

Impact of Awareness of Retail Investors in Green Funds on Investment Attitude in Tiruchirappalli District

Dr. G. Rabia jahani farzana¹, N. Sathyapriya².

Assistant Professor and Research Advisor, Department of Business Administration, Government Arts College, Thuvakudi, Tiruchirappalli – 620022.

Research Scholar, Department of Business Administration, Government Arts College, Thuvakudi, Tiruchirappalli – 620022.

Corresponding Author: Dr. G. Rabia jahani farzana

Abstract: *Both Primary and Secondary data collection method was adopted. This research is in a descriptive structure within which research should be conducted. Thus the preparation of such as design facilitates research to be as efficient as possible and will yield maximal information. The researcher has done the analysis by using various analytical techniques namely factor analysis and multiple regressions. The findings, recommendations and conclusion of this study were made based on research objectives*

Keywords: *Primary Data, Secondary data of retail Investors in green funds on environmentally investment attitude*

Date of Submission: 20-02-2019

Date of acceptance: 06-03-2019

I. Introduction

Green funds are new with no benchmark and also ambiguous. Despite more than a decade of success of green fund movement in different parts of the world, with a developed capital market and a culture of investments in India, there are very few green funds available. Other than wind and solar there are many projects which are not bankable. In such sectors, public capital instruments need to be deployed. As there has been a paradigm shift in the investment strategy. Many corporations are investing the accumulated fund in various markets without trying to know the investors opinion. The focus of corporations is on people, planet and profits. It is where green funds emerged as a means to integrate personal values and investment decision. In such a scenario, it is essential for the green fund companies to know the how the retailer investors investment decision in green funds is influenced. Hence, this study has attempted to systematically identify the impact of green fund awareness. Perception of the retail investors about green funds and environmentally responsible attitude on investment decision of retail investors. Socially responsible funds in India are few in number and also managing a small asset base. Indians are concerned about climate change in the world measured in terms of climate change/global warming, quality of air, water pollution, water shortages, packaging waste, use of pesticides, energy efficiency, fair trade practice, treatment to animals etc. (Business Standard, 2011)^[2]. Green funds can help in building a prosperous low-carbon economy in India and finance the future of our planet by bridging the gap between the goals of private finance and public funding.

S&P BSE GREENEX: This index measures the performance of the top 25 “green” companies in terms of greenhouse gas emissions in the S&P BSE 100.

II. Objectives

1. To understand the profile of green fund retail investors in Tiruchirappalli district.
2. To examine the variance in awareness of the investors in green funds.
3. To study the influence of demographic factors on Awareness of investors attitude in green funds.
4. To study the investors preference of investment from total savings.
5. To study the factors of priority by the investors.

III. Hypothesis

The following Hypotheses were tested in the study.

1. H1: There is a significant difference between urban males and females in the mean green fund awareness and investment attitude in green funds.
2. H2: There is a significant difference between rural males and females in the mean green fund awareness and investment attitude investment decision in green funds.

IV. Review of Literature

Keefe (2007) suggests that the integration of ESG factors into financial analysis and decision making can be called sustainable investing. He argues that sustainable investing and socially responsible investing are different from each other. He defines socially responsible investing as the investments which are based on largely social, non-economic, guidelines.

Renneboog et al., (2008), found that the risk/reward profile of socially responsible funds are best comparable to benchmarks.

The research results of Claudy and O'Driscoll, (2008) shows that behavioral determinants such as attitudes, beliefs and social norms, are often neglected by policy makers. The authors suggest that such investments are motivated by conviction rather than economics. The individual investor has direct impact on the environment, reducing its carbon emissions and eventually reduces the energy consumption by purchasing such domestic energy conservation. According to them One of the most notable barriers is limited access and high interest rates of the capital required for the initial investment.

Boulatoff and Boyer (2009) found that the green firms underperformed and had significantly higher volatility. According to them Green mutual funds ended with the steep decline in green stocks.

Diffney et al, (2009), argues that the high penetration of wind is economically sound only when it is accompanied by an increase in interconnection by keeping capital costs down. There are expectations that will decrease in the prices of the green energy in next ten to fifteen years. This will give a competitive edge of the green energy sector over the traditional fossil fuels such as coal, oil and natural gas.

Mallett and Michelson (2010) found that green fund returns and index returns are similar. They also found that there is little return difference between green funds and SRFs. Green fund existed for short term period.

Vevenka (2010) notes, the green economy is driven by government policy, standards, subsidies, and regulation and not by consumer or business demand.

Cheah et al (2011), found that socially responsible companies are more profitable than socially irresponsible companies.

According to Green Investment Guide, 2011, Green investment in solar power is the most accessible option for private investors who are interested in such opportunities and it remains the market leader.

Moser and Martin (2012), suggests that investors may be slow to accept socially responsible investments and thus it appears that perspectives on socially responsible corporate activities such as based on traditional accounting, finance, and economic theory, is that companies engage in socially responsible activities only when doing so maximizes shareholder value and companies might make socially responsible expenditures to benefit society, even if doing so decreases shareholder value have to be considered.

According to Girerd-Potin, Jimenez-Garces, and Louvet. (2014) earlier, financial investors used to focused on social responsibility but recently, risk factors in investors' minds are environmental and community involvement among them.

Hochstaedter and Scheck (2015) integration of environmental, social and governance criteria into mainstream investment decision-making and ownership practices should be taken into account for responsible investment to take place.

Researcher has attempted to classify the most psychological, attitudinal and behavioral aspects related to investment decision making and to create a conceptual model that would describe how Green Fund Awareness has an influence on investment decision.

It is a sample survey to know the awareness, attitude and perception and analyze the significance of demographics factors that influence the investor's decision towards making investments in green funds especially in Tiruchirapalli District. For the present study, stratified random sampling method was adopted to select the sample respondents in Tiruchirapalli district. The required sample size for this research study as 384 (Table -1) were obtained. The calculated sample size is the lower limit for this research study to evaluate the impact of green fund awareness on investment decision of the retail investor. The calculation of area wise sample size is given below.

Table-1 : Determination of Sample size

AREA	Proportion of Households (1)	Area wise Sample Size [Total Sample Size * (1)]
RURAL	0.51	196
URBAN	0.49	188
TOTAL	1.00	384

DATA COLLECTION

Both primary and secondary data has been collected for the study.Primary data was collected through survey method by distributing structured questionnaires to the respondents.

**Measurement model for Green Fund awareness
Table - 2: reported values of model fit for Green Fund awareness**

	Absolute Fit Measures				RMSEA	Incremental Fit Measures		Parsimony Fit Measures	AVE
	χ^2	df	χ^2/df	GFI		NFI	CFI	AGFI	
Criteria			<3	≥0.90	<0.05	≥0.90	≥0.90	≥0.90	≥0.5
Obtained	1.510	5	0.302	0.989	0.000	0.989	1.000	0.966	0.94

(Note: χ^2 : Chi-square; Df: degree of freedom; GFI: Goodness of fit index; RMSEA: Root mean square error of approximation; NFI: Normated fit index; CFI: Comparative fit index; AGFI: Adjusted goodness of fit index)

The individual reliability of the items is evaluated using factor loadings above 0.5. The above table shows that all the factor loadings are above the recommended value. This shows that the statements are related to the constructs. The internal consistency of all the items is ensured through construct reliability. Construct reliability evaluates the rigorousness with which the latent item is measured by the observable item. Convergent validity of the model is ensured when the AVE value is not less than 0.5 (Table – 2).

V. Results And Discussion

Table – 3: Distribution of investors based on their demographic characteristics

S.No.	Demographic factors	Urban (288)	Rural (299)
1	Gender	Male	123 (42.7)
		Female	113 (39.2)
		Transgender	52 (18.1)
2	Age (in years)	<30	95 (33.0)
		30-60	152 (52.8)
		>60	41 (14.2)
3	Qualification	Undergraduate	74 (25.8)
		Graduate	82 (28.6)
		Post Graduate	74 (25.8)
		Diploma	17 (5.9)
		Professional	40 (13.9)
4	Marital status	Married	127 (44.1)
		Unmarried	98 (34.0)
		Single	63 (21.9)
5	Annual income	< 5,00,000	30 (10.5)
		5,00,000-8,00,000	185 (64.2)
		>8,00,000	73 (25.3)
6	Annual savings	<1,00,000	23 (8.0)
		1,00,000-2,00,000	114 (39.6)
		>2,00,000	151 (52.4)

From table – 3, 42.7% of the respondents in urban area are male followed by 39.2% of female whereas in rural area 54.3% of the respondents are female followed by 45.7 male. In terms of age of the sample, majority of the urban (52.8%) and rural (41.8%) respondents belong to the age group of 30-60 years respectively followed by 33% of urban respondents who are less than 30 years and 14.2% are above 60 years. 30.1% of the rural respondents are above 60 years followed by 28.1% respondents who are less than 30 years of age.

Majority of the respondents (28.6%) of the urban respondents are Graduates, followed by 25.8% of them are undergraduates and post graduates followed by 13.9% are professionals followed by 5.9% are diploma holders. Most of the rural respondents (32.4%) are Post graduates, 30% are graduates, 19.7% are professionals followed by 12% of undergraduates and 6% are diploma holders. 44.1% of the urban respondents are married followed by 34% are unmarried and 21.9% are single. Among the rural respondents 55.9% are married followed by 37.8% unmarried and 6.4% are single. Majority of the urban respondents (64.2%) and 73.9% of the rural respondents annual income ranges from five lakh rupees to eight lakh rupees followed by 25.3% of the urban respondents and 20.1% of the rural respondents annual income is above eight lakhs and 10.5% of the urban respondents and 6% of the rural respondents annual income is below five lakh rupees. Majority of the respondents (52.4%) in the urban area are saving above two lakh rupees annually followed by 39.2% of the respondents annual saving ranges from one lakh rupees to two lakh rupees and 8% of the urban respondents are saving less than one lakh rupees annually. 55.9% in rural respondents annual savings ranges from one lakh rupees to two lakh rupees, followed by 40.1% respondents annual savings is above two lakhs and 4% of the respondents annual savings is below one lakh.

FACTOR ANALYSIS

Factor analysis was conducted on the Green Fund Awareness on Environmentally Responsive Investment Attitude to determine the factors that best represent the data. Simple components analysis was carried to study the, eigenvalues and scree plots for all scales. Reliability of the factors was determined by computing Cronbach alpha coefficients. All factors were found to have reliabilities greater than 0.70 ($\alpha > 0.70$).

The results are as follows:

The results of the factor analysis on the Green Fund Awareness on Environmentally Responsive Investment Attitude were found one factor. The above factors explained the shared variance of 70.681%, 73.269%, 81.992% and 71.500% respectively.

Only one factor was extracted, hence the data set is best explained by a uni-dimensional solution and there was no need for rotation.

GREEN FUND AWARENESS

The overall significance of the correlation matrix with Bartlett test, considering the data in this research, the correlations, when taken overall, are significant at the 0.000 level which is 1680.849 for the green fund awareness.

Table - 4: Factor loadings for Green Fund Awareness

Item	Factor 1
I am aware of Green Fund	0.817
I am aware that Green Fund is important in the future	0.812
I am aware that Green Fund is good for financial planning	0.889
I am aware that Green Fund can give more income	0.857
I am aware that Green Fund has less risk	0.827

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The overall test is the measure of sampling adequacy (MSA) for this research it fortunately falls in the acceptable range of (above 0.45). All the variables obtained have exceeded the minimum acceptable MSA level and thus all the five variables which are concerned with green fund awareness are significant and collectively meet the necessary threshold of sampling adequacy. All the measures tested above, indicates that the set of variables are appropriate for factor analysis with respect to green fund awareness, which can be further proceeded to the next level of test (Table – 4).

ENVIRONMENTALLY RESPONSIBLE INVESTMENT ATTITUDE

The overall significance of the correlation matrix with Bartlett test, considering the data in this research, the correlations, when taken overall, are significant at the 0.000 level which is 3880.290 for the Environmentally Responsible Investment Attitude

Table - 5: Factor loadings for Environmentally Responsible Investment Attitude

Item	Factor 1
I believe that it is important to include environmentally responsible investments in my portfolio	0.895
It is more important that a company act in an environmentally responsible manner as opposed to earning significant returns for its shareholders.	0.927
In choosing investments, I believe that environmental responsibility is more important than financial	0.876
Most people who are important to me believe that it is important to invest in environmentally responsible companies.	0.900
I believe that I can have a positive impact on the environment if I invest in environmentally responsible companies.	0.941
I believe that companies will become more environmentally responsible if I only invest in environmentally responsible companies.	0.921

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The overall test is the measure of sampling adequacy (MSA) for this research it fortunately falls in the acceptable range of (above 0.45). All the variables obtained have exceeded the minimum acceptable MSA level and thus all the six variables are concerned with environmentally responsible investment attitude are significant and collectively meet the necessary threshold of sampling adequacy. All the measures tested above, indicates

that the set of variables are appropriate for factor analysis with respect to environmentally responsible investment attitude, which can be further proceeded to the next level of test (Table – 5).

**WEIGHTED AVERAGE
PREFERENCE OF INVESTMENT FROM TOTAL SAVINGS**

Table -6: Ranks for investors preference of investment from total savings

		1	2	3	4	5	6	7	Weighted Score	%	Rank
URBAN	Savings	36	36	42	48	42	42	42	1122	13.98	7
	Deposits	42	36	36	42	48	42	42	1128	14.06	6
	Share/ Debentures	42	42	36	36	42	48	42	1134	14.13	5
	Gold/Silver	42	42	42	36	36	42	48	1140	14.21	4
	Real Estate	48	42	42	42	36	36	42	1188	14.81	1
	Mutual Funds	36	42	48	42	42	42	36	1158	14.43	2
	Insurance	36	42	47	42	42	42	36	1153	14.37	3
TOTAL									8023		
RURAL	Savings	37	37	43	50	44	44	44	1160	13.86	7
	Deposits	44	37	37	43	50	44	44	1169	13.96	6
	Share/ Debentures	44	44	37	37	43	50	44	1178	14.07	5
	Gold/Silver	44	44	44	37	37	43	50	1187	14.18	4
	Real Estate	50	44	44	44	37	37	43	1238	14.79	2
	Mutual Funds	43	50	44	44	44	37	37	1240	14.81	1
	Insurance	37	43	50	44	44	44	37	1200	14.33	3
TOTAL									8372		

As far as urban retail investor’s preference of investment from Total Savings is concerned, investment in real estate has got first rank followed by mutual funds. Similarly, rural investor’s preference is concerned, mutual funds got the first rank and real estate got the second rank. Similarly, the preference of investment from total savings by both urban and rural investors, Insurance got the third rank, investment in Gold/Silver got the fourth rank followed by shares and Debentures fifth rank, investment in deposits has got sixth rank and savings got seventh rank (Table-6).

PRIORITY BY THE INVESTORS

Table - 7: Ranks for the factors of priority by the investors

		1	2	3	4	5	Weighted Score	Percentage	Rank
URBAN	Liquidity	39	39	78	39	93	756	10.184561	4
	Less Risk	86	85	39	39	39	1004	13.525529	2
	High Returns	85	39	39	39	86	862	11.612556	3
	Tax Benefits	39	39	39	85	86	724	9.7534689	5
	Safety	80	160	285	696	790	4077	54.923885	1
TOTAL							7423		
RURAL	Liquidity	40	40	81	41	97	782	18.42167	3
	Less Risk	89	40	40	41	89	896	21.10718	2
	High Returns	41	41	49	88	80	772	18.1861	4
	Tax Benefits	40	41	41	89	88	753	17.73852	5
	Safety	89	89	40	40	41	1042	24.54653	1
TOTAL							4245		

As far as the priority of urban investors is concerned, safety has got first rank followed by less risk which has got second rank. High returns got third rank followed by liquidity, fourth rank and tax benefits got fifth rank. Similarly, the priority of rural investors is concerned; safety has got first rank followed by less risk which has got second rank. Liquidity has got third rank followed High returns, fourth rank and tax benefits got fifth rank.

INDEPENDENT SAMPLES T - test

H2: There is a significant difference between urban males and females in the mean green fund awareness, perception and investment attitude in green funds.

H3: There is a significant difference between rural males and females in the mean green fund awareness, perception and investmentattitudein green funds.

Table - 7: Independent Samples T - Test to compare the variance in mean Awareness and Investment attitude among Males and Females

		t	df	Sig. (2-tailed)
Urban	Green Fund Awareness	-4.751	234	0.000
		-4.761	233.755	0.000
		-5.580	230.841	0.000
	InvestmentAttitude	-3.280	234	0.001
		-3.301	232.952	0.001
		-5.506	234	0.000
Investment Decision	-5.543	232.760	0.000	
	-1.964	297	0.050	
	-1.974	293.384	0.049	
Rural	Green Fund Awareness	-4.923	267.664	0.000
		-1.863	297	0.063
		-1.851	280.331	0.065
	InvestmentAttitude	-5.229	297	0.000
		-5.192	279.352	0.000

An Independent samples T – Test was conducted to compare the means of green fund awareness, environmentally responsible investment attitude and investment decision among the urban and rural males and females. From the above table it is inferred that the Sig (2-tailed) values of green fund awareness, environmentally responsible investment attitude and investment decision among urban males and females are 0.000, 0.001, 0.000 and 0.000. As the values are less than the required cut off 0.05, the null hypothesis is accepted (Table-7). Hence, it could be concluded that there is a significant difference between the means of green fund awareness, environmentally responsible investment attitude and investment decision of urban males and females.

Moreover, the values of green fund awareness and investment decision among rural males and females are 0.050, 0.000 and 0.000. As the values are less than or equal to the required cut off 0.05, the null hypothesis is accepted (Table-7). Hence, it could be concluded that there is a significant difference between the means of green fund awareness and investment decision of rural males and females.

The value of environmentally responsible investment attitude among rural males and females is 0.063, as the value is greater the required cut off 0.05, the null hypothesis is rejected (Table-7). Hence, it could be concluded that there is no significant difference between the means of environmentally responsible investment attitude of rural males and females.

VI. Conclusion

Globally, green funds are gaining importance. Awareness about green funds has to be alleviated by media and advertising with to the point messages and sensitize retail investors about the environment through green marketing to bring positive perception towards green funds. Awareness of green funds and positive perception towards green funds will influence the environmentally responsible investment attitude of the retail investors who invest in green funds. Investment Decision of urban and rural retail investors in Tiruchirapalli district is highly influenced by Green Fund Awareness, Perception and Environmentally Responsible Investment Attitude. Hence, this study will have tremendous inference for fund houses attempting to start green funds in India.

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IOSR Journal of Business and Management (IOSR-JBM) is UGC approved Journal with SI. No. 4481, Journal no. 46879.

Dr. G. Rabia jahani farzana. "Impact of Awareness of Retail Investors in Green Funds on Investment Attitude in Tiruchirappalli District." *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 21, No. 3, 2019, pp. -.14-20