Impact Of Perception Of Retail Investors In Green Funds On Environmentally Investment Attitude

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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

INTRODUCTION

Green revolution has started in the world. Recently, there is a big market for environment friendly products. Environmental friendly lifestyle is being adopted by Companies, industries and even individuals. People are switching to eco-friendly practices. There were very few companies that were environment friendly. Several countries are assuring their support for the environment and making environment friendly policies. Many companies have come forward with a crystal-clear objective of being sensitive to the environment and reduce emissions. The acceptance for responsible investing is getting hold of position. Globally consumers are willing to pay more for products and services from companies committed to positive social and environmental impact (Nielsen Global Survey of Corporate Social Responsibility, 2014)[1]. In India 95 global socially responsible funds have been invested and allocated 18.5 per cent of their funds to Indian companies. Only 41 global funds drive in with 25 per cent of their funds in Indian equities.

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.

GREEN FUND

Green fund can be defined as a mutual fund or any other investment vehicle which will invest only in companies that are supposed to be socially conscious in their business transactions or directly promote environmental responsibility. Green investing as an investment option have begun during the 1990s, In this period investors were more seriously about the harm businesses or the pressure of entire industries putting on the environment. Green fund investment has been taking place in the renewable energy and buildings and efficiency sector. Some of the green mutual funds are (i)TIAA-CREF Social Choice Equity Fund (TICRX), (ii) Portfolio 21 Global Equity Fund Class R (PORTX) 21 and (iii) the Green Century balanced (GCBLX).The Universe of green fund companies would be broadly selected from the following sectors:

1. Renewable & Alternative energy

2. Energy efficiency

3. Water infrastructure & technologies

4. Pollution reduction

     5. Waste recycling and management

     6. Environmental support services

     7. Green Chemicals

OBJECTIVES

1. To understand the profile of green fund retail investors.
2. To examine the variance in perception of the investors in green funds.
3. To study the influence of demographic factors on Perception and investors attitude in green funds.

HYPOTHESIS

The following Hypotheses were tested in the study.

1. H1: Variance in perception of the retail investors in green funds can be explained about green funds and their investment attitude.
2. H2: There is a significant difference between urban males and females in the mean green fund perception and investment attitude in green funds.
3. H3: There is a significant difference between rural males and females in the mean green fund perception and investment attitude investment decision in green funds.

REVIEW OF LITERATURE

Shafer (2006), found that the primary rationale for the status quo in the global capitalist economy is provided by supporting free-market capitalism, its disdain for government regulation and its belief in the unlimited potential for economic growth provides.

According to **Mincer (2007)** there are several green companies that are positioned to do well. Socially Responsible Investments managed fund's rapid growth is due to the concern towards the environment **(Vyvyan, Ng and Brimble, 2007).**

Nilsson (2008) finds a positive association between investors' pro-social attitudes specific to socially responsible investments and the percentage of their portfolio that they hold in socially responsible investments. It means that investors choose socially responsible investments as a means of promoting social and environmental concerns and favouring companies that are responsive to a diverse set of stakeholders' interests.

Chia et al. (2009), found that the world's increasing population increasing had created the need becomes for green companies that can maintain or increase production while minimizing the use of the world's natural resources.

Sabbaghi (2010) documented that green returns were not benchmarked to any index which made it difficult to gauge how to compare with average stock returns over any period.

Recently opportunities to invest in green emerged due to growth in population and consumption of natural resources in every continent has increased the need for thinking how to survive and grow without consuming planet. **(Kimmel, 2010).**

Cheah et al. (2011), indicated that investors' reliance on socially responsible screens screens and their socially responsible investment choices depend on their attitudes.

Woiceshyn, (2011, opines that the investor's decisions whether to invest ethically or not can change their lives and also the lives of others involved.

According to Cheah et al. (2011), investors' views that describe their attitudes are important in the decision to choose socially responsible investments. One view of the investors is that company's financial performance is not that much important than its social and environmental performance. The other view is that to give a higher priority to promoting social and environmental concerns than to maximizing shareholder wealth (McLachlan and Gardner 2004).

Cheah et al's (2011) found corporate social responsibility activities are viewed as a signal that management places a greater or lesser priority on shareholder versus outside stakeholder interests. Therefore, suggests that individuals with strong pro-social attitudes will be inclined to choose socially responsible investments as they view such investments as a means of promoting

social and environmental concerns and an organization which responds to a wider range of stakeholder interests will eventually be more successful in maximizing shareholder wealth.

According to Chang, (2012), green investments, investment niche have emerged recently from from the larger socially responsible investment theme which emphasizes on towards environmental issues". Green investments are made in companies that produce green energy or ecologically friendly products and those companies which takes measures to minimize their carbon footprint or the resources used in the production process.

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.

Hoechstaedter 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 and Perception 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 and perception 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 Perception

Table - 2 : Reported values of model fit for Perception

Absolute Fit Measures						Incremental Fit Measures		Parsimony Fit Measures	AVE
	χ^2	df	χ^2/df	GFI	RMSEA	NFI	CFI	AGFI	
Criteria			<3	≥0.90	<0.05	≥0.90	≥0.90	≥0.90	≥0.5
Obtained	37.42	35	1.069	0.878	0.038	0.942	0.996	0.808	1.21

(**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 – 3).

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)	137 (45.7)
		Female	113 (39.2)	162 (54.3)
		Transgender	52 (18.1)	0 (0%)
2	**Age (in years)**	<30	95 (33.0)	84 (28.1)
		30-60	152 (52.8)	125 (41.8)
		>60	41 (14.2)	90 (30.1)
3	**Qualification**	Undergraduate	74 (25.8)	36 (12.0)
		Graduate	82 (28.6)	90 (30.0)
		Post Graduate	74 (25.8)	97 (32.3)
		Diploma	17 (5.9)	18 (6.0)
		Professional	40 (13.9)	59 (19.7)
4	**Marital status**	Married	127 (44.1)	167 (55.9)
		Unmarried	98 (34.0)	113 (37.8)
		Single	63 (21.9)	19 (6.4)

From table – 4, 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.

FACTOR ANALYSIS

Factor analysis was conducted on the Green Fund Perception and 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 Perception and 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- gbdimensional solution and there was no need for rotation.

PERCEPTION

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 7979.635for the Perception.

Table -4: Factor loadings for Perception

Item	Factor 1
Investment in Green Funds helps in realizing the benefits of stock Market investing	0.880
Green Funds gives a definite positive return	0.920
Return of the Principal amount invested in any Green Funds is assured	0.876
Returns and Principal associated with Green Funds are fully protected and guaranteed by Securities and Exchange Board of India (SEBI)	0.863
Green Mutual give a definite positive return which is greater than Bank fixed deposits rate	0.928
Entry and exit out of Green Funds is easy	0.933

Due to professional investment, a good return can be expected of Green Funds	0.937
Ups and downs of stock Market will not affect the return from Green Funds	0.891
There are many Green Funds schemes to meet the varied needs of investors	0.891
AMFI,SEBI, RBI protects the interests of Green Funds industry and the unit holders	0.931

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 ten variables are concerned with perception 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 perception, 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).

MULTIPLE REGRESSION

H1: Variance in perception of the retail investors in green funds can be explained by awareness about green funds and their environmentally responsible investment attitude.

<p align="center">**Table - 6   : Contribution Green Fund Perception and Investment Attitude**</p>

Dependant Variable: Investment Decision (Y)

	Urban	Rural
(Constant)	4.790	5.496
Green Fund Awareness	0.521*	0.202**
Perception	1.172*	1.348*
Environmentally Responsible Investment Attitude	-0.259**	-0.306**
Multiple R	0.993	0.991
R^2	0.985	0.982

Predictors: Green Fund Awareness, Perception and Environmentally Responsible Investment Attitude

* t - Ratio significant at 1% level   ** t- Ratio Significant at 5% level

$$\hat{Y} = 4.790 + 0.521X_1 + 1.172X_2 - 0.259X_3 \qquad (1)$$
$$\hat{Y} = 5.496. + 0.202X_1 + 1.348X_2 - 0.306X_3 \qquad (2)$$

Where, $\hat{Y}$ is the estimated Investment Decision

The above table explains the impact of Green Fund Awareness, Perception, and Environmentally Responsible Investment Attitude on Investment Decision of the retail investors. The above equations (1) and (2) describes that on an average if the mean score of "Green Fund Awareness" changes by one standard deviation, there will be an increase of 0.521 and 0.202 units of standard deviation in the Investment Decision of Urban and rural retail investors respectively, when the other factors are kept constant and vice versa.

The results of t-test confirm that the estimated regression coefficients of the urban retail investors (0.521), (1.172) and (-0.259) are highly significant at one per cent and five per cent level, the estimated regression coefficients of the rural retail investors (0.202), (1.348) and (-0.306)are highly significant at one per cent and five per cent level. The multiple R of 0.993 and 0.991 shows that there exists a relationship of 99.3 per cent and99.1 per cent respectively between the above emerged variables. Moreover, the R² of 0.985 and 0.982 confirms that there exists a variation of 98.5 per cent and98.2 per cent respectively in the Investment Decision.

Hence, it could be concluded that among Green Fund Awareness, Perception and Environmentally Responsible Investment Attitude the Investment Decision of the urban and rural retail investors is highly influenced Green Fund Awareness, Perception and Environmentally Responsible Investment Attitude.Therefore, Investment Decision of urban and rural retail investors in Tiruchirapalli district is highly influenced by Green Fund Awareness, Perception and Environmentally Responsible Investment Attitude.

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 Perception and Investment attitude among Males and Females

		t	df	Sig. (2-tailed)
Urban	Perception	-5.533	234	0.000
		-5.580	230.841	0.000
	Investment Attitude	-3.280	234	0.001
		-3.301	232.952	0.001
	Investment Decision	-5.506	234	0.000
		-5.543	232.760	0.000
		-1.974	293.384	0.049
Rural	Perception	-4.992	297	0.000
		-4.923	267.664	0.000
	Investment Attitude	-1.863	297	0.063
		-1.851	280.331	0.065
	Investment Decision	-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 perception, 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 perception, 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 perception, environmentally responsible investment attitude and investment decision of urban males and females.

Moreover, the values of green fund perception 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 perception 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.

CONCLUSION

Green funds in India are at a nascent stage, but expected to gain momentum in coming years. Stakeholders, government, corporations, and market participants have become more aware of this concept and are now recognizing the importance of responsible investing. The future of green funds will likely depend on their ability to deliver competitive returns.

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