios and share price movements in Nigeria oil and gas sector. A sample of four oil and gas companies listed in the Nigeria Stock Exchange from 2002 to 2014 was used. Cross-sectional correlation analysis was used to establish the relationship. Share price was regressed using Earnings per share, Dividend per share, Net asset value per share and Dividend cover as predictor variables. TheThey found that there was a weak and insignificant relationship between financial ratios and share movements. Wijesundera et al (2015) examined the ability of the historical financial information to predict stock returns in the Sri Lankan market. They applied ordinary least squares technique to estimate the predictive regressions in form of simple and multiple models of panel data sets. The results highlighted that ROE, EPS and MV/BV have a significant positive relationship with the stock returns. Arkan (2016) investigated the importance of financial ratios to predict stock price trends in emerging markets. Prediction power of 12 financial ratios was tested depending on data of 15 companies distributed over three sectors for the years 2005–2014 in the Kuwait capital market. Multiple regression technique was used by him The results showed that the most effective ratios on the stock price for the industrial sector are ROA, ROE and net profit ratio. The most effective ratio on the stock price for the service sector was the ROA, ROE, P/E and EPS ratio and the same for the investment sector. Chan (2016) explored the improvement in multiple-based valuations from using a composite of price to earnings (P/E) and price to book (P/B) ratios and firm-specific regression-based weights. His results supported that composite benchmark multiples lead to improved valuations over single multiples. Further improvement was achieved by incorporating firm characteristics to derive firm-specific regression-based weights. The unrestricted regression-weighted composite multiples perform better than other approaches in predicting year one to year three share prices. Kharatyan & Nunes (2016) investigated factors that affected return on equity (ROE). The study was conducted on a sample of 90 non-financial companies which were components of NASDAQ-100 index. The ordinary least squares method was used. Consequently, the study used eight ratios/indicators that are believed to have impact on ROE. They found out that the most relevant ratios that determine ROE are tax burden, interest burden, operating margin, asset turnover and financial leverage. Ping-Fu & Kwai-Yee (2016) examined the effectiveness of financial ratios of 17 firms of 50 HSI constituent stocks in Hong Kong Stock Exchange and using a multiple regression analysis technique. Predictor variables were price-to-sales, market-to-book, earnings per share, dividend yield, market capitalization etc., against the dependent variable of stock returns. Whilst the literature suggests that there is a clear relationship and dependence between these variables, the results of this research proved inconclusive. Ghajar & Reja (2017) investigated the effect of ratios measuring liquidity risks, Credit, capital adequacy & unexpected interest rate of commercial banks in the Stock Exchange between years 2011-2015 by using factor analysis technique and subsequent linear regression to identify 18 financial ratios to calculate the risks to be included in the regression model. Jagannathan & Suresh (2017) considered data from 500 stocks in the Standards and Poor's (S&P) 500 and checked the predictive accuracy of Price to Earnings (PE), Price to Sales (PS), Price to Earnings Growth (PEG) & Price to Book (PB) on actual stock price movements. Their results indicated that none of PE, PB, PS, PB ratios was a good predictor of stock price changes. Meric et al (2017) explored the relationship between stock prices and price earning & dividend yield by applying VAR technique. The output obtained by them suffered from inconsistency. Theogene et al (2017) analyzed the contribution of financial ratio analysis on decision making in commercial banks in Rwanda. They used regression analysis and found that financial ratios were effective in predicting organizational performance. Rm Musallam (2018) explored the relationship between financial ratios and market stock returns of twenty six listed firms in Qatar from 2009 to 2015 by using Weighted Least Square (WLS) technique. They found out that earnings per share, earnings yield ratio, and dividend yield ratio had significant and positive relationship with market stock returns while market to book value ratio, return on assets, return on equity, price to earnings ratio, dividends earnings ratio, and net profit margin had insignificant relationship with market stock returns.

The survey of literature revealed the dearth of studies linking financial ratios and categorization of stocks into high and low PE stock groups. This study has thus been triggered by the need for a study on applicability of using financial ratio in segregating stocks into low PE and high PE groups. Accordingly, binary logistic regression technique has been used in this study.

OBJECTIVE OF THE STUDY :

The prime objective of this study is to identify financial ratios which can segregate stocks into high and low Price-earning groups using binary logistic regression technique. Another objective of this study is to test whether the significant ratios so identified, remain the same over the years or change over time.

METHODOLOGY OF THE STUDY :

The CNX NIFTY Large Midcap 250 index has been selected as the market proxy as it the most broadly based index in the Indian capital market in the NSE family of indices. The CNX NIFTY Large Midcap 250 reflects the performance of a portfolio of 100 large cap and 150 mid cap companies listed on NSE, represented through the CNX NIFTY 100 and the CNX NIFTY Midcap 150 index respectively. The aggregate weight of large cap stocks and mid cap stocks is 50% each and are reset on a quarterly basis. The index has a base date of April 01, 2005 and a base value of 1000. Index consists of all Stocks forming part of NIFTY 100 and NIFTY Midcap 150 index. Aggregate weight of large cap stock and Midcap stocks are capped at 50% each. Index shall be reconstituted on a semi-annual basis along with NIFTY 100 and NIFTY Midcap 150 index. Weights of large cap and midcap stocks are rebalanced on a quarterly basis.

While selecting the financial ratios, the ratios selected by researchers and scholars in earlier studies have been considered. The ratios have been selected so as to avoid ratios which measure the same aspect and thus have high positive correlations among them. The following financial ratios (with their respective abbreviations used in this study) have been selected to be the predictor variables:

Table 1
Ratios used in identifying the significant financial ratios & their abbreviations

Ratio	Abbreviation	Description
Dividend Payout	DVPO	An indicator of percentage of Net Income distributed as dividends
Post-Tax Profit Margin	PATM	An indicator of post-tax profitability

Cash Profit Margin	CPRM	An indicator of cash profitability
Return on Assets %	ROAM	Net Income expressed s a percentage of total assets
Return on Equity %	ROEM	Net Income compared to Equity Shareholders' Funds
Return on Capital Employed %	ROCE	Net Operating Income compared to total capital employed by a business
Total Assets Turnover	TATO	An indicator of utilization of total assets in generating sales
Fixed Capital to Sales	FXCS	An indicator of efficiency in using fixed capital to generate sales
Total Debt to Market Capitalization	TDMC	A comparison between Total Debt and Total market value of outstanding shares

Source : Authors' own compilations and assignment of abbreviations

The Adjusted PE Ratio has been used as the dependent variable. The Adjusted PE ratio is one of the most widely used tools for stock selection. A high Adjusted PE ratio indicates that investors expect higher earnings. However, a stock with a high Adjusted PE ratio is not necessarily a better investment than one with a lower Adjusted PE ratio, as a high Adjusted PE ratio can indicate that the stock is being overvalued. Companies with high Price Earnings Ratio are often considered to be growth stocks. It means that investors have higher expectations for future earnings growth and are willing to pay more for them as it indicates a positive future performance. However, the disadvantage of high Adjusted PE is that growth stocks are often unpredictable, and this puts a lot of pressure on companies to do more to justify their higher valuation. Therefore, investing in growth stocks will more likely be a risky investment. Also, in some cases, it can even be interpreted as an overpriced stock.

A lower Adjusted PE ratio means that investors are paying less per dollar of company earnings, and that it will take less time for the company to earn enough to buy back its shares. Thus in essence, When a company's stock has a low Adjusted PE ratio, it may indicate that the stock is undervalued. Investors can often buy undervalued stock at a discount and then profit when the price of that stock climbs.

However, a low Adjusted PE ratio sometimes reflects a genuine lack of growth potential. Companies with low Price Earnings Ratio are often considered to have undervalued stocks. This means that the price of their stock is relatively low. This lower pricing of stock attracts investors to buy their stock before the market corrects it. When it does so, investors make profits because of the higher stock price. The adjusted PE ratio has been revealed to be the most appropriate one in the Indian markets (Sehgal & Pandey, 2010). The dependent variable has been taken to be lagged one by 1 year i.e. the dependent adjusted PE ratio for 2018 has been regressed using the predictor variables for 2017 and so on. The selected ratio for the constituent were collected for five consecutive years from year ended 31 March 2014 to year ended 31 March 2018 to capture the recency as well as the trajectory of the effects of the selected ratios in identifying the stocks into high PE and low PE categories. The ratio of all the years for the constituents of the selected index were obtained from Ace Equity Data Product v2 10.3.0. The Binary Logistic Regression has been carried out on the R Studio Platform, version 3.5.1. The R codes, as have been used in this study, have been provided in the Appendix.

The outliers in the PE ratios of the constitute companies were identified by plotting Box & Whiskers Plot of the PE ratios of the constituent stocks for each year. The outliers were excluded from the data set. Similarly stocks with negative and zero PE ratios were also excluded for all the five years under study. Thus the number of data points varied slightly from year to year. After excluding the negative and zero PE ratios and the outlier PE ratios, the distributions of PE ratios for all the five years were found to be more or less normal.

The box plots and the normal Q-Q plots for the PE ratios of the constituent companies of CNX NIFTY Large Midcap 250 index, for the years 2013-14 to 2017-18, are contained serially in Chart Nos. 1-10.

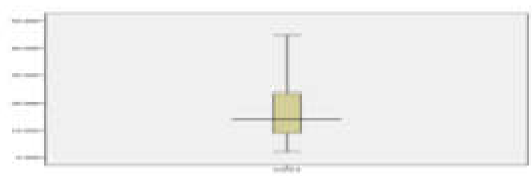
Chart 1 Box & Whiskers Plot for PE Ratios - 2014	Chart 2 Normal Q-Q Plot of PE Ratios – 2014
	

Chart 3
Box & Whiskers Plot for PE Ratios - 2015

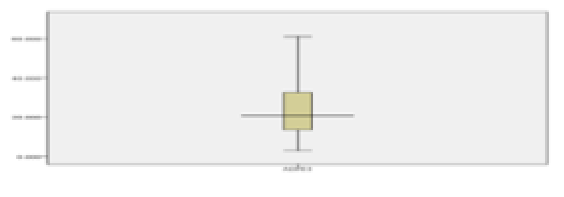


Chart 4
Normal Q-Q Plot of PE Ratios – 2015

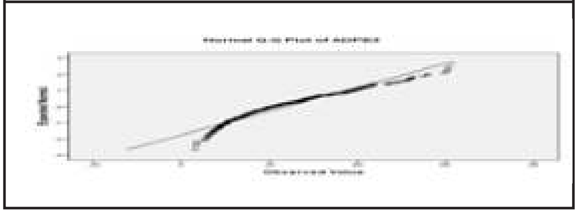


Chart 5
Box & Whiskers Plot for PE Ratios - 2016

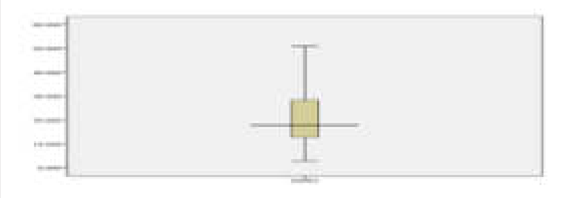


Chart 6
Normal Q-Q Plot of PE Ratios - 2016

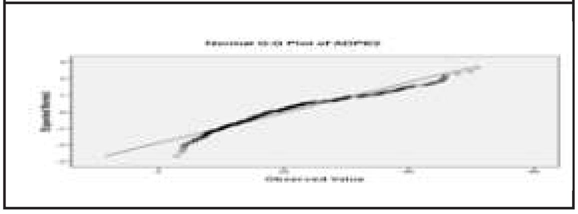


Chart 7
Box & Whiskers Plot for PE Ratios - 2017

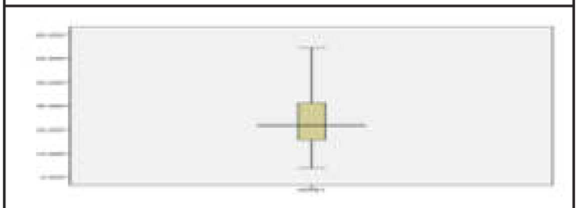


Chart 8
Normal Q-Q Plot of PE Ratios - 2017

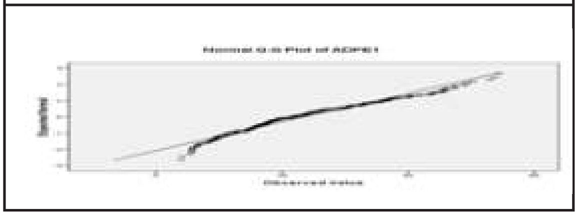
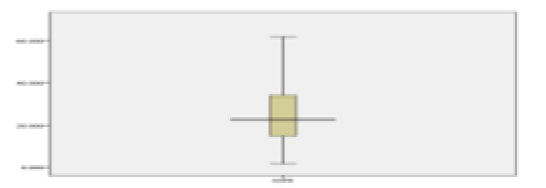


Chart 9 Box & Whiskers Plot for PE Ratios - 2018	Chart 10 Normal Q-Q Plot of PE Ratios - 2018
	

The year-wise summarized results from 2013-14 to 2017-18, of the Binary Logistic Regression have been appended below which principally constitutes Deviance Residuals, Significant Predictor Variables with Coefficients, ANOVA, Confidence Intervals, Odds Ratio with Confidence Intervals, Importance of the Identified Significant Predictor Variables, Wald's Test, Likelihood Ratio Test, Pseudo R^2 Tests (Adjusted McFadden, Cox & Snell, Nagelkerke and Corrected Akaike Information Criteria [AIC]), Hosmer & Lemeshow Test for Goodness of Fit and Receiver Operating Characteristic (ROC) Curve to show the Area under Curve (AUC).

Results of Binary Logistic Regression for the Year 2013-14

Table 2

Deviance Residuals

Min	1Q	Median	3Q	Max
-2.73738336	0.13657646	0.47200614	0.65250473	1.9319382

Coefficients

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	0.17429417	0.5100278	0.34173464	0.7325506
dvpo4	0.07001869	0.02269898	3.08466179	0.00203784
tdmc4	-0.21878558	0.11221928	-1.94962555	0.05122077

ANOVA

	df	Deviance	Resid.df	Resid. Dev	Pr(>Chi)
NULL	NA	NA	127	131.8902124	NA
dvpo4	1	18.64445823	126	113.24575417	0.00001575
tdmc4	1	4.74927322	125	108.49648095	0.02931067

Table : 3

Confidence Intervals			Odds Ratio and Confidence Intervalsodds			
	2.5 %	**97.5 %**		**Odds Ratio**	**2.5%**	**97.5%**
(Intercept)	-0.8327374	1.18560309	**(Intercept)**	1.19040569	0.43485728	3.27265994
dvpo4	0.02909638	0.11839712	**dvpo4**	1.07252822	1.02952382	1.12569106
tdmc4	-0.4709011	-0.02089446	**tdmc4**	0.80349399	0.62443933	0.97932231

Table : 4

Pseudo R Square

	Overall
McFadden	0.17737276
Adj.McFadden	0.11671625
Cox.Snell	0.16703489
Nagelkerke	0.25972058
McKelvey. Zavoina	0.99751247
Effron	0.1916698
Count	0.8046875
Adj.Count	0.07407407
AIC	114.49648095
Corrected.AIC	114.69002934

Variable Importance

	Overall
dvpo4	3.08466179
tdmc4	1.94962555

Wald Test

Resid.df	**df**	**F**	**Pr(>F)**
125	NA	NA	NA
127	-2	7.67292091	0.00071929

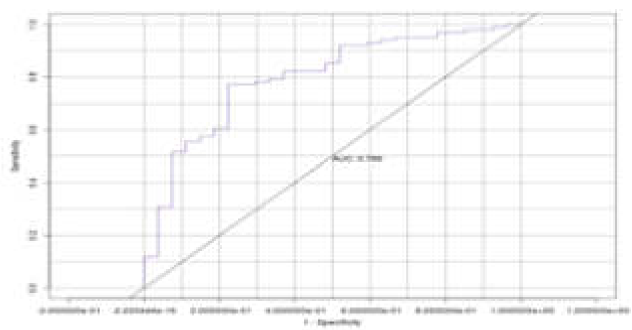
Hosmer-Lemeshow Goodness of fit Test

X squared	**df**	**p value**
8.69452306470127	8	0.368717265506618

Likelihood Ratio Test

#df	**LogLik**	**df**	**Chisq**	**Pr(>Chisq)**
3	-54.24824048	NA	NA	NA
1	-65.9451062	-2	23.39373145	0.0000083 1985507

Chart 11
AUC of ROC – 2013-14



Results of Binary Logistic Regression for the Year 2014-15

Table 5

Deviance Residuals					
Min	**1Q**	**Median**	**3Q**	**Max**	
-2.43330016	0.21515526	0.57874875	0.6963261	2.01187986	
Coefficients					
	Estimate	**Std. Error**	**z value**	**Pr(>|z|)**	
(Intercept)	1.17017304	0.62562427	1.87040864	0.06142709	
dvpo3	0.02261059	0.01488903	1.51860705	0.12886144	
roem3	-0.07551091	0.03879769	-1.94627334	0.05162191	
roce3	0.06019715	0.03818798	1.57633776	0.11494798	
tdmc3	-0.40587752	0.17516726	-2.31708558	0.02049907	
ANOVA					
	df	**Deviance**	**Resid.df**	**Resid. Dev**	**Pr(>Chi)**
NULL	NA	NA	129	142.81802011	NA
dvpo3	1	6.82191486	128	135.99610525	0.0090046
roem3	1	0.01343497	127	135.98267028	0.90772441
roce3	1	2.84866414	126	133.13400614	0.09144989
tdmc3	1	8.32340863	125	124.81059751	0.00391376

Table : 6

Confidence Intervals			**Odds Ratio and Confidence Intervalsodds**			
	2.5 %	**97.5 %**		**Odds Ratio**	**2.5%**	**97.5%**
(Intercept)	-0.056028	2.39637408	**(Intercept)**	3.22255022	0.948947891	1.190562
dvpo3	-0.00657138	0.05179255	**dvpo3**	1.02286814	0.99685184	1.05658886
roem3	-0.15155299	0.00053117	**roem3**	0.92726961	0.85651616	1.00028293
roce3	-0.01464991	0.13504421	**roce3**	1.06204591	0.98800269	1.15044772
tdmc3	-0.74919904	-0.06255601	**tdmc3**	0.66639178	0.44807639	0.8918045

Table 7

Pseudo R Square	**Overall**
McFadden	0.12608649
Adj.McFadden	0.04206348
Cox.Snell	0.12935297
Nagelkerke	0.19403064
McKelvey. Zavoina	0.24602751
Effron	0.15048602
Count	0.78461538
Adj.Count	0.09677419
AIC	134.81059751
Corrected. AIC	135.29446848

Likelihood Ratio Test

#df	**LogLik**	**df**	**Chisq**	**Pr(>Chisq)**
5	62.40529876	NA	NA	NA
1	-71.40901006	-4	18.0074226	0.00122998

Wald Test

Resid.df	**df**	**F**	**Pr(>F)**
125	NA	NA	NA
129	-4	3.13331626	0.01706783

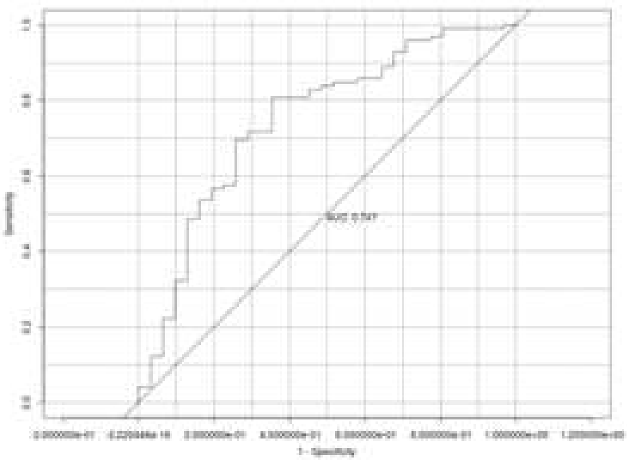
Variable Importance

	Overall
dvpo3	1.51860705
roem3	1.94627334
roce3	1.57633776
tdmc3	2.31708558

Hosmer-Lemeshow Goodness of fit Test

X squared	**df**	**p value**
14.5576504533579	8	0.0683392923892889

Chart 12
AUC of ROC – 2014-15



Results of Binary Logistic Regression for the Year 2015-16

Table : 8

Deviance Residuals				
Min	**1Q**	**Median**	**3Q**	**Max**
-2.16415795	-0.22755816	0.5653764	0.65962626	2.90260117

Coefficients				
	Estimate	**Std. Error**	**z value**	**Pr(>|z|)**
(Intercept)	2.3698821	0.49982975	4.74137859	0.00000212268848
tato2	-0.51676039	0.29536586	-1.7495603	0.08019422
tdmc2	-0.87370036	0.23611045	-3.70038842	0.00021527

ANOVA					
	df	**Deviance**	**Resid.df**	**Resid. Dev**	**Pr(>Chi)**
NULL	NA	NA	129	149.41158868	NA
tato2	1	0.03280247	128	149.37878622	0.85627769
tdmc2	1	24.81614285	127	124.56264336	6.30670848e-7

Table : 9

Confidence Intervals			**Odds Ratio and Confidence Intervalsodds**			
	2.5 %	**97.5 %**		**Odds Ratio**	**2.5%**	**97.5%**
(Intercept)	1.39023378	3.34953041	**(Intercept)**	10.6961311	4.189211023	0.23265063
tato2	-1.09566684	0.06214607	**tato2**	0.59644969	0.329653	1.07879523
tdmc2	-1.33646833	-0.41093239	**tdmc2**	0.41740414	0.24865401	0.62559946

Table : 10

Pseudo R Square	
	Overall
McFadden	0.16631203
Adj.McFadden	0.11276866
Cox.Snell	0.1739878
Nagelkerke	0.25468543
McKelvey.	0.29895549
Zavoina	

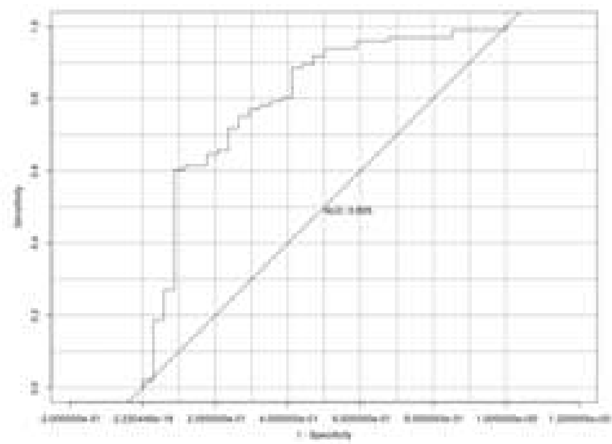
Variable Importance			
	Overall		
tato2	1.7495603		
tdmc2	3.70038842		
Wald Test			
Resid.df	**df**	**F**	**Pr(>F)**
127	NA	NA	NA
129	-2	6.93133885	0.00138993

Effron	0.22333559
Count	0.79230769
Adj. Count	0.20588235
AIC	130.56264336
Corrected. AIC	130.75311955

Likelihood Ratio Test				
#df	**LogLik**	**df**	**Chisq**	**Pr(>Chisq)**
3-6	2.28132168	NA	NA	NA
1	-74.70579434	-2	24.84894532	0.0000040 1901922

Hosmer-Lemeshow Goodness of fit Test		
X squared	**df**	**p value**
8.9125036934861	8	0.349730778147645

Chart : 13
AUC of ROC – 2015-16



Results of Binary Logistic Regression for the Year 2016-17

Table 11

Deviance Residuals				
Min	**1Q**	**Median**	**3Q**	**Max**
-2.24731162	0.40464222	0.55484835	0.63520787	2.45626552
Coefficients				
	Estimate	**Std. Error**	**z value**	**Pr(>|z|)**
(Intercept)	3.40508051	0.75444671	4.51334796	0.0000063812199
roem1	-0.0338528	0.02247324	-1.5063599	0.13197479

tato1	-0.6014302	0.40542675	-1.4834499	0.13795491
fxcs1	-0.6517597	0.41312493	-1.5776334	0.11464983
tdmc1	-0.8835710	0.32863989	-2.6885689	0.0071759

ANOVA

	df	Deviance	Resid.df	Resid. Dev	Pr(>Chi)
NULL	NA	NA	129	138.00145458	NA
roem1	1	0.57473308	128	137.4267215	0.44838422
tato1	1	0.00767649	127	137.41904501	0.93018221
fxcs1	1	4.62587402	126	132.79317099	0.03149321
tdmc1	1	14.27050047	125	118.52267052	0.00015833

Table : 12

Confidence Intervals			Odds Ratio and Confidence Intervalsodds			
	2.5 %	97.5 %		Odds Ratio	2.5%	97.5%
(Intercept)	1.92639214	4.88376889	**(Intercept)**	30.11672043	7.591152315	1.10161985
roem1	-0.07789955	0.01019395	**roem1**	0.9667138	0.9237982	1.01062627
tato1	-1.3960521	0.19319154	**tato1**	0.54802724	0.24260986	1.24091477
fxcs1	-1.46146969	0.15795026	**fxcs1**	0.52112793	0.19800417	1.03592979
tdmc1	-1.52769338	-0.23944866	**tdmc1**	0.41330436	0.19755625	0.70753456

Table : 13

Pseudo R Square	
	Overall
McFadden	0.14114912
Adj.McFadden	0.05419352
Cox.Snell	0.13915154
Nagelkerke	0.21274371
McKelvey. Zavoina	0.27870145
Effron	0.17961488
Count	0.82307692
Adj. Count	0.20689655

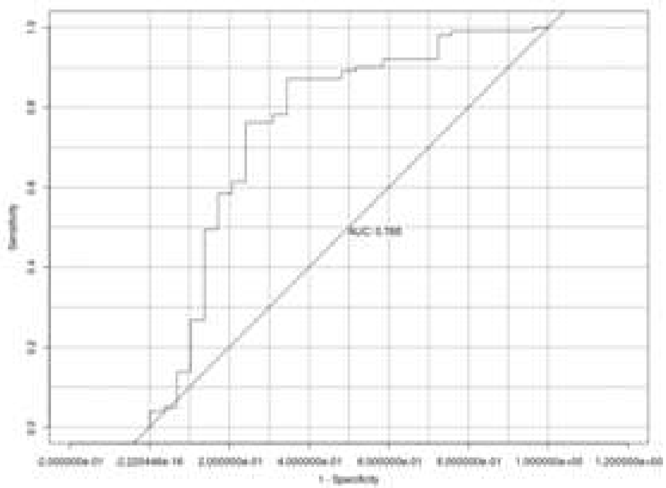
Variable Importance	
	Overall
roem1	1.50635998
tato1	1.48344994
fxcs1	1.57763349
tdmc1	2.68856896

Likelihood Ratio Test

#df	LogLik	df	Chisq	Pr(>Chisq)
5	-59.26133526	NA	NA	NA
1	-69.00072729	-4	19.47878406	0.00063273

AIC	128.52267052			
Corrected. AIC	129.00654149	**Hosmer-Lemeshow Goodness of fit Test**		
		X squared	**df**	**p value**
		8.03305459177085	8	0.430247924046507

Chart : 14
AUC of ROC – 2016-17



Results of Binary Logistic Regression for the Year 2017-18

Table 14

Deviance Residuals				
Min	**1Q**	**Median**	**3Q**	**Max**
-2.57821989	0.13834815	0.23127194	0.33440925	0.9419366
Coefficients				
	Estimate	**Std. Error**	**z value**	**Pr(>|z|)**
(Intercept)	3.50435584	1.45818488	2.4032315	0.0162509
roem	-0.2352154	0.07512044	-3.13117698	0.00174107
roce	0.22379107	0.10532544	2.12475811	0.0336068
fxcs	-1.0441632	0.78657841	-1.32747504	0.18435159

ANOVA					
	df	**Deviance**	**Resid.df**	**Resid. Dev**	**Pr(>Chi)**
NULL	NA	NA	128	65.28353967	NA
Roem	1	0.77573486	127	64.5078048	0.37844875
Roce	1	13.05994843	126	51.44785638	0.00030168
Fxcs	1	4.32406203	125	47.12379435	0.03757712

Table : 15

Confidence Intervals			**Odds Ratio and Confidence Intervalsodds**			
	2.5 %	**97.5 %**		**Odds Ratio**	**2.5%**	**97.5%**
(Intercept)	0.64636599	6.36234569	**(Intercept)**	3.26001227	2.550289380	9.58820317
roem	-0.38244877	-0.08798204	**roem**	0.79040058	0.66775564	0.90667996
roce	0.01735701	0.43022514	**roce**	1.25080967	1.06659453	1.6109203
fxcs	-2.58582856	0.49750215	**fxcs**	0.35198624	0.05980211	0.95698335

Table : 16

Pseudo R Square	
	Overall
McFadden	0.27816729
Adj.Mc Fadden	0.12498932
Cox.Snell	0.13131371
Nagelkerke	0.33064657
McKelvey. Zavoina	0.42529089
Effron	0.26399195
Count	0.95348837
Adj. Count	0.33333333
AIC	55.12379435
Corrected. AIC	55.44637499

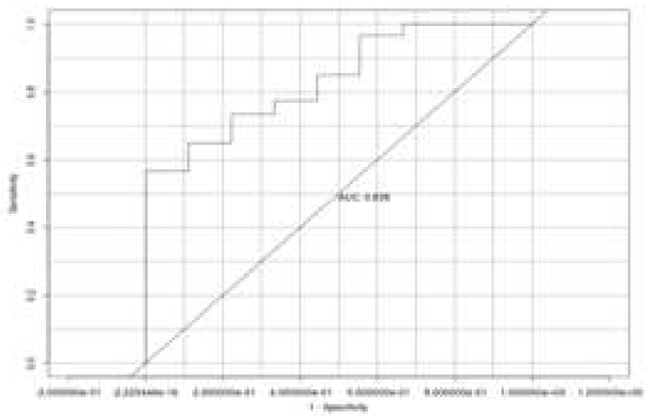
Variable Importance	
	Overall
roem	3.13117698
roce	2.12475811
fxcs	1.32747504

Wald Test			
Resid.df	**df**	**F**	**Pr(>F)**
125	NA	NA	NA
128	-3	3.6895402	0.01379184

Likelihood Ratio Test				
#df	**LogLik**	**df**	**Chisq**	**Pr(>Chisq)**
4	-23.56189717	NA	NA	NA
1	-32.64176983	-3	18.15974532	0.00040771

Hosmer-Lemeshow Goodness of fit Test		
X squared	**df**	**p value**
3.85786833007306	8	0.869713903772775

Chart : 15
AUC of ROC – 2017-18



In order to identify the low PE stocks, the first decile of the distribution of the PE ratios of the constituent companies of the CNX NIFTY Large Midcap 250 index, has been considered to be the low PE stocks. The low PE stocks have been assigned the value of "0" and the others have been assigned the value of "1". This threshold of 10% of the range may be altered by the investor.

Binary logistic regression has been carried out for each year and the results have been interpreted from the extent of Goodness of fit using Hosmer Lemeshow Test, the extent of variation of the dependent variable explained by the predictor variables and overall accuracy of the identified significant financial ratios in correctly classifying the stocks into high & low PE groups. Moreover, the predictor variables making significant contributions to the accuracy of classification has also been traced for the years from 2013-14 to 2017-18.

FINDINGS OF THE STUDY :

The Cox and Snell R^2 as well as the Nagelkerke R^2 both have been calculated for the years as detailed below. As Nagelkerke R^2 is a betterment over the Cox & Snell R^2, the results are interpreted on the basis of Nagelkerke R^2. The minimum value of the corrected AIC of the final iteration for arriving at the binary logistic regression equation are also shown below.

Table : 17
Values of AIC and R^2 for the five years under study

Years	Corrected AIC	Cox & Snell R^2	Nagelkerke R^2
2014	114.69	0.167	0.259
2015	135.294	0.129	0.194
2016	130.753	0.173	0.255
2017	129.006	0.139	0.212
2018	55.446	0.131	0.330

Source : Authors' own calculations

It has been observed that the portion of variation of the dependent variable as could be explained by the predictor variables is maximum 33% which is in 2018. The extent of explained variation in the dependent variable undulated over the period from 2014 to 2018 within 19.40% and 33%. This observation reveals that other factors, not considered in this study, accounted for major portion of the unexplained variation of the dependent variable.

The goodness of fit of the regression equation was tested by the Hosmer Lemeshow Test, the results of which are appended below:

Table : 18
Results of the Hosmer Lemeshow Test

Year	**Chi Square**	**Df**	**p Value at á = 5%**
2014	8.694	8	0.368
2015	14.557	8	0.068
2016	8.912	8	0.349
2017	8.033	8	0.430
2018	3.857	8	0.861

Source : Authors' own calculations

The p-values being higher than the á value of 0.05 accepts the null and the goodness of fit of the regression equation is established.

The overall accuracy of the regression equation in correctly predicting low and high PE stocks has been estimated by plotting the Receiver Operating Characteristic (ROC) curve and observing the Area under Curve (AUC). AUC provides an aggregate measure of performance across all possible classification thresholds. The area under curve (AUC) serves as an measure of accuracy or concordance index. The AUC remained between 0.74 and 0.84. The AUC remained more towards the higher end of 1. The diagnostic ability of the binary classifier has thus been satisfactory for all the years from 2013-14 to 2017-18.

Table : 19
AUC of ROC

Year	AUC of ROC
2014	0.799
2015	0.747
2016	0.805
2017	0.768
2018	0.838

Source : Authors' own calculations

The predictor variables in making significant contribution towards the predictive accuracy of the regression equation over the period from 2014 to 2018, is appended below

Table : 20
Predictor Variables having significant contribution to correct classification

2014	2015	2016	2017	2018
DVPO	DVPO	TATO	ROEM	ROEM
TDMC	ROEM	TDMC	TATO	ROCE
	ROCE		FXCS	FXCS
	TDMC		TDMC	

Source : Authors' own compilation

It has been observed from the table above that total debt to market capitalization has been a significant predictor variable in classifying stocks into high PE and low PE groups in four out of the five years covered under this study. Dividend payout was a significant contributor till 2015 after which it ceased to be so. Total Asset Turnover was a significant contributor in the two consecutive years 2016 & 2017. Return on equity was a significant predictor variable in three out of five years covered under the study. Return on Capital Employed turned out to be significant predictors abruptly in the years 2015 &

2018. Fixed Capital to Sales has emerged as significant predictor variables in the two recent years of 2017 & 2018. On summing up these observations, it transpires that Total Debt to Market capitalization, Return on Equity & Fixed Capital To Sales ratios are significant predictor variables in classifying stocks into high PE and low PE groups.

The findings above corroborates the fact that the selected financial ratios can be used to predict whether the stock will be a low PE stock or high PE stock next year with a limited accuracy rate. The significant financial ratio in contributing to the predictive accuracy, has been total debt to market capitalization, return on equity and fixed capital to sales, the first one being the most prominent of them.

CONCLUSION :

The findings of this study has led to the conclusion that using financial ratio to categorize stocks in the Indian market into low PE and high PE groups can lead to limited utility. The extent of variation in the dependent variable by the predictor variables has oscillated between 19.40% and 33% during the period 2013-14 to 2017-18. One of the reasons for such low percentage is that PE ratio of a stock is dependent on the market price which in turn is governed by the demand of that stock as supply is constant. The demand for stocks depend on numerous factors of which past results of the company measured by financial ratios form only a small part. Other macro-economic, legal, political and other factors also affect stock prices. The oscillating nature of the correct prediction of low PE stocks by financial ratios, indicate towards the undulating behavior of investors in taking invest or divestment decisions based on immediately past performances measured by financial ratios. In spite of such oscillations, the total debt to market capitalization ratio has consistently been a significant financial ratio in categorizing the stocks into low & high PE ratio groups. Thus it transpires from this study that financial leverage is consistently significant in determining the categorization of high & low PE stocks. Return on equity and fixed capital to sales have also been found to be important ratios considered by the investors. The diagnostic ability of the selected predictor variables, as evident from the AUC of ROC have been varying from 0.747 to 0.838. The values being closer to the upper limit of 1, indicates satisfactory classifying ability of the binary logistic equations.

RECOMMENDATIONS BASED ON THE INFERENCES DRAWN FROM THE STUDY :

Investors willing to predict underpriced low PE ratio stocks in the next year should focus on the total debt to market capitalization ratio, return on equity and also on fixed capital to sales. The low PE stocks have been found to be non sector-specific and have been found to be scattered over various sectors. Thus investors should do well to avoid mental attachment to any specific sector for having low PE ratio stocks.

SCOPE OF FUTURE RESEARCH :

This study has been done considering the adjusted PE ratio to be the dependent variable. Moreover this study has envisaged only the CNX NIFTY Large Midcap 250 index. However, various other valuation ratios e.g. Price to Book Value and Enterprise Value – based ratios may also be used as the dependent variable. In such situations, instead of going in for the lowest values of these ratios, one should go for highest values. The number of independent variables may be extended to other financial ratios also. This study may be repeated using Tjur R^2 (2009) which, as opined by some scholars, is preferred to Nagelkerke's R^2 as it satisfies Kvalseth's (1985) eight properties of a good R^2 in a better way. The results of this study may also be attempted to be validated by testing with other broad-based, strategy, thematic and sectoral indices also, not only in Indian markets but in global markets as well.

REFERENCES :

Aono, Kohei., & Iwaisako, Tokuo. (2010). Forecasting Japanese stock returns with financial ratios and other variables. *Working Paper Series No. 63. Research Center For Price Dynamics*, Institute of Economic Research, Hitotsubashi University, Japan.

Arkan, T. (2016). The importance 0f financial ratios in predicting stock price trends: A case study in emerging markets. *Finanse, Rynki Finansowe, Ubezpieczenia,* 1 (79), 13–26.

Borhan, Dr.Halimahton,. Mohamed, Rozita Naina,. (2014). The impact of financial ratios on the financial performance of a chemical company. *World Journal of Entrepreneurship, Management and Sustainable Development*, 10, (2), 154-160.

Chan, Kelly, (2016). Equity valuation using benchmark multiples: an improved approach using regression-based weights. *Corporate Ownership & Control*, 13, (4).

Ghajar Sarkolateh, Milad. & Reza Modanlo Joibary, Ali. (2017). Investigating the relationship between the income response rate and the financial ratio with abnormal stock among the banks listed in Tehran stock exchange. *International Journal of Scientific Study*, 5 (4), 636-646.

Inyiama, Oliver Ike., Ugah, Helen,. (2015). Evaluation of the relationships between financial ratios and share price movements in Nigeria Oil and Gas (2002 – 2014), 3, (4), 367-375.

Jagannathan, Uday Kumar., Suresh, N. (2017). A study on determinants of short term return on stocks in the s&p500. retrieved from https://ssrn.com/Abstract=3029505

Kharatyan, Davit., Nunes, José Carlos Lopes. (2016). Financial ratios and indicators that determine return on equity. Retrieved from http://www.aeca1.org/xviiencuentroaeca/comunicaciones/104a.pdf

Kvalseth, T.O. (1985). Cautionary note about R^2. *The American Statistician*. 39, 279-285.

Lewellen, Jonathan. (2004). Predicting returns with financial ratios. *Journal of Financial Economics*. 74, (2), 209–235.

Meriç, Ekrem., Kamisli, Melik. & Temizel, Fatih. (2017). Interactions among stock price and financial ratios: The case of Turkish banking sector. *Applied Economics and Finance*. 4, (6).

Nissim, Doron. & H. Penman, Stephen. (2001). Ratio analysis and equity valuation: From research to practice. *Review of Accounting Studies.* 6, 109–154.

Ping-Fu, Lai., Kwai-Yee, Cho. (2016). Relationships between stock returns and corporate financial ratios based on a statistical analysis of corporate data from the Hong Kong Stock Market. *Public Finance Quarterly*. 1, 110-123.

Rm Musallam, Sami. (2018). Exploring the relationship between financial ratios and market stock returns. *Eurasian Journal of Business And Economics.* 2018, 11(21), 101-116.

Sehgal, Sanjay., & Pandey, Asheesh. (2010). Equity valuation using price multiples: Evidence from India. *Asian Academy of Management Journal of Accounting And Finance*. 6, (1), 89–108.

Siminica, Marian., Circiumaru, Daniel. & Simion, Dalia. (2012). The correlation between the return on assets and the measures of financial balance for Romanian companies. *International Journal of Mathematical Models and Methods in Applied Sciences.* 2, (6).

Taani, Khalaf., Hasan Hamed Banykhaled, Mari'e. (2011). The effect of financial ratios, firm size and cash flows from operating activities on earnings per share: (An Applied Study: On Jordanian Industrial Sector). *International Journal of Social Sciences and Humanity Studies*, 3, (1), 2011.

Theogene, Habimana., Mulegi, Tom. & Hosee, Niyompano. (2017). The contribution of financial ratios analysis on effective decision making in commercial banks. *International Journal of Management and Applied Science*. 3, (6)

Tjur, T. (2009). Coefficients of determination in logistic regression models — A new proposal: The coefficient of discrimination. *The American Statistician*. 63, 366-372.

Turk, Adam. (2006). The predictive nature of financial ratios. *The Park Place Economist,* XIV, 96-104.

Wijesundera, A. A. V. I. D. A. S., Weerasinghe, T. P. C. R. Krishna., Gunawardena, M. M. D. & Peiris, H. R. I. (2015). Predictability of stock returns using financial ratios: Empirical evidence from Colombo stock exchange. *Kelaniya Journal of Management.* 4, (2).

APPENDIX :

R Codes used in applying Binary Logistic Regression technique

```
model<-glm(adpebin~dvpo4+tdmc4, family=binomial(link=”logit”))
stepbinom<-step(model, direction=”both”)
model<-stepbinom
quantile((summary(model)$deviance.resid),c(0,0.25,0.5,0.75,1 ))
summary(model)$coefficients
summary(model)$dispersion
model$null.deviance
model$df.null
model$deviance
model$df.residual
model$aic
model$iter
anova(model,test=’Chisq’)
confint(model)
exp(cbind(odds_Ratio=coef(model), confint(model)))
caret::varImp(model)
lmtest::waldtest(model)
lmtest::lrtest(model)
BaylorEdPsych::PseudoR2(model)
hoslem<-ResourceSelection::hoslem.test(model$y, fitted(model), g=10)
pred<-predict(model, type=”response”)
roccurve<-pROC::roc(adpebin~pred)
plot(roccurve, print.auc=TRUE, print.auc.col=”#000000", col=”#4A148C”, lty=1, lwd=1,
identity.col=”#000000",identity.lty=1, identity.lwd=1, grid=TRUE, grid.col=”#000000",
legacy.axes=TRUE)
```

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 78 - 87

Behavioural Finance as a New Paradigm in Finance : A Synopsis of its Related Themes and Mediated Biases

Jaynal Ud-din Ahmed
Professor & Head, Department of Management, North-Eastern Hill University,
Tura Campus, Tura-794002, Meghalaya, India
E-mail: jaynaluahmed@yahoo.co.in / juahmednehu@gmail.com

ABSTRACT :

There has been considerable debate on the definition and validity of behavioural finance as the idea itself is still developing itself. It studies the psychological and sociological factors that influence the financial decision-making process of individuals, groups, and entities. Behavioural finance is a relatively recent and high impact paradigm which provides an interesting alternative to classical finance. It is very popular in stock market across the world for investment decisions. The scholars and academicians have started to develop and investigate an alternative theory of finance known as behavioural finance. It makes an attempt to explain and improve people's awareness regarding the emotional factors and psychological processes of individuals and entities that invest in financial markets. Behavioural finance scholars and investment professionals are developing an appreciation for the interdisciplinary research that is the underlying foundation of this evolving discipline. In the light of above, the present paper has discussed various themes within the arena of behavioural finance. The paper has also discussed some trading approaches for investors in stocks and bonds to assist them in manifesting and controlling their psychological roadblocks. The behavioural finance-driven structured guidelines for making investment choices will assist individuals by drawing attention to potential mental mistakes leading to increased investment returns.

Key Words : Finance, Psychology, New Paradigm, Themes, Biases, Theory of Regret

1. INTRODUCTION :

Behavioural finance is in conflict with the perspective of efficient market theory, which maintains that market prices are based on rational foundations, like the fundamental financial health and performance of a company. It is a sub-field of behavioural economics, proposes psychology-based theories to explain stock market anomalies, such as severe rises or falls in stock price (Kenton, 2019). Behavioural finance is the study of the influence of the psychological factors on the development of financial markets. It attempts to explain and increase understanding of the reasoning patterns of investors, including the emotional processes involved and the degree to which they influence the decision-making process. There has been considerable debate over the real definition and validity of behavioural finance as the idea itself is still developing and refining itself. This evolutionary process continues to occur because many scholars have such a diverse and wide range of academic and professional specialties. It studies the psychological and sociological factors that influence the financial decision-making process of individuals, groups, and entities (Figure-1). Behavioural finance is a relatively recent and high impact paradigm which provides an interesting alternative to classical finance. It is very popular in stock market across the world for investment decisions. It helps to understand why people buy or sell stock without doing fundamental analysis and behave irrationally in investment decisions.

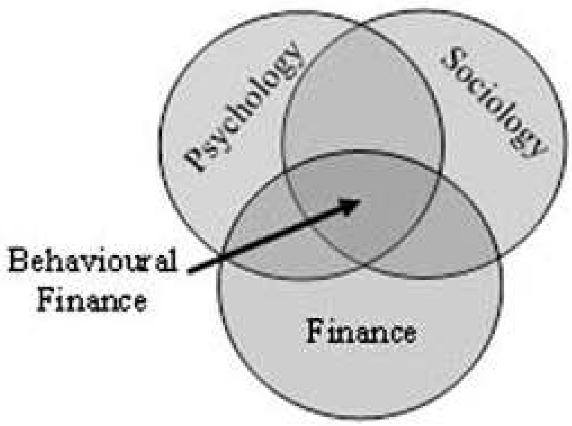


Figure-1: Behavioural Finance

The scholars and academicians have started to develop and investigate an alternative theory of finance known as behavioural finance. It makes an attempt to explain and improve people's awareness regarding the emotional factors and psychological processes of individuals and entities that invest in financial markets. Behavioural finance scholars and investment professionals are developing an appreciation for the interdisciplinary research that is the underlying foundation of this evolving discipline. In the light of above, the present paper has discussed various themes within the arena of behavioural finance, which are overconfidence, cognitive dissonance, regret theory, prospect theory and biases. These themes are an introductory representation of the many different themes that have started to occur over the years. The behavioural finance-driven structured guidelines for making investment choices will aid individuals by drawing attention to potential mental mistakes leading to increased investment returns.

2. TRADITIONAL FINANCE VS BEHAVIOURAL FINANCE :

In traditional theories of finance, investment decisions are based on the assumption that investors act in a rational manner. This means that they behave rationally so they earn returns for the money they put in stock markets. To become successful in the stock market it is essential for investors to have rational behaviour patterns. Modern theory of investors' decision-making suggests that investors do not act rationally at every time while making an investment decision. They deal with several cognitive and psychological errors. These errors are called behavioural biases and are exists in many ways. Behavioural finance has been growing over the years specifically because investors rarely behave according to the assumptions made in traditional financial and economic theory.

3. PREVIOUS STUDIES REVIEWED :

An extensive comparison between the emerging discipline behavioural finance and standard finance by Statman (1995) who highlighted that behaviour and psychology influence individual investors and portfolio managers regarding the financial decision-making process in terms of risk assessment and the issues of framing. Shefrin (2000) describes behavioural finance as the interaction of psychology with the financial actions and performance of practitioners and recommended that these investors should be aware of their own "investment mistakes" as well the "errors of judgment" of their counterparts. Barber and Odean (1999) stated that people systemically make tracks from optimal judgment and decision making; the behavioural finance does enrich economic understanding by incorporating these aspects of human nature into financial models. Olsen (1998) describes the new paradigm to comprehend and forecast systematic behaviour of investors to make more accurate and correct investment decisions. The study highlighted that researchers have developed many sub-theories and themes of behavioural finance yet no cohesive theory of behavioural finance exist. Ricciardi and Simon (2000) emphasised the conventional academic finance emphasizes theories such as modern portfolio theory and the efficient market hypothesis, the emerging field of behavioural finance investigates the psychological and sociological issues that impact the decision-making process of individuals, groups, and organizations. The paper has discussed some general principles of behavioural finance including; overconfidence, financial cognitive dissonance, the theory of regret, and prospect theory. The paper recommended the strategies to assist individuals to resolve their investment decisions. Ritter (2003) has given a concise introduction of behavioural finance and rejected the traditional assumption of expected utility maximization with rational investors in efficient market. The study shows that the two dimensions of behavioural finance are cognitive psychology and the limit of arbitrage when market will be inefficient. Chandra (2008) investigated the impact of behavioural factors and investor's psychology on their decision-making process based on the secondary data. The study found that retail investors can not always take rational decision as decision of investment is influenced by many behavioural factors such as greed and fear, cognitive dissonance, mental accounting, heuristics and anchoring etc. The study recommended that these behavioural factors must be considered while taking the investment decision. Chaudhary (2013) identified the reasons for irrational financial decisions by investors. The study demonstrates how emotions and cognitive errors influence investors in the decision making process and established various causes that led to behavioural finance are anchoring, overconfidence, herd behaviour, over and under reaction and loss aversions. Bhatt and Chauhan (2014) experimented that the behavioural finance integrates psychology and economics in finance theory. The study hinted that efficient market hypothesis has been the most important theory that explains the behaviour of agents in the financial markets but it neglects the impact of any human behaviour in investment process. The study has identified behavioural factors which have influence on investment decision of the investor. Keith and Tim (2018) have explored and linked the literature on heterogeneous preferences of investors to signalling theory, and apply it in the context of founding family governance by exploring the presence of investor clusters with varying utility functions with respect to founding family governance. The paper showed that nonprofessional investors use these signals in their investment choices. Latent class analysis identifies three distinct clusters within the sample that have conflicting utility curves with respect to founding family governance. Kenton (2019) reviewed the themes and opined that Behavioural finance attempted combine scientific insights into cognitive reasoning with conventional economic and financial theory. More explicitly, behavioural finance studies different psychological biases that human being possess and these biases lead to irrational investment decisions.

4. OBJECTIVES OF THE PAPER :

The objective of the paper is to study the various themes to establish the behavioural finance as a paradigm of finance.

5. THEMES OF BEHAVIOURAL FINANCE :

5. 1. Overconfidence:

The scholars from the fields of psychology and behavioural finance have studied the theme of overconfidence. People in general, have a tendency to overestimate our own skills and predictions for success. Mahajan (1992) defines overconfidence as an overestimation of the probabilities for a set of events. Operationally, it is reflected by comparing whether the specific probability assigned is greater than the portion that is correct for all assessments assigned that given probability. The psychologists are of the view that overconfidence causes people to overestimate their knowledge, under-estimate risks and exaggerate their ability to control events. A common trait among investors is a general overconfidence of their own ability when it comes to picking stocks and to decide when to enter or exit a position. An overconfident investor makes too many trades and takes too much risk. They do not diversify their investment. In both the areas of psychology and behavioural finance the subject matter of overconfidence continues to have a substantial presence. As investors, we have an inherent ability of forgetting or failing to learn from our past errors known as financial cognitive dissonance, such as a bad financial decision. This failure to acquire from our past investment decisions further adds to our overconfidence problem.

5.2. Financial Cognitive Dissonance :

The theory of cognitive dissonance is a theme in the field of behavioural finance. Festinger's theory of cognitive dissonance (Morton, 1993) states that people feel internal tension and anxiety in a situation of experiencing conflicting beliefs. People attempt to reduce their inner conflict either with changing their past values and feelings or by means of rationalizing their choice. This theory may apply to investors or traders in the stock market who attempt to rationalize contradictory behaviours, so that they seem to follow naturally from personal values or viewpoints. The investors may experience dissonance during the mutual fund investment process, specifically, the decision to buy, sell, or hold (Goetzmann and Peles, 1997).

5.3. Theory of Regret :

The most well-known theme in behavioural finance is Regret Theory. The theory of regret states that an individual evaluates his or her expected reactions to a future event or situation (e.g. loss of Rs. 1 crore from selling the stock of i phone). The regret as the emotion caused by comparing a given outcome or state of events with the state of a foregone choice (Bell, 1982). Regret theory can also be applied to the area of investor psychology within the stock market. Whether an investor has contemplated purchasing a stock or mutual fund which has declined or not, actually purchasing the intended security will cause the investor to experience an emotional reaction. Investors may avoid selling stocks that have declined in value in order to avoid the regret of having made a bad investment choice and the discomfort of reporting the loss. Therefore, the investor can rationalize his or her investment choice more easily if the stock or mutual fund declines substantially in value. The investor can reduce emotional reactions or feelings since a group of individual investors also lost money on the same bad investment.

5.4. Prospect Theory :

Prospect theory deals with the idea that people do not always behave rationally. There are persistent biases motivated by psychological factors that influence people's choices under conditions of uncertainty. Prospect theory considers preferences as a function of "decision weights," and it assumes that these weights do not always match with probabilities. Specifically, prospect theory suggests that decision weights tend to overweigh small probabilities and under-weigh moderate and high probabilities. Schwartz (1998) articulates that investors tend to evaluate prospects or possible outcomes in terms of gains and losses relative to some reference point rather than the final states of wealth (Figure 2). This can be illustrated by considering two alternative choices of investment selection.

* *Choice 1 :* A sure profit (gain) of Rs. 5 crore or
* *Choice 2 :* An 80% possibility of gaining Rs. 7 crore with a 20 percent chance of receiving nothing.

Question : Which option would give you the best chance to maximize your profits?

Most people (investors) select the first option, which is essentially is a "sure gain or bet." Two theorists of prospect theory, Kahneman, Daniel and Amos Tversky (1979), found that most people become risk averse when confronted with the expectation of a financial gain. Therefore, investors choose choice 1 which is a sure gain of Rs. 5 crore. Essentially, this appears to be the rational choice if you believe there is a high probability of loss. However, this is in fact the less attractive selection. If investors selected Choice 2, their overall performance on a cumulative basis would be a superior choice because there is a greater payoff of Rs. 5.6 crore. On an investment (portfolio) approach, the result would be calculated by: (Rs. 7 crore x 80%) + (Rs. 0 + 20%) = Rs. 5.6 crore.

The prospect theory exhibited that if investors are faced with the chances of losing money, they often take on riskier decisions aimed at loss aversion despite the fact that they may sometimes refrain from investing altogether. They tend to reverse / alter their revealed disposition toward risk. Lastly, this error in thinking relative to investing ultimately may result in substantial losses within a portfolio of investments, such as an individual invested in a group of mutual funds.

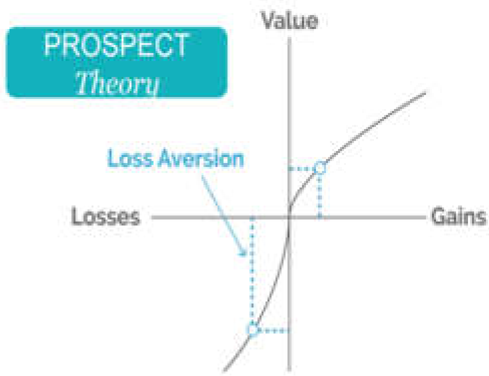


Figure-2: Prospect Theory

5. 5. Biases Mediated :

The psychological bias leads people to follow common trends without any deep thought of their own. The self-attribution bias, a habit of attributing favourable outcomes to expertise and unfavourable outcomes to bad luck or an exogenous event, is also closely premeditated within behavioural finance. Besides, people generally have persuaded with availability biases confirmation biases and disposition biases as discussed below.

5. 5. 1. Availability Bias :

The availability bias occurs when investors' memory of recent events makes them biased or believe that the event is far more likely to occur again. Many had a depressing view of the markets and expected more economic hardship in the coming years. The experience of having gone through such a negative event increased their bias or likelihood that the event could reoccur. In reality, the economy recovered, and the market bounced back in the years to follow. The availability bias suggests that the recent memory i.e., the available example influences more on investor's decision of investment i.e., if investors have recently seen huge loss in one investment avenue then he will not invest in that avenue. The investors are more likely to be fearful of stock market if they have recently seen any stock market crisis (Bhatt, and Chauhan, 2014).

5. 5. 2. Confirmation Bias :

People usually appear to be more inclined towards whatever information they have in their mind. Their existing beliefs have more impact on what decisions they make for their investments. Any information that passes by them, that supports their belief, immediately grab their attention. At times, they do not even confirm from other sources, if their beliefs are valid or are based on some ground realities. Investors are guilty of confirmation bias when we seek out information, facts, and opinions that support what we already believe and ignore or discount information, facts, and opinions that are contrary to our belief. Confirmation bias can cause us to act without considering all available information.

5.5.3. Disposition Bias :

Disposition bias refers to a situation where investors sell their winners and swing on their losers. Investors' thinking is that they want to realize gains quickly. However, when an investment is losing money, they will hold on it because they want to get back to even or their initial price. The investors tend to admit their correct about an investment quickly ie, when there is a gain. However, investors are reluctant to admit when they made an investment mistake ie, when there is a loss. The flaw in disposition bias is that the performance of the investment is not tied to the entry price for the investor (Kenton, 2019). There is a range of deep-seated behavioural biases, which, although they might serve us well in various circumstances, tend to detract from investment success. These biases can affect the decisions an investor take on particular investments and the way we construct portfolios. Individual investors can fall victim to the biases, but as a part of human nature, professional investors and advisers are also vulnerable. One cannot cure the biases, but we can attempt to mitigate their effects using techniques such as feedback, audit trails for decisions, checklists, and devil's advocates to improve the chances of investment success.

6. CONCLUDING NOTE :

The standard finance or academic finance has been the dominant theory within the academic community. However, scholars and investment professionals have started to investigate an alternative theory of finance known as behavioural finance. Behavioural finance makes an attempt to explain and improve people's awareness regarding the emotional factors and psychological processes of individuals and entities that invest in financial markets. Behavioural finance scholars and investment professionals are developing an appreciation for the interdisciplinary research that is the underlying foundation of this evolving discipline. The behaviours described in this paper are exhibited within the stock market by many different types of individual investors, groups of investors, and entire organizations. This paper has discussed relevant themes within the arena of behavioural finance. The validity of all of these themes will be tested over time as the behavioural finance scholars eventually are working on the various concepts to be implemented. The debate on this issue should address which behavioural finance themes are relevant enough in today's scenario.

7. REFERENCES :

Barber, B. and Odean, T. (1999). "The Courage of Misguided Convictions." *Financial Analysts Journal, 55,* 41-55.

Barber, B. and Odean, T. (2000). "Boys will be Boys: Gender, Overconfidence, and Common Stock Investment." Working Paper. Available: http://www.undiscoveredmanagers.com/ Boys%20Will%20Be%20Boys.htm.

Bell, D. (1982). "Regret in Decision Making Under Uncertainty." *Operations Research, 30,:* 961-981.

Bhatt, B.K and Chauhan, A.A (2014), Behavioural Finance: A New Paradigm of Finance, *International Journal of Application or Innovation in Engineering & Management,* 3(2), *359-362*

Chaudhary, A. K., (2013),"Impact of Behavioural Finance in Investment Decision and Strategies-A Fresh Approach", International Journal of Management Research and Business Strategy , 2 (2).

Feldman, A. (1999). "A Finance Professor for the People." *Money, 28:* 173-174.

Global Corporate Finance Society (2019), Behavioural Finance: How Processing Errors and Biases Impact Investors, 2015-2018, CFI Education Inc, Retrieved from https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/behavioral-finance/ (visited on 15/09/19)

Goetzmann, W. N. and N. Peles (1993). "Cognitive Dissonance and Mutual Fund Investors." The Journal of Financial Research, 20: 145-158.

Kahneman, D. and A. Tversky. (1979). "Prospect Theory: An Analysis of Decision Under Risk." Econometrics, 47:263-291.

Keith Duncan and Tim Hasso (2018), Family Governance Signals and Heterogeneous Preferences of Investors, *Journal of Behavioural Finance,* 19(4), 381-395

Kenton, W (2019), Behavioral Finance, Investopedia, Retrieved from https://www.investopedia.com/terms/b/behavioralfinance.asp (Date of visit 12/09/19)

Mahajan, J. (1992). "The Overconfidence Effect in Marketing Management Predictions." Journal of Marketing Research, 29: 329-342.

Morton, H. (1993). The Story of Psychology. New York, NY: Bantam Double Dell Publishing Group, Inc.

Olsen, R. A. (1998). "Behavioural Finance and its Implication for Stock-Price Volatility." *Financial Analysts Journal.* March/April: 10-17.

Ricciardi, V. (2000). "An Exploratory Study in Behavioural Finance: How Board of Trustees Make Behavioural Investment Decisions Pertaining to Endowment Funds at U.S. Private Universities." (Preliminary Dissertation Topic).

Ritter. T, (1993). Advances in Behavioral Finance. New York, NY: Russell Sage Foundation.

Schwartz, H. (1998). Rationality Gone Awry? Decision Making Inconsistent with Economic and Financial Theory. Westport, Connecticut: Greenwood Publishing Group, Inc.

Shefrin, Hersh (2000). *Beyond Greed and Fear.* Boston, Massachusetts: Harvard Business School Press.

Statman, M. (1995). "Behavioural Finance vs. Standard Finance." *Behavioural Finance and Decision Theory in Investment Management.* Charlottesville, VA: AIMR: 14-22.

Victor Ricciardi and Helen K. Simon (2000), What is Behavioural Finance? Business, Education and Technology Journal, Fall 2000, 2(2), 1-9.

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 88 - 34

GST in Indian Economy : An Overview

[1]Rais Ahmad, [2]TaabSherwani & [3]Mohd. Irfan Rais

[1]Dept. of Agricultural Economics and Business Management, Aligarh Muslim University, Aligarh,
[2]Research Scholar, Department of Commerce, AMU, Aligarh,
[3]MBA 4/81(5), Rais Villa, Kabir Colony, Anoopshahar Road, Aligarh.

ABSTRACT :

GST also known as the Goods and Services Tax is defined as the giant indirect tax structure designed to support and enhances the economic growth of a country. More than 150 countries have implemented GST so far. However, the idea of GST in India was mooted by Vajpayee government in 2000 and the constitutional amendment for the same was passed by the Lok sabha on 6th May 2015 but is yet to be ratified by the Rajya sabha. However, there is a huge hue and cry against its implementation. It would be interesting to understand why this proposed GST regime may hamper the growth and development of the country.GST is one of the most crucial tax reforms in India which has been long pending. It was supposed to be implemented from April 2010. It is a comprehensive tax system that will subsume all indirect taxes of States and Central Government and unify economy into a one national market. GST put away the old indirect taxing system in India. It is expected to iron out wrinkles of existing indirect tax system and play a vital role in growth of India. This paper presents an overview of GST concept, explains its features along with its timeline of implementation in India. The paper is more focused on advantages of GST and challenges faced by India in execution.

Keywords : *Tax, Indirect tax, Goods and Service Tax (GST), India.*

INTRODUCTION :

Taxation plays a very important in economic development of country. Because taxes are only means for financing the public goods as they cannot be properly priced in the market and government is only the source of funding using the taxation methods. As taxes are the drivers of the economy. Tax regimes should be designed in such a manner that is does not become the source of distortion in the market or result in failure of market. Raising a sufficient amount of revenue is main aim of tax law in efficient, effective and equitable manner. Tax policies are important contributor to the economy in both the cases efficiency and equity. Good tax system should keep in view the issues of income distribution and also focused on strategies to generate tax revenues to support government expenditures on public services and infrastructural development. GST stands for Goods and Service Tax. Domestic trade tax will be levied in the form of a value added tax on all goods and services, in practice with some exemptions. VAT exempts all inputs including capital goods. Moreover it is general tax is on domestic consumption. Basically there is need to change the taxation pattern, as double taxation system de-motivates the consumer from consumption of products. It also impacts spending pattern of public. Development of the economy depends on the purchasing power of the country. GST is convenient and economically efficient way of taxing the consumption. Basically there are very few exemptions because it has single rate and it becomes a proportional tax on consumption. One level of tax is efficient way of collection, because it either goes to the state or central level. Multiple level of tax is distortion in case of destination of tax collection. Tax should go to the state in which the concerned consumer lives. This will automatically take place if tax is levied at the central level or state is in unitary level with the one and only level of tax collection. If GST has to be implemented at central level i.e. in one level, it has to face many challenges at central level.

NEED FOR GST :

India's recent progress towards economic growth stems from reforms undertaken after the 1991 fiscal crisis, which lifted India from decades of slow growth under socialist rule and offered an opportunity to improve living conditions in the immense, poor country. At the same time much had changed in India after the balance of payments crisis of 1991. Indian policies became more positive about promoting export and allowing foreign capital to participate in the process of India's growth. Globalization and liberalization have become order of the day. The interdependence of economies in their move for development compelled the Governments of all the countries to follow the globalization policies adopted by the major economies of the world. To survive and grow in this economic order rational and competitive tax policies are being adopted by every country. India has also fallen in line with the requirement and has been initiating modifications in direct and indirect taxes. The recent proposals of Direct Taxes Code (DTC) and Goods and Services Tax (GST) are considered as path breaking in the economic restructuring in general and in the taxation area in particular.

REVIEW OF LITERATURE :

- Poirson (2006) assesses the effects of India's tax system on growth through the level and productivity of private investment during 1974-75 to 2004-05. She discovers that the overall tax burden, as measured by the Average Effective Tax Rates (AETR), is low in India as compared to advanced economies and higher income emerging markets in the region. She views that the proposed introduction of GST with few exceptions should enhance indirect tax productivity and improve economic efficiency by harmonizing tax rates across states.

- Srinivasan Pagalthivarthi (2015) in this paper author addresses important issues in detail relating to the proposed Goods and Service Tax in India. The issue he has raised pertains to remaining gaps in the proposed structure as well as the consequences that could be expected from the anomalies. Importantly he points towards possible disputes over the event of taxation, classification, value, place of supply and applicable rates that would continue under GST.

- G. Raghuram (2015) here the scholar brought out the perspectives of different stakeholders and the contentious issues and subsume a variety of taxes and simplify the indirect tax regime.

- Girish Garg, (2014) - "Basic Concepts and Features of Good and Service Tax in India", it is found that GST is the most logical steps towards the comprehensive indirect tax reform in our country since independence. GST will create a single, integrated Indian market to make the economy stronger. Under GST, the taxation burden will be divided equitably between manufacturing and services, through a lower tax rate by increasing the tax base and minimizing exemptions. Through this it is likely to improve tax collections and Boost India's economic development by breaking tax barriers between States and integrating India through a uniform tax rate.

- Pinki, Supriya Kamna & Richa Verma (2014) Goods and Service Tax -Panacea for Indirect Tax System in India" it is found that the GST is India's most ambitious indirect tax reform plan, which aims at removing the cascading effect of tax. The movement of GST was declared in 2008 and supposed to be in force by 2010. Due to various reasons it could not be in force. GST has been implemented in more than 150 countries which will leads to economic growth of the country.

- Syed Mohd Ali Taqvi (2013) "Challenges and Opportunities of Goods and Service Tax in India" the researcher explains the GST is only indirect tax that directly affect all sectors and sections of our country. It is aiming at creating a single, unified market that will benefit both co-operates and economy. He also explains the proposed GST model will be implemented parallel by the central and state governments as Central GST and State GST respectively.

- ❖ Jana V. M., Sarma and V Bhaskar (2012) "A Road Map for implementation of Goods and Service Tax", from the study it is found that the steps to be undertaken to implement the comprehensive tax system i.e., GST. The authors have thrown light on the constitutional amendment required for the implementation of GST in India.

International Journal of Research –GRANTHAALAYA (2015): This paper presents an overview of GST concept, explains its features along with its timeline of implementation in India. The paper is more focused on advantages of GST and challenges faced by India in execution.

JUSTIFICATION OF GST :

Despite the success of VAT, there are still certain shortcomings in the structure of VAT, both at the Centre and at the State level.

A. Justification at the Central Level

i. At present excise duty paid on the raw material consumed is being allowed as input credit only. For other taxes and duties paid for post-manufacturing expenses, there is no mechanism for input credit under the Central Excise Duty Act.

ii. Credit for service tax paid is being allowed manufacturer/ service provider to a limited extent. In order to give the credit of service tax paid in respect of services consumed, it is necessary that there should be a comprehensive system under which both the goods and services are covered.

iii. At present, the service tax is levied on restricted items only. Much other large number of services could not be taxed. It is to reduce the effect of cascading of taxes, which means levying tax on taxes.

B. Justification at the State Level

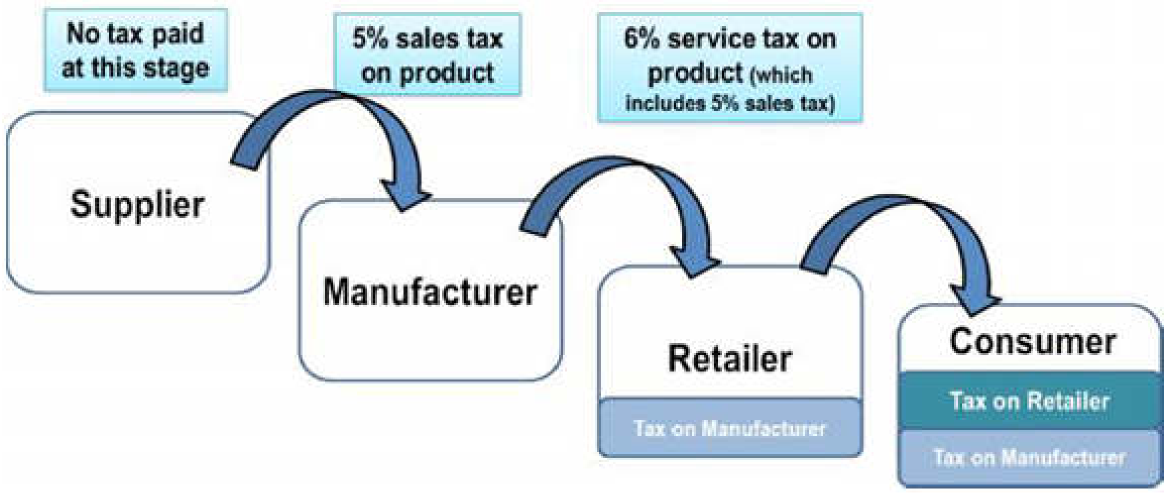
i. A major defect under the State VAT is that the State is charging VAT on the excise duty paid to the Central Government, which goes against the principle of not levying tax on taxes.

ii. In the present State level VAT scheme, Cenvat allowed on the goods remains included in the value of goods to be taxed which is a cascading effect on account of Cenvat element.

iii. Many of the States are still continuing with various types of indirect taxes, such as luxury tax, entertainment tax, etc. iv. As tax is being levied on inter-state transfer of goods, there is no provision for taking input credit on CST leading to additional burden on the dealers.

CASCADING EFFECT :

A cascade tax is a type of turnover tax with each successive transfer being taxed inclusive of any previous cascade taxes being levied. Because each successive turnovers includes the taxes of all previous turnovers, the end tax amount will be greater than the cascade tax rate.



OBJECTIVES OF THE STUDY :

1. To study the concept of Goods and Services Tax (GST).
2. To study the impact of GST on Indian Economy.
3. To understand how GST will work in India.

RESEARCH METHODOLOGY :

The study focuses on study of Secondary data collected from various books, national and international journals, government reports, publications from various websites which has been published and focused on various aspects of Goods and Service tax.

CONCEPT OF GOODS AND SERVICE TAX :

GST or Goods and Services Tax is applicable on supply of goods and services. It will replace the current taxes of excise, VAT and service tax. Currently there are different VAT laws in different states. This creates problems, especially when businesses sell to different states. Also, most businesses have to pay and comply with 3 different taxes –

excise, VAT, and service tax.GST will bring uniform taxation across the country and allow full tax credit from the procurement of inputs and capital goods which can later be set off against GST output liability. This reform gives equal footing to the big enterprises as well as SMEs. The aim of GST is thus to simplify tax hurdles for the entire economy.GST will be paid by all manufacturers and sellers. It will also be paid by service providers such as telecom providers, consultants, chartered accountants etc. However, being an indirect tax, GST will be ultimately borne by the end consumers, just like in the current process. What kind of GST will be implemented in India? India will implement the Canadian model of Dual GST, i.e., both the Centre and State will collect GST. GST is a destination based tax system. Supply of goods and services are base for charging tax. GAT is very comprehensive indirect taxation system on manufactured product and services, sale and consumptions of goods and services at national level.GST is going be one of the biggest tax reforms after independence till the date. GST is very comprehensive indirect taxation system on goods manufactured and services provided. It is one of the biggest tax reforms in country. Clause 366(12A) of the Constitution Bill defines GST as "goods and services tax" means any tax on supply of goods, or services or both except taxes on the supply of the alcoholic liquor for human consumption. Further the clause 366(26A) of the Bill defines "Services" means anything other than Goods. Thus it can be said that GST is a comprehensive tax levy onat a national level. The proposed tax will be levied on all transactions involving supply of goods and services, except those which are kept out of its purview.

PROCESS AND FRAMEWORK OF GST :

To implement comprehensive indirect tax reform in the country the then Union Finance Minister Mr. P. Chidambaram while presenting Union Budget for the year 2007-08 announced to the effect that GST would be introduced from 01/ 04/2010 and an Empowered Committee of State Finance Ministers was constituted. The Finance Minister said that the Committee would work with the Central Government to prepare a road map for introduction of GST in India. After this announcement the Empowered Committee of State Finance Ministers decided to setup a joint working group on May 10, 2007. The Joint working group after intensive internal discussion and interaction with experts and representatives of Chambers of Commerce and Industry submitted its report to the Empowered Committee in Nov. 2007. After-words a spate of deliberations and discussions were held from among different interest groups including trade and industry bodies in the last seven-eight years. In the budget speech during July 2014, the Finance Minister Mr. ArunJaitly announced that the GST would be rolled-out by the beginning of financial year 2015-16. However, it did not materialize and the Finance Minister then hoped to implement it from 01/04/2016 and the Government tried its best to get the GST Bill passed in parliament. But it was struck in Upper-House after getting passed in Lower-House. Now, the Bill awaits its passing in Upper House. In principle, GST is the same as the VAT already adopted by the states but with a wider base. While the VAT – which replaced the sales tax - was imposed only on goods, the GST will be a VAT on goods and services2. In the current tax regime, states tax sale of goods but not services. The Centre taxes manufacturing and services but not wholesale/retail trade. The GST is expected to usher in a uniform tax regime across India through an expansion of the base of each into the other's territory. This is why a constitutional amendment was necessary3. As per the GST bill the Centre will administer Central GST (CGST) and the States administer State GST (SGST). Compliance will be monitored independently at the two levels. The rates of both CGST and SGST will be fixed by the GST Council, whose members will be State Finance/Revenue Ministers and the Chairman will be the Union Finance Minister. Once the rates are set by the GST Council, individual states will lose their right to tax commodities at the rates they want

GST – HOW IT WORKS IN INDIA ?

GST is based on the grounds of VAT. Same set-off system is also available in the respect of the taxes paid in the previous level against GST charged at time of sale. Following are some of the module of GST.

COMPONENTS :

GST will be basically divided into two components i.e namely, *Central Goods and Service Tax and also State Goods and Service Applicability*: GST will be also applicable to all the Goods and Services sold and provided in India, only except from the list of exempted goods which fall outside its purview.

Payment : At central and State level GST will be paid separately.

Credit : The facility of Input Tax Credit at Central level will only be available in respect of Central Goods and Service tax.

GST MODELS :

Goods & Services Tax (GST) or Value Added Tax is implemented by about 160 countries in the world. Francewas being the first country to implement GST in 1954.There are various models of GST followed across the World, Which are different from one to another based on the economic and market conditions.Following are popular GST models and their features:

GST model	Main Feature	Applicable to Country
National GST	Tax levied by Centre	Australia, China
State GST non concurrent dual GST	Tax levied by states, On goods levied by state and on Services levied by Centre	USA
Concurrent dual GST	Tax levied by both centre and state on both goods and services	Brazil India Canada

India is opting Concurrent Dual GST model. The need for a Dual-GST model is based on the following premise :

- At existing framework, both levels of Government i.e. Centre and State, as per Constitution holds concurrent powers to levy tax domestic goods and services;
- The proposed Concurrent Dual-GST model would be a dual levy imposed concurrently but independently by the Centre and the States;
- Both the Centre and State will operate over a common base, i.e. the base for levy and imposition of duty/tax liability would be identical. To understand the operating procedure of Concurrent Dual GST Model we have to consider the tax/taxes which shall be levied as per place of supply of goods and services. They are as follows:
- CGST – Central Goods and Service Tax
- SGST – State Goods and Service Tax
- IGST – Integrated Goods and Service Tax Additional Tax (up to 1%) to be levied in case of inter-state supply of goods.

Nature of levy	To be levied by	Collecting authority
CGST	Central Government on Intra- Central Government State Supply of Goods and/ or Services	Central Government
SGST	State Government Intra State State Government Supply of Goods and/ or Services	State Government
IGST	Central Government on Inter- Central Government State Supply of Goods and/or Services	Central Government
Additional Tax	Central Government on Inter- Central Government state supply of goods, but the net proceeds to be assigned to the States from where supply originates	Central Government

IMPACT OF GST ON INDIAN ECONOMY :

Expect reduction in prices of

FMCG goods such as shampoos, chocolates

- Eating out
- Small cars
- DTH

Increase in prices of:

- Luxury cars
- Tobacco
- Aerated beverages
- Textiles

Advantages of GST

- For Citizen
- Simpler tax system
- Reduction in prices of goods and services due to elimination of cascading.
- Uniform prices throughout the country.
- Transparency in taxation system.
- Increase in employment opportunities

For Trade/Industry

Reduction in multiplicity of Taxes

Mitigation of cascading /double taxation

More efficient neutralization of taxes especially for exports

FOR CENTRAL/ STATE GOVERNMENTS :

A unified common national market to boost Foreign Investment and "Make In India" campaign Boost to export /manufacture activity, generation of more employment, leading to reduced poverty and increased GDP growth. Improving the overall investment climate in the country which will benefit the development of the states. Uniform SGST and IGST rates to reduce the incentives for tax evasion.

Reduction in compliance costs as no requirement of multiple records keeping. Challenges of GST in Indian Context GST will be the biggest reform in Indian taxation since 1947, but there are many challenges for its successful implementation. These are as under **Consent of States**

For implementing it is critical that GST bill is passed by the respective state Governments in state assemblies so as to bring majority. This is a herculean task.

Revenue Neutral Rate (RNR) :

- It is one of Prominent Factor for its success. We know that in GST regime, the government revenue would not be the same as compared to the current system. Hence, through RNR Government is to ensure that its revenue remains the same despite of giving tax credits.

Threshold Limit in GST :

- While achieving broad based tax structure under GST, Both empowered committee and Central Government must ensure that lowering of threshold limit should not be a "taxing" burden on small businessmen in the country.

Robust IT Network :

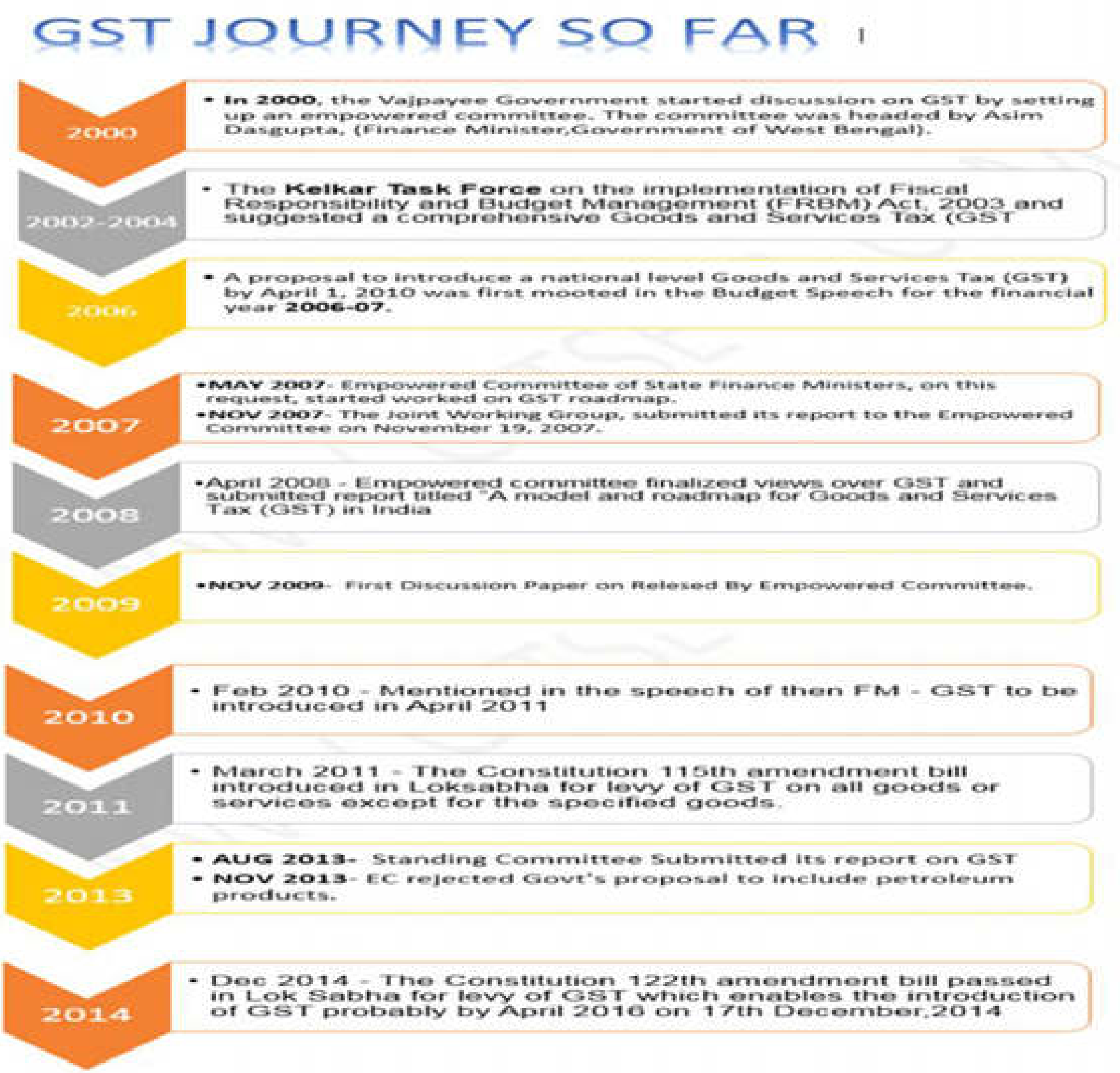
- Government has already incorporated Goods and service tax network (GSTN). GSTN has to develop GST portal which ensure technology support for GST Registration, GST return filing, tax payments, IGST settlements etc. Thus there should be a robust IT backbone.

Extensive Training to Tax Administration Staff :

- GST is absolutely different from existing system. It, therefore, requires that tax administration staff at both Centre and state to be trained properly in terms of concept, legislation and Procedure.

There are following negative aspects of Goods and Services Tax (GST)

1. Majority of dealers are not covered with the central excise but are only paying VAT in the state. Now all the VAT dealers will be required to pay Central Goods and Services Tax (CGST).
2. GST is referred as single taxation system in India but in reality it is a dual tax in which both state and centre collects separate tax on single transaction of sale & service. However GST has some negative aspect but at the end it will boost economy.
3. GST would impact negatively on the real estate market. It would add up to 8 percent to the cost of new homes and reduce demand by about 12 percent.
4. Service tax litigations have risen substantially in recent years and that may be because of the absence of a pan-India Goods and Services Tax (GST) regime that can potentially remove several ambiguities around indirect taxation, experts maintain.



Updated New GST Rates as on 19 January 2018 :

Items	OLD Tax Rate	NEW Tax Rate
Second-hand medium and large cars and SUVs	28%	18%
LPG supply for household domestic consumers by private LPG distributers	18%	5%

Bio Fuels Powered buses	28%	18%
Sugar boiled confectionery	18%	12%
Drinking water packed in 20 litre bottle	18%	12%
Drip irrigation system	18%	12%
Cigarette filter rods	12%	18%
Tailoring Service	18%	5%
The admission to Theme parks, water parks etc.	28%	18%
Mangoes sliced dried	12%	5%
Khakra& plain chapati / roti	12%	5%
Packaged Food	18%	5%
Namkeens	12%	5%
Ayurvedic, Unani, Siddha, Homeopathy medicines	12%	5%
Poster Color	28%	18%
Modelling Paste for children amusement	28%	18%
Plastic Waste, Pairing & Scraps	18%	5%
Rubber Waste, Paring & Scrap	18%	5%
Hard Rubber Waste	28%	5%
Paper Waste & Scrap	12%	5%
Duty Credit scrips	5%	Nil
Sewing thread of manmade filaments	18%	12%
All synthetic filament yarn, such as nylon, polyester, acrylic	18%	12%
All artificial filament yarn, such as viscose rayon, cup ammonium	18%	12%
Sewing thread for manmade staple fibres	18%	12%
Yarn of manmade staple fibres	18%	12%
Real Zari	12%	5%
Floor Tiles	28%	18%
Cullet or other waste of glass	18%	5%
Fittings for loose leaf binders, or files, letter clips, letter corners, paper clips, staple in strips,	28%	18%
Plain shaft bearing 8483	28%	18%
parts suitable for use solely or principally with fixed speed diesel engine of power not exceeding 15HP	28%	18%
parts for Pumps	28%	18%
E-waste	28% / 18%	5%
Biomass briquettes	18%	5%

CONCLUSION :

Taxation plays a significant role in the development of the economy as it impacts the efficiency and equity. It is expected that a good system should control income distribution and at the same time it will also endeavour to generate tax revenue which will support government expenditure on public services and development of infrastructure. GST will have positive impact on Indian economy. GST has faced a lot of controversy and opposition in terms of its implementation. Finally the GST bill has been passed and it ready to roll out in market. Time will only decide whether it will have positive impact or negative impact. International trade, firms and consumer will have new system of tax which is single level and more transparent. The new system of taxation is considered to be more improved system over the pre-existing central excise duty at the national level and sales tax system at state level. The new tax will be significant breakthrough and a logical step towards a comprehensive indirect tax reforms in the country.GST is not only Vat plus service tax but it is major improvement over previous VAT system. A single of tax will help maintain simplicity and transparency by treating all goods and services equal without giving a special treatment to some types of goods and services. It will reduce the litigation on classification of issues. It is also said that implementation of GST in Indian framework will lead to commercial benefits which VAT has not given and hence it would essentially lead to economic development. GST may assure the possibility of overall gain for industry,trade, agriculture and also to central and state government. Now Indian consumer need to have professionalism to acknowledge the GST. It is sure that India will join the international standards of taxation, corporate laws and managerial practices and also be among the world leaders.

REFERENCES :

Agarwal, D. S. (2016). Basic concepts of GST. gstindia.com.

Choudhary, R. (2017). Why gst for india, challenges for success in india an analysis. https://gst.caknowledge.in/gst-india-challenges-successindia/.

Dani, S. (November 20, 2016). A research paper on an impact of goods and service tax (GST) on Indian economy. *Business and Economics Journal*, 6.

Raghuram, G., (2015): Goods and Service Tax: The Introduction Process.

Gupta, A. (2017). GST impact on common man in just 7 easy to understand points. Financial Express.

India", India Policy Forum – 2005-06, NCAER-Brookings Institution.

Granthaalaya (2015) Indirect tax system In India: Tactful Management Research Journal, International Journal of Research.

Govinda., R., M., (2009). Goods and service tax - some progress towards clarity.

Pranab Mukherjee, Finance Minister of India, Speech at the Union Budget 2010-11, available

MukesH, K. K., Vibhor P., (2015) emergence of goods and service (GST)

Pinki ,Supriya, K.and Verma R., (2014). Goods and service tax – Panacea For Poirson (2006): India's tax system.

Govinda, R., M., and Rao, R. K., (2006).Trends and issues in tax policy and reform in India.

Sarma, Jana. V. M and Bhaskar. V, (2012), A road map for implementation of goods and service tax, economic & political weekly,.

Shankar (2005). Thirty years of tax reform in india, *Economic and Political Weekly.*

Pagalthivarthi, S., (2015). Goods and service tax (GST): Analysis, findings and suggestions.

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 102 - 112

Issues Relating to Customer Relationship Management in Banking Sector: An Exploration

Mehbooba Sultana[1] and Jaynal Uddin Ahmed[2]

[1]Research Scholar, Department of Management, North-Eastern Hill University, Tura Campus, Tura-794002, Meghalaya, India,
[2]Professor & Head, Department of Management, North-Eastern Hill University, Tura Campus, Tura-794002, Meghalaya, India

ABSTRACT :

The Customer Relationship Management (CRM). aims at focusing all the bank's activities towards developing long-term collaborative relationship with customers to develop them as lifetime customers. The studies and researches done over the years has clearly revealed the importance and the role of service quality in contributing to banks' ability to retain the loyal customers and improved bank performance. Bankers have to necessarily perform their banking operations with the likelihood risk of the customer switching over at any given point of time that might result in decline in revenue. To prevent or minimize this possibility of customer deflection; bankers have to come out with customer centric strategic decision. Obviously the conditions draw the attention in evolving meaningful CRM which would provide a platform for not only retaining existing customers but also to expand the customer base by attracting additional customers. In banking, product development is limited to the government regulations henceforth the other major challenge is to have product differentiation. The service/product mix offered by the banks, the service delivery system has drastically changed due to the persistent improvement in the technology and also in view of the phenomenal increase in the expectation of bank customers. The banks have realized the fact that CRM is a powerful tool to achieve success in their business and is an effective tool for the bankers to acquire new customers and to retain the existing ones. Therefore, it is essential to identify the customer expectation, which is an influencing element in retaining and increasing the customer base. The complexity in building relationship strategies for banks needs clear classification of customers' perceived service quality variables and the variables that need to be inducted to the employees serving the customers. CRM in banking gives rise to a number of issues that includes influences contributing towards relationship and influences leading to close up of relationship. In the banking business, there is complexity in measuring the relationship quality as it is influenced by the value proposition of the products offered and the quality of services delivered to the customer. The perception factors that influences relationship differs between the bank customers and bank employees. A meaningful understanding of those influences *would obviously contribute towards arriving at gainful relationship building strategies and misunderstanding of the influences leading to inappropriate relationship strategies. In the light of the above, the present paper devoted to comprehend the conceptual and theoretical issues and challenges relating to customer relationship management in banking sector.*

1. INTRODUCTION :

The traditional mode of marketing mainly focused on segmenting and acquiring new customers by using tools and techniques developed for mass marketing. In the present competitive era, there are different approaches to businesses such as relationship marketing, customer retention and cross-selling leading to customer extension, which is a better means than the traditional segmentation model (Premraj, 2012). The term 'Relationship Marketing' was coined by Berry (1983) as attracting, maintaining and multi-service organizations-enhancing customer relationships. This relational concept has been defined in the forms of supplier partnerships, lateral partnerships, buyer partnerships, internal partnerships, as well as business to consumer relationship; it is widely discussed in the literature of marketing management and corporate communication. The approaches in marketing functions are constantly changing in tune with the changing challenges that are faced at the market fronts. Today, marketers consider retaining of customers as a much more challenging job than acquiring customers in the context of growing competitive forces. Thus, the traditional transactional approach of marketing became insufficient to achieve the marketing goals. This scenario necessitated the emergence of a new approach namely Relationship Marketing. The relationship marketing approach differs from the traditional transactional approach in the following ways:

The focus of transactional marketing approach is on individual transaction and does not concern continuous relationship with customers. The framework of transactional marketing does not contain a strategic long-term perspective. It centres on tentative adjustment process as regards to performing marketing functions. As such the customers are viewed as outsiders to the business. Under transactional approach customer's expectations, satisfaction, multiple influences on their decision-making process etc. are not given due importance. Very little attention is paid to customer services and customer commitments. The thrust of transactional marketing is on gaining more and more new customers rather than retaining existing customers. In contrast to the transactional marketing approach, the relationship marketing focuses on continuous multiple transactions rather than isolated individual transactions. The relationship marketing approach considers customers as insiders to the business and aims to build a long term and never ending relationship with them. The focus of relationship marketing approach centres on developing hard core loyal customers with the idea of retaining them forever. A high degree of customer contact, commitment and services are maintained.

The relationship marketing approach has gradually taken the shape of Customer Relationship Management. Relationship marketing has a narrow focus on the customers and only on the marketing functions of the organization concerned. On the other hand, customer relationship management focuses more widely on customers and on the entire functions concerned with the value creation and delivery chain of the organization concerned.

Relationship marketing received more attention from scholars and practitioners in the last decade of 20th century because of two issues: benefits to organization and the involvement of generic service characteristics. Relationship marketing or customer relationship management is emerging as a core marketing activity for businesses in a powerful competitive environment. The statistics suggest that businesses spend more to acquire new customers than to retain them (Mehra, 2000). Therefore, many firms are now paying more attention to their relationships with existing customers to retain them and increase their share of customer purchases.

The concept of Customer Relationship Management has a significant role in every business organisations. It plays a predominant role especially in service organisations where customer acquisition, rendering the required service and retain them by providing value for their cost for a long period of time, and improve continuous revenue from that customer.Customer relationship management is defined as "a process that addresses all aspects of identifying customers, creating customer knowledge, building customer relationships, and shaping their perceptions of the organization and its products" (Lochridge, 2001). Customer Relationship Management (CRM) is a process that enables companies to provide excellent real-time customer service by developing a relationship with each valued customer through the effective use of individual account information. Customer relationship management holds that a major driver of company's profitability is the aggregate value of the company's customer base (Kotler, 2003).

Concepts of CRM :

Some select views of few marketing theorists, practitioners and researchers on relationship marketing is summarized below to gain more knowledge of the concepts of relationship marketing.

Berry (1983) viewed relationship marketing as identifying, acquiring, developing and retaining customers. He proposes the following sequences of activities for performing marketing, i.e. developing core services to build customer relationship, customization of relationship, augmenting core services with extra benefits, enhancing customer loyalty and fine tuning internal marketing to promote external marketing success.

Christoper (1992) view relationship marketing as a "tool to turn current and new customers into regularly purchasing clients and then progressively move them through being strong supporters of the company and its products, to finally being active and vocal advocates for the company".

Sheth and Parvatiyar (2001) define customer relationship management as a "comprehensive strategy and process of acquiring, retaining and partnering with selective customers to create superior value for the company and the customer".

Mohammad and Sagadevan (2002) operationally defined customer relationship management as "a management process of acquiring customers by understanding their requirements, retaining customers by fulfilling their requirements more than their expectations and attracting new customers through customer specific strategic marketing approach. The process invites total commitment on the part of the entire organization in evolving and implementing relationship strategies that would be rewarding to all concerned".

2. COMPONENTS OF CRM :

There are three components in applying CRM, namely:

(a) Operational CRM :

This implies supporting the 'front office' business process, which includes customer contact. The outcome of these processes is forwarded to relevant employees who are engaged in it. It is possible to have a 360 degree view of the customers while interacting with them. Some of the operational CRMs in practice are in the form of Sales Force Automation (SFA). SFA facilitates the automation of sales management functions such as lead management, contact management, quota management, forecasting, keeping track of customer preferences, buying habits and demographics and performance management.

(b) AnalyticalCRM :

The data gathered in operational CRM are analyzed to segment customers or to identify the potential for enhancing a relationship with a client. This helps expand the list of customers of a bank. The main objective of analytical CRM is acquisition, retention, information and modification of the customers' list.

(c) Collaborative CRM :

Collaborative CRM facilitates effective interactions with customers through a variety of channels such as personal, letter, fax, phone, web, e-mail etc. and supports coordination. This integrates people, processes and data together so that the firms can offer better services to customers and retain them over longer periods.

3. CRM IN BANKING SECTOR :

The pace of competition in the banking industry has been increasing due to the deregulation and globalization of the Indian economy with the world economy. Banks now enjoy greater freedom in designing their products offering at competitive interest rates that was not available earlier. Thus, it has become essential for banks to move away from the traditional transaction based view of banking to an entirely relationship orientation so as to build a long lasting profitable relationship with their customers.

CRM aims at focusing all the bank's activities towards developing long-term collaborative relationship with customers to develop them as lifetime customers. The studies and research done over the years has clearly revealed the importance and the role of service quality in contributing to banks' ability to retain the loyal customers and improved bank performance. Figure 1.1 explains the fact that a customer first considers the quality of the product offered to start his dealings withbanks. Secondly, the customer develops a relationship with the banks based on the quality of services offered which the bank exhibits through its performance, serviceability, conformance, aesthetics and quickness of response.

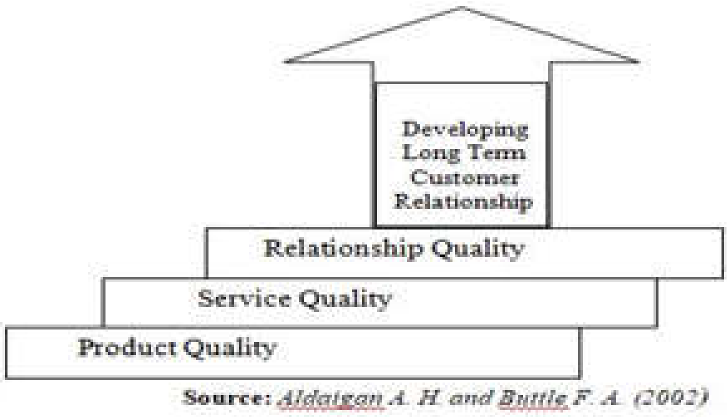


Figure 1.1: Customer Relationship Management and Service Quality

When the quality of the services offered by the bank meets or exceeds the expectations of the customer, the attachment between the bank and customer strengthens thereby improving the quality of relationship (which includes trust, commitment and intimacy) between them. This helps the bank to progress towards the ultimate goal of CRM. The activities that constitute customer relationship management are :

- Establishing and maintaining a customer data base;
- Planning customer contact programs;

- Analyzing informal customer feedback;
- Conducting customer satisfaction surveys;
- Managing communication programs;
- Hosting special events or programs for customers; and
- Auditing and reclaiming lost customers.

4. REVIEW OF LITERATURE :

Adoption of Customer Relationship Management in Banks

Estiri, Hosseini, Yazdani, and Nejad (2011) performed a review of the set of attributes which are capable of being incorporated in the measure of customer satisfaction for Islamic banks. Later, the possibility was posed of grouping these attributes into dimensions of quality, proceeding to value various alternative structures by means of confirmatory factor analysis methodology and testing their reliability and validity. The findings from this study revealed that customer satisfaction in Islamic retail banking depends on two major factors namely value proposition quality and service delivery quality. Singh and Kaur (2011) determined the factors that have an impact on customer satisfaction as regards the working of select Indian universal banks. The study was conducted using the survey method. Data were collected through a well-structured questionnaire from a sample of respondents. The major findings of the study show that customer satisfaction is influenced by seven factors: employee responsiveness, appearance of tangibles, social responsibility, services innovation, positive word-of-mouth, competence, and reliability. The results of multiple regressions showed that three variables: social responsibility, positive word-of-mouth, and reliability have major influences on the overall satisfaction of the customer. Ganguli and Roy (2011) studied the factors affecting customer satisfaction in the Indian retail banking sector. Online structured questionnaire was developed to determine the factors for customer satisfaction were distributed among the respondents. The dimensions were identified using an exploratory factor analysis (EFA). Next the reliability and validity of the factors for customer satisfaction were established through confirmatory factor analysis (CFA). The paper identifies four generic dimensions in the technology-based banking services customer service, technology security and information quality, technology convenience, and technology usage easiness and reliability. It was found that customer service and technology usage easiness and reliability have positive and significant impact on customer satisfaction. Padmavathy, Balaji and V.J. Sivakumar (2012) developed a multi-item scale for measuring the customer relationship management effectiveness (CRME) in Indian retail banks and examined its relationship with key customer response variable. This research adopted two different studies to develop and validate the scale for CRME. In the first study, the responses obtained from 197 Indian retail banking customers were used to identify key dimensions of CRME. In the second study, nomological validity for the CRME scale was provided using a new sample of 261 actual bank customers. Furthermore, the relationship between CRME dimensions and customer behavioral outcomes such as customer satisfaction, loyalty and cross-buying were also examined. The results of factor analyses revealed ûve dimensions for CRME, namely, organizational commitment, customer experience, process-driven approach, reliability and technology-orientation. Organizational commitment, process-driven approach and reliability were found to positively affect customer satisfaction. Reliability was found to have direct association with customer loyalty and both customer satisfaction and loyalty-inûuence cross-buying. Rouholamini and Venkatesh (2011) evaluated CRM practices in Iranian banking industry. In this study the primary data were gathered from 400 respondents who represented the top, middle and lower management of public and private banks of Iran through questionnaires. Secondary data was obtained from books, articles and research reports. The study concludes that the practice of CRM is widely acknowledged as an important component of marketing management and corporate communication management processes in Iranian banks but unfortunately applications of CRM is not favourable. Advanced information and communication technologies are also widely utilised by the Iranian banks to enrich the process of organisational management in general and customer relations management in particular. George and Manoj (2013)are of the view that one of the approaches that is fast gaining significance is Customer Relationship Management. They concluded that apart from focusing on developing product strategies alone, banks need to accord equal or higher priority to customer service particularly by way of installing an effective CRM system. Osunde (2014) found that the effective CRM practices can lead to confidence in the formal banking sector given the cultural perceptions of banks in Nigeria and the wide spread practices of the Esusu which is a traditional method of saving money adopted by millions of Nigerians. Also, the study reveals that commercial banks can build relationship with customers by making use of technology and managing information to improve service delivery and achieve increase in their customer base, customer royalty and retention. Manoj (2015) viewed that all the banks have fast switching over to E-CRM from the traditional CRM because of the obvious benefits of the former in view of the advances in Information and Communication Technology and its adoption by all banks.F-test and t-test was used to test the relationship between level of education, gender and the use of E-CRM services. However, he concluded that gender and education are not a significant factor that influences the use of E-CRM. Cvijovic, Stankovic and Reljic (2017) explained that CRM enables segmentation of customers in accordance with different criteria, which enables customization of banking products and services and continuous innovation of product portfolio. CRM provides the possibility to create active and friendly relationship with customers, which certainly contributes to their loyalty to banks and the provision of permanent and secure revenues in the long run. Therefore, CRM in a contemporary context represents the crucial factor for the achievement of the overall business success and survival in the market, when it comes to traditional banking, but especially in the context of Internet and mobile banking. Agrawal (2017) conducted a study on the impact of CRM on Indian banking sector and found that relationship marketing is becoming important in financial services. CRM is an opportunity that banks can avail to rise above minor advantages by developing actual relationships with their customers. Gayathry (2016) identified the effectiveness of CRM and the lacunae in the process of CRM by establishing an empirically tested CRM model. Two sets of questionnaires were used to collect information from customers and bank employees. The study has given a clear message that the real challenge before the banks is to translate sentiments into dealings, and a dealings-based relationship into a psychologically linked and dedicated one within a time period.

5. OBJECTIVES OF THE STUDY :

The objective of the study is to understand the issues and challenges of customers' relationship management in the banking sector.

6. RESEARCH METHODOLOGY :

The study is basically based on conceptualisation of CRM in banking sector. The primary source of the present paper is the established research papers published in journals and periodicals. Besides, observation and personal interview with the bank managers was conducted to derive the issues and challenges of CRM in banking sector.

7. ISSUES AND CHALLENGES :

An exhaustive review of literature of CRM in banking sector and Models of CRM shows a multiple problems and challenges associated with the conceptualisation of CRM in banking sector. These issues and barriers to Customer Relationship Management in banking sector need to be conceptualise appropriately to a proper academic discourse.

a) The employees of modern organisations are not adequately trained in the management of corporate communication which also includes Human Relationship Development. The art and craft of public relations are not taught formally or informally to the employees who handle various aspects of customer relationship management including application of Information and Communication Technology.
b) Gaining adequate funding for CRM requirements is an important issue for organizations, particularly as many of the projects expanded dramatically in cost and sometimes in scope. Some organizations had overcome the problem of funding by adopting what is referred to as a 'quick wins' approach. By structuring their

CRM implementation projects to deliver quick wins and visible benefits at incremental stages, such as improvements in customer service or higher response rates to campaigns, they were able to demonstrate immediate progress and returns.

c) Organizations at different stages of CRM development experience different issues with respect to data quality and data quantity. Modern organisations are yet to develop scientific database which facilitates meaningful customer relationship management activities on the basis of authentic data and firsthand experience.

d) Low initial awareness of the benefits of a marketing database among senior management is also a barrier for companies which are less advanced in CRM implementation. This problem tends to overcome as the data warehouse goes live and begins to deliver results. CRM managers point out that the data warehouse is perceived as a high cost and senior management often failed to understand the potential financial benefits in the earlier stages of the CRM project.

e) Managers at the functional or business unit level may be reluctant or unwilling to cooperate at the early stages of the CRM project. It may require considerable organizational effort to make functional and business unit managers aware of the benefits of greater company-wide operations and cross-functional working.

f) Experience also reveals that the top management is least involved in the CRM activities which are normally handled by the managers, supervisor and workers of the organisations concerned. Their role is to ensure a high level executive, ideally at Board level, acts as a sponsor and champion for the company's CRM activities and that the importance of transforming the company's relationships with customers through CRM is understood and shared by the Board and senior management.

g) CRM managers often point out how poor or inappropriate measurement and reward systems can hinder the initiation and fulfilment of CRM projects. Measures used to determine the success of CRM performance are often considered inadequate. Sometimes, the problem is that the organization is not clear about its goals or does not communicate its goals to its people.

8. CONCLUSION :

The banking industry includes a number of businesses such as corporate banking, investment banking, wealth management, capital market etc. It is facing a very stiff competition and current scenario is that of the survival of the fittest. Modern banks are trying to increase their customer base and are developing their own customer relation strategies in order to be in the market. The present day customers are technology savvy and they are more exposed to various kinds of goods and services. Modern banks have of late realised that customers play a dominant role in shaping the destiny of economy in general and banking industry in particular. The manufacturer or service provider dominance is being replaced by the customer preferences in the banking sector. In this age of competitiveness, the creation of a good positive customer relation is not only a necessity but it is a key strategy for differentiation. Also, CRM faces increasing customer expectations and customer relationship complexity, which is caused not only by the new, continuously evolving technology, but also because of the wide range of choices available for the customer in the banking and faster development of new products and services by the competitors. Therefore, adoption of CRM in banking sector becomes inevitable for the survival as well as long term prosperity in the highly competitive scenario.

REFERENCES :

Agarwal, S. (2017). Impact of customer relationship management on Indian banking sector, *Voice of Research, 6*(1), 35-36.

Aldaigan, A. H. & Buttle, F. A. (2002). Systra-Sq: A new measure of bank service quality, *International Journal of service Industry, Management, 13,* 362-382.

Berry, L. L. (1983). Relationship marketing of services: Growing interest, emerging perspectives, *Journal of the Academy of Marketing Science, 23*(4), 236-245.

Christopher, M., Payne, A. and Ballantyne, D., (1992). Relationship marketing: Bringing quality customer service and marketing together, Oxford: Butterworth-Heinemann, p. 11.

Cvijovic, J., Stankovic, M. K., & Reljic, M. (2017). Customer relationship management in banking industry: Modern approach, *Industrija, 45* (3), 151-165.

Estiri, M., Hosseini, F., and Yazdani., H. (2011). Determinants of customer satisfaction in Islamic banking: Evidence from Iran, *International Journal of Islamic and Middle Eastern Finance and Management* , 4(4), 295-307.

Ganguli, S., and Roy, SK., (2011). Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty, *International Journal of Bank Marketing,* 13(2),168-189.

Gayathry , S. (2016). Customer relationship management model for banks, *Journal of Internet Banking and Commerce,21*(5), 1-12.

George, A. J., & Manoj, P.K. (2013). Customer relationship management in banks: A comparative study of public and private sector banks in Kerala, *International Journal of Scientific Research, 2* (9), 246-249.

Jagdish N. S., Atul P., and Shainesh G., (2001). *Customer Relationship Management,* Tata McGraw Hill Publishing Company Ltd., New Delhi.

Kotler, P. (2003). *Marketing Management*, Prentice Hall, USA.

Lochridge, S. (2001). Customer relationship management: How to Get Beyond the Hype, eWeek, *18* (20), 42.

Manoj, P. K. (2015). Customer relationship management (CRM) in banks in the ICT era: An empirical study of customer acceptance, *International Journal of Information Technology & Computer Sciences Perspectives, 4*(3), 1545-1550.

Mehra, V. (2000). Tremors in the Indian banking system nonperforming assets erode bank profitability. *The Journal of Indian Management and Strategy, 3*(3), 26-29.

Osunde, C. (2014). A study on customer relationship management practices in selected commercial banks with reference to Nigeria, *Journal of Entrepreneurship and Organization Management,3,* (2), 1-6.

Padmavathy, C., Balaji, M.S., and Sivakumar, V.J. (2012). Measuring effectiveness of customer relationship management in Indian retail banks, *International Journal of Bank Marketing,* 30(4), 246-266.

Peeru Mohammed, H. and Sagadevan, A., (2002). *Customer Relationship Management,* Vikas Publishing House (Pvt.) Ltd, New Delhi.

Premraj, H. (2012). *Customer Relationship Management In Indian Banking Industry – A Study With Reference To Retail Banking In Chennai,*(Doctoral dissertation, University of Madras ,Chennai, India)

Rouholamini, M. and Venkatesh, S. (2011). A study of customer relationship management in Iranian banking industry, *International Journal of Information Technology and Knowledge Management,* 4(2), 723-729.

Singh, J., and Kaur, G., (2011). Customer satisfaction and universal banks: An empirical study", *International Journal of Commerce and Management*, 21(4), 327-348.

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 113 - 34

Integration of Vedic philosophy with Management philosophies for better management practices

Mousumi Devi
Department of Management, Dispur College, Guwahati-781005
email-id-sumimaushumi@gmail.com

ABSTRACT :

The Indian philosophy is very rich with the knowledge and teachings of our old manuscripts in the form of Veda and Upanishads. Especially the Rig Veda, the oldest of all stated different philosophies of life and learning. These ancient knowledge can be integrated with other the theories developed and propounded various management thinkers over the year to make the life and task of the workers and managers more fruitful. The paper shall analyse some of the principles of management in the light of Vedic principles to mitigate the shortcomings found in the theories to make them more acceptable for all.

Key words : Veda; Vedanta; Meditation; Life stressors, Occupational stressors; Management principles; Vedic philosophies;

The paper shall have the following objectives :

1. The use of some aspects of Vedic philosophy in management functions and principles.
2. Suggest measures to bring overall development of the employee as an individual for better work performance.
3. Integration of Vedic philosophies with Management philosophies.

METHODOLOGY :

The paper shall be more empirical in nature. To analyse the management philosophies, secondary data in the form of books and journals are used. Again, books and articles stating Vedic philosophy and literature are also considered. Various articles and knowledge shared in the Internet also gave meaningful information on the topic. To collect pertinent information about the study, primary information is also collected from a sample frame of 50 respondents from two different fields of profession. The collected information will be analysed to derive meaningful inferences.

KEY FINDINGS :

1. The Vedic philosophies and principles like principle of Sarvodaya, SarvaLokaHitam etc. if properly learnt and used ,can solve many complicated management issues.
2. As found in the study, regular practise of yoga and meditation can act as de-stressors, the modern day managers suggest such practices as a routine part of work.

POLICY IMPLEMENTATION/SUGGESTIONS :

The world at large should be exposed to the rich Vedic theories in a simple way. As originally written in Sanskrit Language, it remained limited only to a class of people. So, ripe the benefit of this jargon it should be communicated in an easy way to all the concerned people. Besides, by integrating management thought with Vedic thought a new dimension can be reached in managing the most complicated yet very important **M**of factors of production.

INTRODUCTION :

The function of management is practised in everyday life to manage time, money or resources. But its exact definition can be found only since 1900 onwards. Its evolution to its present economic time (1980 onwards) can be broadly categorised as - Classical Theory, Neo-classical Theory and Modern Theory. But in India, the principles of management and administration is presented in Vedic literatures even before. As the origin of Rig Veda can be traced back to 600 year B.C.Indian philosophy is very rich with the four Vedas and Upanishads.The Kautilya'sArthashastra,Chanakya's policy about good governance and management,Aryabhattas mathematical teachings,Astronomical learning,Astrological knowledge,Ayurveda ,Natyashastra etc.enriched the world of knowledge over thousands of years back.

The nature of work in a globalised environment becomes more and more complex. In the era of working with virtual and learning organisation,the task of the manager has become more demanding. Today's organisationis an open systemand organisation culture becomes more unique and diverse with employees coming from cross-cultural and cross-regional identity. To entangle all the diverse values into one, the organisation can put the sense of togetherness by enlightening the employees with Vedic thoughts through motivational talks. The manager can make them adapt the philosophy as stated by the Shanti Mantra(peace hymn)"Om SahaNaa-Avantu |SahaNauBhunaktu | SahaViryam Karavaavahai | TejasviNaav-Adhiitam- AstuMaaVidvissaavahai | Om Shaantih Shaantih Shaantih|| " (Taittiriya , Katha, Mandukya, Shvetashvara Upanisghads) which means Om, May God protect us (during the journey of awakening our knowledge), May God

Nourish us (with that spring of knowledge which nourishes life when awakened), May we work together with energy and vigour(cleansing ourselves with that flow of energy for the knowledge to manifest), May our study be enlightening (taking us towards the true essence underlying everything) and not giving rise to hostility (by constricting the understanding of the essence in a particular manifestation only). Om peacepeacepeace.

By integrating Vedic philosophies the y may considerate to each other's values and cultures that may foster a spirit brotherhood and organisational peace.

The paper shall put light on the following objectives :

1. The use of some aspects of Vedic philosophy in management functions and principles.
2. Suggest measures to bring overall development of the employee as an individual for better work performance.
3. Integration of Vedic philosophies with Management philosophies.

METHODOLOGY :

The study will be basically empirical in approach. It shall try to relate the management philosophies with the Vedic philosophies.In this regard the philosophies of the following management thinkers will be considered :

1. Frederick Taylor.
2. Henry Gantt.
3. Henry Fayol.
4. Elton Mayo.
5. Peter Drucker and
6. Edwards Deming.

The paper is basically based on secondary sources of information. However, to collect some pertinent information, primary information is also collected through schedules.

To collect primary information 50 respondents from different occupation were contacted. The respondents were asked on the parameters of stress viz. Work stressors-Task demand, Physical demand, Role Demand, Inter-personal demand&Life Stressors-Death of a spouse, Marriage,Personal illness or injury.

The sample frame of the respondents is :

Noof respondents	Category of Respondent
25	Teacher
25	Private sector employees
Total 50	

To analyse the primary data, Rating Scale is used.

DELIMITATION OF THE STUDY :

1. In analysing the philosophies, the theories relating to managing human resources will only be considered.
2. To collect information relating to work related stress and life stressors, teachingprofessionals and executives working in various private sectors of Guwahati will be contacted.

The study is presented as follows :

VEDIC PHILOSOPHY IN MANAGEMENT :

In Vedic philosophy, business has seen as a legitimate, integral part of society. Its core function is to create wealth for society through manufacturing, domestic distribution, foreign trade, financing and other such related activities. A business organisation no matter of its size, type or form will run well if it is managed well. Peter Drucker in his book "Principles of Management" stated as "Management is a multi-purpose organ that manages business and manages managers and manages workers and work."The functions of Management are universal in nature.It is also an applied science which is again dynamic in nature.The various principles of management are used in Indian organisations integrating the local values and ethos.The organisation should emphasise on working for an economic structure based on 'SarvaLokaHitam' which means 'universal well-being'. The basic managerial functions started with planning.While planning, emphasis should be made on the mantra **'SabkaSaath, SabkaVikas'** for inclusive growth of the organisation. In determining the existence and functioning of an organisation, the basic Principles of Management viz. Principle of objective, principle of specialisation, principle of authority and responsibility, principle of definition can be integrated with the Principle of **LokahSamastahSukhinoBhavantu**(may all beings everywhere be free and happy)can be integrated. This will surely bring more acceptability to the organisation norms.Similarly in organising the structure of work,responsibility and authority, the modern management should integrate the vediclearnings.While designing the organisation structure the philosophy of Sarvodai can be followed. Sarvodaimeans universaluplifitment or upliftment of all without discrimination.Etymologically speaking Sarvoday means '**the rise or welfare of all'.**It believes in equal and fair treatment and sympathy to all.Sarvodaya may well be regarded as India's distinctive contribution to social philosophy and was made a part by Buddha and MahavirJain on their preaching to the masses almost 3000 years back. However, Gandhiwas influenced by this principle after reading John Ruskin'stract on political economy 'Unto This Last' .It was further supported by J.P Chandra stating decentralisation of both political and economic powers, Sarvodaya provides opportunity for all round development of the individual and the society. The modern business organisation can adopt this principle by giving more autonomy to work by decentralisation and delegation of workand manymanagement thinkers like Allen, Henry Fayol supported this principle. But to bring more acceptability and adaptability, managers can incorporate the **Principles ofSarvodaya** viz. **Social principle** – stating everyone is deliberated as an equal complement to the society;**Economic principle**-non-exploitative arrangement of economic principles, co-operative-is as an essential; **Political principle**-government, authority, power would be decentralised and **Religious principle**-religious peaceful co-existence of people of all religions.

It was often seen that wrongful structural arrangement of work and responsibility leads to mis-utilisation of resources of an organisation. Max Weber in his Bureaucratic Model has highlighted that there should be a clear division of work as per specialisation, impersonality, selection on basis of qualification, systematic discipline and control of work. Peter Drucker ,PeterSenge also advocated for a systematic organisation of work and responsibility. But, despite of following such standards organisational conflict arises. So, to avoid such conflict situations the Principles of Sarvodaya can be adopted.e.g. in Indian context ,employees from different religious beliefs , religion , region, caste etc. used to form groups. The religious principle can learn the employees the art of living in unity despite the diversity which is of course, practiced in national perspectives, but in can be used in organisational context as well.

SCIENTIFIC MANAGEMENT OF F.W. TAYLOR :

Scientific Management also known as Taylorism, had analysed and synthesized workflows scientifically to improve economic efficiency especially labour productivity. Taylor stressed on the need of systematic management to analyse the work to be done, to measure it and to assign portions of work to the best selected people and trained them to perform the work. Scientific management is the process of scientific method in directing human efforts and solve management problems arising in the process of management by management specialist. In order to achieve the operational efficiency, Taylor along in association with Frank and Gilberth developed Time and Motion study to decide time required to perform a task to calculate bonus in addition to normal rate of pay. Again, through Motion study unnecessary and repetitions of works were eliminated to bring more efficiency**.**

Drawbacks : Scientific Management used a systematic experimental techniques .It showed mechanistic assumption about human behaviour .The system brought many workers more difficulties at work than gain and left them with a distrust of managers who did not seem to care about their well being. Taylor considered human behaviour as a component of a large productive machine. Only performers who acted like machines had a place in his productive system. The dissatisfied workers resisted to the new system. Taylor failed to consider the complexities of human behaviour.

Overcoming drawbacks of Scientific Management Theory: Despite of many of the drawbacks today's managers use the following principles of Scientific Management to bring efficiency:

1. Time and motion study.
2. Hiring best qualified workers by scientific selection.
3. Designing incentive systems based on output.

Henry Gantt :

Henry Laurence Gantt was also a contributor of Scientific Management School. He developed task and bonus system and a chart known as Gantt chart. As per the bonus scheme, workers receive their days wage even they do not perform their complete job. But they receive bonus if they perform less than the standard time. It was further recommended that there is an incentive scheme for foremen based on the incremental performances of workers. The Gantt Chartis used to compare actual performances with planned performance in production planning. It is a visual device used in production control used to indicate production in terms of time rather than quantity.Gantt charts is a visual methods of scheduling both time and resources for work project. Gantt advocates psychology of employee relations indicating management responsibility to teach and train workers. He emphasised on service rather than on profits.

Advantages :

The bonus plan suggested by Gantt is more acceptable among the workers as a worker gets as per the time taken to finish the job if he cannot finish within the standard time and if he finishes less than the standard time he gets wages for the standard time and a bonus of 20% of the wage earned.

Again, it makes no distinction between efficient and inefficient workers as it ensures time wages for substandard workers and piece wage and bonus of 20% for standard and super standard workers.

Drawbacks : The theory ignored the important aspects of organisational behaviour. It failed to consider internal and external environmental forces. It stressed more on increasing productivity.

Henry Fayol : Henry Fayol in his book General and Industrial Management describes a number of management principles that constitute the theory of management or administration. As part of the theory he gave importance to the role of staff specialist in guiding and advising line managers in complex organisations. He recommended selection and training of workers and managers to create skilled workers and professional managers. Fayol put importance on non-financial incentives to motivate employees.

Criticism :

In the words of Herbert Simon-Fayol's Theory suffers from superficiality, oversimplification and lack of realism. It works well when the organisation is stable and may not hold good in today's turbulent work situation. Again Fayol's theory does not pay attention onworkers and treated as biological machines in the production process. Some principles of Fayol's are contradictory. e.g. Principle of specialisation contradicts principle of unity of command.

Elton Mayo's contribution : Elton Mayo and his associates are the pioneer human relation movement. Elton Mayo's contribution gave a new direction to modern human relations management methods. They applied psychological approach in Management developed certain principles from the Hawthorne studies. Mayo pointed out informal organisation has a strong presence in any organisational set up. It focused on the importance of human relations. He stressed that successful human relations approach can create harmony in an organisation , higher employee satisfaction which brings greater operational efficiency. Managers must take social needs, such as belonging to an(informal) group seriously.

Criticism : The works of Elton Mayo were criticised as later on it was proved that there is no direct and deep connection between morale and productivity. Besides morale which is a very elusive quality , other factors like plant efficiency, work environment, managerial style, job contents, man-machine system ,financial resources, marketing efficiency material movement also influence productivity.

Peter Drucker :

Drucker the founder of modern management invented the concept Management by Objective (MBO) and self control. MBO is a regarded as an effective measure of performance appraisal technique as it calls for active involvement of employees in setting their standards of performance in line with organisational objectives. General Electric Company used elements of MBO while reorganising itself allowing decentralised decision making system. MBO is also acts as a motivatingtechnique. MBO paved the way for participative management by making the workforce more involved and committed to their own performance. MBO helps in managing an organisation with clarity and creates effective control.

Edward Deming: Deming's famous 14 points is the base of Japanese Theory and Theory Z. Deming's 14 points provide a framework to developing knowledge in the work place. Deming viewed that by adopting appropriate principles of Management; organisation can increase quality and can reduce cost. Deming's works were unrecognised and unknown in U.S.A but helped to lay the foundation of Japanese Organisation Development on their expansion to world economy. He was a regular counsellor, advisor to Japanese business and govt leader. Deming viewed that organisation can increase quality and reduce cost (by reducing waste,rework, staff attrition and litigation while increasing customer loyalty). When people and organisation focus primarily on quality , quality tends to increase and cost falls. However, when it primarily focus on cost , cost increases due to not minimising waste, ignoring amount of rework occurring , not resolving disputes when appeared, taking staff for granted, over time, loss of customer loyalty which leads to decline in quality. This calls for transformation of the management system –termed as 'System of Profound Knowledge'. As stated by Deming, the first step is transformation of individual. The transformed individual will perceive new meaning to his life, to events, to numbers. He will have a basis for judgement of his own decisions and for transformation of the organisation that he belongs to. Transformed individual will help people to pull away from their current practices and beliefs and move into new philosophy without a feeling of guilt about the past. The system of profound knowledge is the basis for application of Deming's 14 Points for Management.Deming advocated that all managers need to have Profound Knowledge. Among the **14 points**, the Principle – institute a vigorous program of education and self –improvement; and the Principle - put everybody in the company to work to accomplish ; drive out fear so that everyone can work more effectively for the company; holds good in every work situation.

Table : 1
Integration of Vedic principles with Management principles

THEORIST	CONTRIBUTION	VEDIC PRINCIPLES SUGGESTED	EXPECTED RESULT
1. Frederick Taylor	Scientific Management Theory	**SarvaLokaHitam'** which means 'universal well-being'	Employee-Management conflict can be minimised as both the parties will spontaneously respond to each other's need and well-being.

2. Henry Gantt	Task and bonus system and Gantt Chart	'**SarvaLokaHitam'** which means 'universal well-being'	Inclusive growth of the organisation
3. Henry Fayol	Administrative Management Theory	The Principles ofSarvodaya **i.e.** Rising of all	Remove ambiguity, inefficiencies and less bureaucratic control
4. Elton Mayo	Hawthorne Studies	'**SarvaLokaHitam**' which means 'universal well-being	in the attitude of individual and behaviours, group behaviour. Foster co-operative concept.
5. Peter Drucker	MBO Technique	philosophy of **Sarvodai** which means the rise or welfare of all	The human element in production will collectively develop to be more resourceful
6. Edwards Deming	System of profound knowledge	**LokahSamastahSukhino Bhavantu** (may all beings everywhere be free and happy)	Easy acceptance to the transformation both at individual level and organisational level and 14 point of Management

Sources :
1. Bhattachacharyya,D.K. Principles of Management.Pearson.2012.
2. Bhatia, R.C. Principles of Management.PHI Publications.2013
3. Bhattacharjee, A.Modern Management Through Ancient Indian Wisdom: Towards a more sustainable paradigm.Vol. IV, BNo.1, March-August 2011.
4. Bharatan, K.(Editor)What is Sarvodaya? 1954.

VEDIC PHILOSOPHY IN MAKING HUMAN RESOURCES MORE RESOURCEFUL :

Similarly to make the human resources more resourceful the Vedic learning has a lot to offer.The Hindu philosophy basically aims at purifying mind and soul for an accomplished human being. Even psychologist also opined that a satisfied human mind and soul is always a better performer.Again, in the verse 47 and 49 of Bhagavada Gita it laid emphasis on Karma. , it is important that employees should understand their "Karma" in its entirety. The concept of Karma comes from the "Karma-Yoga" of Bhagavad Gita in which Lord Krishna says to Arjuna:

"KarmanyeVadhikaraste Ma PhaleshuKadachana
Ma Karma PhalaHeturBhurmateySangostvaAkarmani"

(2.47, TheBhagavadgîtâ)

It means that "we have only the right to work, right on our actions but not on theconsequences or fruits of that action. So we should be not being attached to either fruits of theaction or inaction.The employee must be motivated to perform well without aiming for material reward.He will be recognised for his good deeds some day or other. Dis-satisfaction arises for non-fulfilment of wishes. So for attaining self contentment believing in Karma is the main matra. And then Lord Krishna subsequently said:

"DoorenahyAvaram karma, Buddhi-YogaadDhananjaya
BuddhauSaranamanviccha, Kripanaahphala-hetavah"

(3.49, TheBhagavadgîta)

This means that we should not focus our work to attain the target set to earn material gain but should work with an ideal (Buddhi-Yoga) or a vision, because if we work for result, then our work will culminate once we achieve the result. However, when we work with an ideal or vision and keep it so high, we keep on striving to reach it so that in the process of delivering our Karma we grow. We should dedicate all our work / effort to the God with open heart and hope that our good efforts will reap benefit.

In the presentorganisational context every manager should focus on his work and at the same time be "in-sync" with the organization's vision and mission. When every worker and manager is in-sync with the organization's vision and mission, then it ultimately leads to excellence.

MANAGING STRESS AND CONFLICT THROUGH VEDIC PRINCIPLES :

Conflict and Stress at work place arethe two behavioural phenomenons's that a human resource manager has to regularly deal with. Conflicts, whether intra-individual, interpersonal, inter-group or organisational; it affects employee performances and reduces productivity. The conflict arises due to differences in needs, expectations, and interest of people. Again, stress is a frequent cause of conflict and conflict can again reinforce stress. Stress whether occurred due to organisational stress that caused because of taskdemand , physical demand or inter-personal demand or appeared due to one or the other personal reason like death of a spouse, marriage, personal illness or injury and so on are very hard to manage. Because, all human beings has different psychological and emotional characteristics, it is hard to devise one single mechanism to handle stress.

The respondent rated the main concern of their stress relating to work situation as follows :

The respondents are more stressed out to fulfil the demand of the job. The job content and muti-tasking by the employees in today's time make the job more stressful. Again, physical demand to perform cent percent despite of all adversities if appeared brings more organisational stress. Whereas, role demand and inter-personal demand causes almost equal level of stress at work.

Among the life stressors, it appears that the main reason of concern is personal illness or injury. The other reason of stress is because of adjustment in the form of dislocation, changes in family life etc. to be made due to marriage. The other life stressors like death of spouse or any close one causes mental disturbance. As it is totally a psychological phenomenon, the acceptance level of stress is different from individual to individual. Individual member may feel fatigue, helplessness due to excessive stress. The best way to manage stress is exercise, meditation and relaxation. Organisations can also offer institutional program, wellness programmes to help employees tackle stress both organisational and life. The ancient Vedic ideologies like meditation and stress reducing measures like chanting hymns and mantras like Gayatri mantra, asanas, pranayams etc. can sooth our body and soul. As stated earlier the chanting of certain mantras or Asanas can be a stress booster. Prime Minister NarendraModi has also addressed the same to the young students in his recent book 'Exam Warriors' to face exam terror.

Again, to regulate our actions and behaviours meditation and yoga can be practiced. Yoga at workplace can be quite beneficial because "when your staffs are healthy, they have lower risk of injury, lower absenteeism and a greater resilience" (www.fruitamigos.com)

Yoga for corporate wellness program includes the practices of asana, pranayam, meditation and yogic relaxation as per the need of the employees. The yoga session can be planned for one hour on daily basis or 3 days a week for duration of one month to one year. Realising its power, many multi -national companies,banks, I.T Companies arranges special session for yoga and meditation for stress management. Some of such big companies are Taj Group of Hotels, Reliance Capital, Ericsson, OTIS, Datamatics, Target India, and

General Motors etc. The companies have also responded to the Government of India's Ministry of Ayush program of International Yoga Day on 21st June of each year. This year the 3rd International Yoga Day was celebrated by many companies and banks. Art of living, Guwahati Centre in association with its branch offices situated at various parts of the State is regularly organising yoga and meditation camp, motivational talks to various private and public sector enterprises like ONGC Nazira,ONGCSibsagarh, GAIL Sibsagarh, OIL India LTD,Duliajan BCPL Dibrugarh, DigboiRefinery,BVFCNamrup, APL Namrup, Gas Company Dulijan and many other educational institutions of the State

KEY FINDINGS :

1. The Vedic philosophies and principles like principle of Sarvodaya, SarvaLokaHitametc. if properly learnt and used ,can solve many complicated management issues.
2. As found in the study, regular practise of yoga and meditation can act as de-stressors, the modern day managers suggest such practices as a routine part of work.

CONCLUSION & SUGGESTION :

Every business institution is a part of social system .To get acceptance in the society it must be responsive to its stakeholders viz. Customers, Employees, Government, Shareholders etc. . Although, the concept of Corporate Social Responsibility has gained importance in the 20th Century, many big or small business houses are performing in their own way; it has been well stated in the Vedas thousands of years back. According to the Vedas the Divine Law is the moral standards. Dharma is the root of good conduct; wealth is its branch; customary good conduct produces merits. Duties to the country (desadharma) should not be violated. The business houses should be responsiveness to the people. Truthfulness, kindness, calmness and harmlessness are the four parts of dharma. Because of this strong ethical values, moral standards, strong societal base and philosophical virtues the world economy is inclined to Indian economy.. When the economy of most of the powerful nations like U.S.A, China , France and other European Countries were disturbed due to economic slowdown in early part of 21st century , Indian economy could sustained the great disturbance. Many economists gave credit to the policy makers and philosophical backbone of the country. However it is suggested that the Vedic knowledge and learning should be addressed and communicated in a simpler way so that it can be inculcated in the minds of the people. As it is often said that it is better to catch them young, so the younger lot should be inclined to the Indian philosophy at their tender age through motivational classes and workshops. The Prime-Minister of the country is also highlighting the same in his radio program MaankiBaat.The government of India has proposed to make Yoga as a compulsory subject in schools for students of class 1-8 but it was rejected by the S.C after an appeal. But it is suggested that after deliberation, discussion and consent of the concerned parties spiritual lectures of all the communities along with yoga and meditation session can be held in all educational institutions, private or public organisations. It is yet a commendable step of K.K.H.S.O.U of Assam to start P.G course on yoga and meditation from the year 2015 .The U.G.C asks universities to include yoga module in physiotherapy courses from the next academic session i.e. year 2018-19.Again, AICTE has made mandatory that students should have 25% attendance in yoga, sports and other socially relevant activities to get a degree in engineering and technical colleges. (11th July 2017).IIT Kanpur has designed a website to transliterate traditional knowledge of SrimadBhagavadGita,,Ramacharitmanas, Brahma Sutra, Upanisads,Vedanta Concept Map, Yoga Sutra,ValmikiRamayan, Nepali Site(contains Bhanubhakta's Ramayana, Other Gitas, Narada Bhakti Sutra Concept Map.The web address of the site is www.gitasupersite.iitk.ac.in. The site is designed by the faculty member of the institute and government funded Resource Centre for Indian Language Technology Solutions. The objective of the websites is to describes Vedanta 'gyana'(knowledge) to shape a qualified 'adhilkari' (professionals). The site translates the resources into 11 Indian languages including Assamese. Earlier the site was visited by 500-700 visitors but thanks to aWhatsApp message ,its readership (both Indian and abroad)rose to 24,000 per day an increase of 4,700 per cent readership.

It was again proved scientifically that chanting of Vedic mantras can boost up memory power .As reported in Times of India, Hyderabad news 24th March 2017, chanting of Vedic mantras leads to psychological and physiological well-being of students.The research conducted by the Hyderabad Campus of the Birla Institute of Technology and Science (BITS) reveals " clear improvement in the general cheerfulness and clarity of min of the students after they chanted the Gayatri mantra (from Rig Veda) and Sahasranam (thousands name of Lord Bishnu) So, the rich Indian knowledge is very relevant to be an accomplished entity. The world is waiting to unfold more treasure from this rich heritage of our past. The world at large should be exposed to the rich Vedic theories in a simple way. As originally written in Sanskrit Language, it remained limited only to a class of people. So, ripe the benefit of this jargon it should be communicated in a easy way to all the concerned people. Besides, by integrating management thought with Vedic thought a new dimension can be reached in managing the most complicated yet very important **M** of factors of production .

References:

Argyris,C. (1975.). Personality and Organisation. Harper & Row.

Bhattachacharyya,D.K. (2012). Principles of Management. Pearson.

Bhatia, R.C. (2013). Principles of Management. PHI Publications.

Bhattacharjee, A. (2011). Modern management through ancient Indian wisdom: Towards a more sustainable paradigm. IV, (1).

Bharatan, K. (1954). What is Sarvodaya?(Editor).

Chandrani, C. (2012). Indian philosophy and business ethics: A Review

Hartley,J and J, Kelly.'(1992). Psychology and industrial relation : From conflict to cooperation,' Journal if Occupational Psychology, 59, 161-176.

Moller, C. (1988). Personal quality: The basis of all other quality. Time Manager International.

Nidhi ,K & Sanjit, M. (2017). Management practices in the ancient Vedas. Global Journals Inc. O(US).

Sharma, A & Talwar, B. (2007). Evolution of universal business excellence model incorporating Vedic philosophy, Measuring Business Excellence. 1,(3).

Sherlekar, Sharlekar (2014). Principles of Business Management. Himalaya Publishing House.

Shaaarma, M. (2016). Principles of Management. Himalaya Publishing House.

Sarma, S., (2016). Dynamics of culture. Param Mitra Prakashan (ed.)

Sarma, S (2018). Cultural continuum (An Anthology of Art & Culture. Abhishek Prakashan.

Vyasa . Bhagavad Gita. Fifth Century B.C. (estimated).

Websites :

www.google.com
www.yogapedia.com
www.gaia.com
www.managementstudyguide.com
www.amritapuri.org
www.iep.utm.edu
www.pinterest.com
timesofindia.indiatimes.com
www.linkedin.com
www.importantindia.com
www.historydiscussion.net
historytuition.com
https://www.gktoday.in
greenmesg.org
www.templepurohit.com
aumamen.com
www.historydiscussion.in

International Journal of Applied Management Research,
Vol. 5 (No.1 & 2), Page : 25 - 34

The Implementation Aspects Of Kisan Credit Card Scheme : Manager's Perception

Hardarshan Kaur[1] & Navkiranjit Kaur Dhaliwal[2]

[1]Research Fellow, &
[2]Professor, Department of Commerce, Punjabi University, Patiala, India
Email: navkirandhaliwal@ymail.com

ABSTRACT :

Kisan credit card scheme is an agriculture credit facility for the farmers where credit has been provided for consumption and production purposes under a single window system. The main objective of the paper was to assess the perception of the managers of the selected banks. For the purpose of the study, primary survey has been conducted to collect data from the managers. The data has been analysed by using various suitable statistical tools. The majority of the respondents have given consent to the various opinion statements. The bank-wise distribution of the managers of selected banks showed agreement regarding the opinion statements.

Key Words **:** Perception, credit, Kisan, card, farmers.

INTRODUCTION :

The kisan credit card scheme came into existence in the year 1998-99 as a credit product which aims to provide timely and hassle free credit to the farmers for their production needs. The model scheme was formulated by NABARAD which was uniformly adopted by almost all the commercial banks, regional rural banks and state co-operative banks. The kisan credit card is valid for the period of five years, subject to annual review by the concerned bank. During the review, the credit limit of the card can be enhanced, reduced or even discontinued depending upon the cropping pattern, scales of finance, change in assets, schedule of repayment etc. and other relevant factors. This facility can be utilized numerous times during its validity period. However, later on various impediments were felt by implementing banks, farmers and policy makers and therefore, after conducting various studies in the year 2012 on the recommendation of a working group, some changes were made to original scheme and revised guidelines have been issued by Reserve Bank of India. The kisan credit card scheme which was introduced in August 1998 was designed to cover investment requirements of farmers, allied and non-farm activities, but it remained outside the ambit of the scheme since 2004 and resultantly, the farmers had to separately approach the banks to avail credit for their additional requirements which consumed extra time, cost and procedural formalities. RBI revised its model scheme and referred it as 'Scheme to cover term loans for agriculture and allied activities under the Kisan Credit Card Scheme'. It was provided that term loan will also be covered as working capital for agriculture and allied activities. The quantum of loan will be fixed by banks on the basis of unit cost of the asset, allied activities already taken up by the farmer, the bank's judgment on his repayment capacity and loan burden developing by the farmer. The short-term credit and working capital credit could be provided by single card and the current pass book would be divided in to three separate portions i.e. short-term credit/crop loans, working capital for activities allied to agriculture and term credit. The borrowers will have the flexibility of using credit as per their requirement. The term credit limit can be used to acquire one or more assets and in one or more installments as per the credit need and the end use will be monitored by the bank. The banks will follow security, margin, rate of interest and prudential norms as per RBI/NABARD stipulations. The repayment period for short term credit/crop loan and working capital credit will be 12 months and term credit will be payable within 5 years depending upon the nature of activity as per existing guidelines. The validity of the term loan facility under the KCC scheme has been extended from 3 years to 5 years.

The short term credit limit will be in the form of revolving cash credit and the same can be withdrawn without any restriction on number of debits and credits. Kisan credit card can be now operated through branch, cheque facility, ATM/debit cards, business correspondents and ultra thin branches, PoS available in sugar mills/contract farming companies, input dealers and mobile based transactions. The KCC holders can avail the option of crop insurance, health insurance and personal accident insurance. The premium will be paid through the KCC account in the agreed ratio between the bank and the insurance company. In the light of the above facts, it has become necessary to study the implementation of the scheme by the banks providing the same.

REVIEW OF LITERATURE :

Ram et al. (1990) conducted study in Andhra Pradesh in the area of Bapatla, district Guntur regarding the performance of Primary Co-operative Agricultural Development Bank The main objective of the paper was to study the trends of selected growth indicators and to indentify the factors influencing the profits obtained by PCADB. The Index analysis and compound growth rates were used for assessing the trends of growth indicators for the period from 1966-67to 1985-86. The multiple linear regression was used to assess the influence of various factors on profits. It was revealed that the selected PCADB achieved impressive progress in terms of membership, paid up share capital, borrowings made, amount of loans and borrowings repaid by PCADB. It was found that some problems like mounting over dues, stagnation in business, increasing administrative and management costs posed a threat to the existence of co-operatives. It was suggested that there was need to find out the forces which affect the profitability of co-operatives.

Kumar and Balishter (1984) attempted to study the various sources of finance and magnitude of finance by different institutional agencies in Sansi block of Aligarh district in Uttar Pradesh. For the purpose of the study, data was collected through survey method from 41 farmers consisting 21 small, 14 medium and 6 large farmers of selected villages for the year 1977-78. It was revealed in the study that moneylenders were the most important among all the sources of finance for small farmers, co-operative banks for medium farmers and commercial banks for large farmers. The institutional agencies met 74 per cent of credit needs of the farmers and for rest they had to depend on non- institutional sources. In case of small farmers institutional agencies met 57 per cent of credit needs and rest 43 per cent were met by non-institutional sources. It was found that because of inadequate availability of credit and complicated procedure in getting loan from institutional agencies the small farmers had to be on the mercy of moneylenders.

Singh and Tyagi (1995) examined the impact of co-operative finance on agricultural development in Basti district of eastern Uttar Pradesh. For the purpose of the research, a sample of 40 borrowers and 40 non borrowers was taken from marginal and small size group of farmers. It was revealed in the study that co-operative finance had a favorable impact on agriculture development by providing timely and adequate credit. It was suggested that the impact of co-operative finance on agriculture would be significantly raised by expanding services of co-operatives and by increasing their operational efficiency. Dhaliwal and Arora (2008) studied the various aspects of Kisan credit card scheme and evaluated the progress of the scheme. The progress of the scheme had been examined year-wise and agency-wise in terms of number and amount. The study covered the period from 1998-99 to 2006-07. The share of KCC in ground level credit had been analyzed and suggestions were made to make the scheme more effective. It was found that there had been regional disparities in the adoption of the scheme by the banks in different states and union territories in the country. The study revealed that high service charges and insistence on land mortgage for small loans were the factors which impeded the progress of the scheme. It was suggested in the study that banks should adopt a time bound plan in order to give the benefit of the scheme to every farmer.

OBJECTIVE OF THE STUDY:

The main objective of the study is to assess the perception of the managers of the selected banks.

RESEARCH METHODOLGY :

The objective of the research was to study the implementation aspects of the scheme, where primary data has also been collected from the managers of the selected banks. The banks so selected were State Bank of Patiala, Punjab National Bank, HDFC, Cooperative bank and regional rural bank. For the collection of data, 50 managers have been interviewed with the help of pre-tested questionnaire at their workplace taking 10 managers from each of the selected banks. The managers were chosen on the basis of convenient sampling. The data has been analysed by using various statistical tools.

Manager's Preception About the Implementation Aspects of Kisan Credit Card Scheme

The analysis of opinion survey of the managers on a five point rating scale regarding the implementation aspects of the kisan credit card scheme which include short-term credit for cultivation of crops, credit for post harvest expenses, credit for marketing of produce, household consumption expenses, credit for investment credit, expenses for maintenance of farm assets, expenses for raising crops, adequacy of credit, timeliness of credit, accessibility of credit, interest rates, documentation process, modes of operation, educate farmers about aspects of scheme, employee training, utilization of credit, purpose of grant, repayment of limit, incentives on prompt repayment and overall perception regarding KCC scheme is depicted in table 1.

Table : 1
Distribution of Respondents' Consent Regarding Opinion Statements Relating to the Implementation Aspects of Kisan Credit Card Scheme

Particulars	Strongly Agreed	Agreed	Neither Agreed Nor Disagreed	Disagreed	Strongly Disagreed	AWS
Under the KCC scheme, the bank provides short–term credit for cultivation of crops	7(14)	43(86)	0	0	0	4.14
It provides credit for post harvest expenses of the farmers	4(8)	19(38)	27(54)	0	0	3.54
It provides credit for the marketing of produce	2(4)	38(76)	10(20)	0	0	3.84
It provides credit for the consumption required for household expenses	12(24)	28(56)	10(20)	0	0	4.04

It provides credit for the investment purpose of farmers	4(8)	35(70)	11(22)	0	0	3.86
It provides credit to meet all the expenses on the maintenance of farm assets	6(12)	27(54)	17(34)	0	0	3.78
The credit covers all the expenses required for raising the crops	5(10)	8(16)	25(50)	12(24)	0	3.12
The credit provided under the scheme is adequate as per the needs of the farmers	5 (10)	24(48)	12(24)	9(18)	0	3.48
It provides timely credit for agriculture	7(14)	12(24)	15(30)	16(32)	0	3.20
The credit under the scheme easily accessible to the farmers	7(14)	13(26)	20(40)	10(20)	0	3.34
The interest charged by the banks for credit under the Kisan credit card scheme is reasonable	3(6)	11(22)	18(36)	18(36)	0	3.0
The documentation process of kisan credit card scheme is simple to understand to the farmer	5(10)	15(30)	13(26)	17(34)	0	3.24
Whether bank is providing various the channels for operating Kisan credit card	3(6)	7(14)	13(26)	25(50)	2(4)	2.48
It educates the farmers about the various features of the scheme	4(8)	16(32)	20(40)	10(20)	0	3.28
The employees are trained to make scheme understand to the farmers	3(6)	7(14)	15(30)	22(44)	3(6)	2.70
It monitors the utilization of the credit periodically	3(6)	7(14)	18(36)	14(28)	8(16)	2.66
The farmers use the credit for the purpose it is meant for	3(6)	6(12)	9(18)	7(14)	25(50)	2.10
The farmers make timely repayment of the limit sanctioned under the scheme	1(2)	9(18)	7(14)	12(24)	21(42)	2.14
It pays incentives on prompt repayment of credit limit	14(28)	16(32)	20(40)	0	0	3.88

Overall satisfaction regarding Kisan credit card	11(22)	19(38)	20(40)	0	0	3.82
Mean of Average Weighted Score= 3.28						

Table 1 reveals that majority of the respondents have given their consent with regard to the opinion statements, 'Bank provide short-term credit for cultivation of crops'(AWS=4.14), 'Bank provides credit for post harvest expenses of the farmers' (AWS=3.54), 'It provides credit for the marketing of produce'(AWS=3.84), 'It provides credit for the consumption required for household expenses' (AWS=4.04), 'It provides credit for the investment purpose of farmers' (AWS=3.86), 'It provides credit to meet all the expenses on the maintenance of farm assets' (AWS=3.78), 'The credit covers all the expenses required for raising the crops' (AWS=3.12), 'The credit provided under the scheme is adequate as per the needs of the farmers'(AWS=3.48), 'It provides timely credit for agriculture'(AWS=3.20), 'The credit under the scheme easily accessible to the farmers' (AWS=3.34), 'The interest charged by the banks for credit under the kisan credit card scheme is reasonable' (AWS=3.0), 'The documentation process of kisan credit card scheme is easy to understand the farmers' (AWS=3.24), 'Whether bank is providing various channels for operating kisan credit card' (AWS=2.48), 'It educates the farmers about the various features of the scheme' (AWS=3.28), 'The employees are trained to make scheme understand to the farmers' (AWS=2.70), 'It monitors the utilization of the credit' (AWS=2.66), 'The farmers use the credit for the purpose for which it is meant' (AWS=2.10), 'The farmers make timely repayment of the limit sanctioned under the scheme' (AWS=2.14), 'It pays incentives on prompt repayment of credit limit' (AWS=3.88), 'Overall satisfaction regarding kisan credit card'(AWS=3.82). The mean value of average weighted scores corresponding to the agreement level of the respondents regarding various opinion statements relating to the implementation aspects of kisan credit card scheme is 3.28.

Thus, the respondents have given their consent with the all opinion statements regarding implementation aspects of kisan credit card scheme. So, the study found agreement among the managers for all the opinion statements.

The bank-wise analysis of the opinion of the managers regarding the implementing KCC scheme is presented in the table 2.

Table : 2
Bank-wise Distribution of Respondents' Consent Regarding Opinion Statements Relating to the Implementation Aspects of Kisan Credit Card Scheme

Particulars	SBOP	PNB	HDFC	RRBs	Co-operative Banks	Kruskall Wallis
	Average Weighted Score					
Under the KCC scheme, the bank provides short–term credit for cultivation of crops	4.1	4.1	4.5	4.0	4.0	14.000*
It provides credit for post harvest expenses of the farmers	3.6	3.6	3.8	3.4	3.3	3.003
It provides credit for the marketing of produce	4.1	4.0	4.1	3.7	3.3	22.295*
It provides credit for the consumption required for household expenses	4.3	4.4	4.5	3.6	3.4	22.432*
It provides credit for the investment purpose of farmers	4.0	3.9	4.1	3.7	3.6	5.006
It provides credit to meet all the expenses on the maintenance of farm assets	3.8	3.7	4.1	3.7	3.6	3.764
The credit covers all the expenses required for raising the crops	3.3	3.0	3.5	2.9	2.9	2.997
The credit provided under the scheme is adequate as per the needs of the farmers	3.8	3.5	3.6	3.3	3.3	2.253
It provides timely credit for agriculture	3.1	3.3	3.3	3.3	3.0	0.709
The credit under the scheme easily accessible to the farmers	3.3	3.6	3.8	3.0	3.0	5.504
The interest charged by the banks for credit under the kisan credit card scheme is reasonable	3.2	2.9	3.4	2.6	2.9	5.065
The documentation process of kisan credit card scheme is simple to understand to the farmer	3.4	3.3	3.3	3.0	3.2	0.808*
Whether bank is providing various the channels for operating kisan credit card	2.2	2.8	3.6	2.0	1.8	30.280*

It educates the farmers about the various features of the scheme	3.7	3.7	3.9	2.6	2.5	23.942*
The employees are trained to make scheme understand to the farmers	3.3	3.0	3.5	1.9	1.8	31.404*
It monitors the utilization of the credit periodically	2.5	2.5	3.9	1.8	2.6	18345*
The farmers use the credit for the purpose it is meant for	2.2	1.7	2.3	1.3	3.0	10.277*
The farmers make timely repayment of the limit sanctioned under the scheme	2.2	1.7	2.4	2.1	2.3	1.383
It pays incentives on prompt repayment of credit limit	4.0	3.9	4.3	3.6	3.6	5.467
Overall satisfaction regarding kisan credit card	3.9	3.8	3.7	3.8	3.9	0.508
MEAN	3.4	3.32	3.68	2.96	3.05	

The Kendall's coefficient of Concordance (W) =0.526, Chi-square value =552.642, df =21, Significant at 5 per cent level of significance.

The table 2 provides that the majority of respondents of all the selected banks have given their consent with the opinion statements 'bank provides short-term credit for cultivation of crops', 'provides credit post harvest expenses of the farmers', provides credit for marketing of produce', 'provides credit for consumption requirement of the household expenses', 'provides credit for the investment purpose of the farmers', 'provides credit to meet all the expenses on the maintenance of farm assets', 'credit provided under the scheme is adequate as per the needs of the farmers', 'timely credit for agriculture', 'credit under the scheme easily accessible to the farmers', 'documentation process of kisan credit card scheme is simple to understand to the farmer', and 'incentives on prompt repayment of credit limit' and 'overall satisfaction of kisan credit card'.

Further, the significant difference of opinion has been found among the respondents of various banks regarding 'bank provides short-term credit for cultivation of crops', 'provides credit for marketing of produce', 'provides credit for consumption requirement of the household expenses', 'bank is providing various the channels for operating kisan credit card', 'educates the farmers about the various features of the scheme', 'employees are trained to make scheme understand to the farmers', 'monitors the utilization of credit periodically' and 'farmers use the credit for the purpose it is meant for'.

The large number of the respondents of SBOP has favored all the opinion statements except 'bank is providing various the channels for operating kisan credit card', 'monitors the utilization of the credit periodically', 'farmers use the credit for the purpose it is meant for' and 'farmers make timely repayment of the limit sanctioned under the scheme'. The respondents of PNB favored all the opinion statements except 'interest charged by the banks for credit under the kisan credit card scheme is reasonable', 'bank is providing various the channels for operating kisan credit card', 'monitors the utilization of the credit periodically', 'farmers use the credit for the purpose it is meant for' and 'farmers make timely repayment of the limit sanctioned under the scheme'. The respondents of HDFC bank all the opinion statements except 'farmers use the credit for the purpose it is meant for' and 'farmers make timely repayment of the limit sanctioned under the scheme'.

The respondents of RRBs and the co-operative banks favored the opinion statements 'bank provides short-term credit for cultivation of crops', 'provides credit post harvest expenses of the farmers', provides credit for marketing of produce', 'provides credit for consumption requirement of the household expenses', 'provides credit to meet all the expenses on the maintenance of farm assets', 'credit provided under the scheme is adequate as per the needs of the farmers', 'timely credit for agriculture', 'credit under the scheme easily accessible to the farmers', 'documentation process of kisan credit card scheme is simple to understand to the farmer', 'incentives on prompt repayment of credit limit' and overall satisfaction of kisan credit card'.

Further, the mean value of average weighted score corresponding to all the opinion statements regarding the implementation of the scheme is the highest in HDFC bank (3.68), followed by the SBOP (3.4), the PNB (3.32), the co-operative banks (3.05) and the RRBs (2.96). The Kendall's coefficient of concordance shows that there exists significant concurrence of rankings (w=0.526) among the managers of different banks with regard to the opinion statements relating to the implementation aspects of kisan credit card scheme.

REFERENCES :

Dhaliwal, Navkiranjit K, and Arora, R. S. (2008). Progress of kisan credit card scheme: An evaluation', *Punjab Journal of Business Studies*, 4 (1), 101-112.

Kumar, Raj; Balishter (1984). Sources of agricultural finance and magnitude of finance from institutional agencies, *Indian Cooperative Review*, 22 (2), 222-230.

Ram, P. Raghu, Rangadu, K. Pandu; Devi, I. B; Satyanarayana, G. (1990). Growth and performance of a PCADB- A Case Study, *Indian Cooperative Review*, 27(4), 383-389.

Singh, A. K., Tyagi, V. P. (1995). Cooperative finance and agricultural development, *Indian Cooperative Review,* 33 (2), 138-142.