EXPLORING HETEROGENEITY AMONG SOCIALLY RESPONSIBLE INVESTORS: A CRITICAL ANALYSIS OF AN ETHICAL BUILDING SOCIETY'S INVESTORS IN THE UK

By

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DEDICATION

This thesis is dedicated to none other than my mother Qaisra, my father Yaqub, my twin sister Sadia, my elder brothers Ali, my younger brother Imran, and love of my life Meerab, my niece. I love you all and Alahamdulillah I am so blessed that Allah made you all the most important part of my life. I owe this thesis and much more to all of you. Thank you for being my strength.

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ABSTRACT

Socially responsible investment (SRI) has seen a massive growth in the last 10 to 15 years. Much of the literature on SRI is a result of research which has examined SR-investors as a homogeneous group of truly socially responsible investors. However, recent studies have started acknowledging the significance of two motivational criteria that an individual looks at when selecting SRI: these being financial return and social return aspects of SRI. Both these return aspects together determine an individual's selection of socially responsible investment. Additionally, the balance an investor acquires between these two motives vary from person to person. Thus, suggesting heterogeneity among SR-investors in terms of the importance they place on the two return aspects of SRI. The aim of this study is to empirically explore heterogeneity among SR-investors in terms of the importance they place on both financial and social returns when selecting SRI. Analysis of survey data, (N=298) obtained from investors of Ecology Building Society, showed that SR-investors could be sub-grouped into three unique segments on the basis of the importance these segments hold for the financial and the social return aspects of SRI. These groups are: financial-return driven investors, social-return driven investors and dual-return driven investors. One-way ANOVA, post- hoc tests, discriminant analysis, chi^2 tests and regression analysis were employed to rigorously validate this typology of investors. Pro-social attitude, perceived consumer effectiveness, trust, value orientations, age, education, income and gender were used as external variables for the validation of the typology/segments of SR investors. The three groups in the typology exhibit different psychographic and demographic profiles according to the specific combination of financial and social return that they exhibit. Also, the values motivating SRI-attitude of each cluster vary, thus highlighting the uniqueness of each cluster. These findings bring new understanding of investors in the 21st century, thus adding to the existing knowledge of investment behaviour and marketing. Marketers can benefit from the findings of this study as they can develop strategies for each segment so as to cater to their specific needs. Policy-makers striving to attain sustainability can benefit from this knowledge as they can determine which values to promote so as to sway people to invest in a sustainable way.

Keywords

Financial return, social return, socially responsible investment, segmentation, value orientation.

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CHAPTER ONE

Chapter 1 - Introduction

1.1. Introduction

An investment incorporating social, ethical and environmental (SEE) issues can be identified as an ethical investment (EI) (Adam and Shauki, 2014; Domini, 1984; Simon et at., 1972) although it is increasingly commonly referred to as socially responsible investment (SRI). Gaining high momentum in recent years (Glac, 2009; Heimann et al., 2013; Hofmann et al., 2008; Nilsson, 2009; Renneboog et al., 2008), SRI seeks to integrate SEE concerns into investment decision (Bennefon et al., 2013; Nilsson, 2009; Sandberg and Nilsson, 2015) making it clearly distinct from more conventional investments which consider financial returns only (Bonnefon et al., 2013; Heimann et al., 2011).

SRI has seen a considerable growth and widening acceptance during the last ten to fifteen years (Adam and Shauki, 2014; Heimann et al., 2013; Nilsson, 2008; Pérez-Gladish et al., 2012; Sandberg and Nilsson, 2015), growing exponentially particularly in Europe (Nilsson, 2009; de Marcillac, 2008), in the United States (USSIF, 2014) and in Australia (Hoepner and Mcmillan, 2009; Pérez-Gladish et al., 2012). Today one out of every six US dollars invested under professional management in the United State is invested in accordance with SRI strategies (USSIF, 2014). SRI displayed a growth rate of more than 76 percent from 2012 to 2014, increasing to $6.57 trillion from $3.74 trillion, in the United State (USSIF, 2014). Similarly, in Australia funds under management invested in SRI increased from AU$14.02 billion (Australian Dollar) to AU$15.41 billion, displaying a 10% growth during the

2010 financial year (Pérez-Gladish et al., 2012). According to the European Sustainable Investment Forum (Eurosif) total funds under SRI broke the €2 billion barrier in 2007 and amounted to over €6.9 trillion by 2014 (Eurosif, 2014). Table 1.1 displays the SRI proportion in relation to assets under management for the major SRI markets worldwide. These statistics indicate that the SRI industry's importance is growing fast, becoming a phenomenon that needs to be taken seriously by both academics and practitioners (Heimann et al., 2013; Nilsson, 2008; Pérez-Gladish et al., 2012).

Table 1.1: Proportion of SRI Relative to Total Assets Under Management for Leading SRI Markets Worldwide

	2012	2014
Europe	49.0%	58.8%
Canada	20.2%	31.3%
Australia	11.2%	17.9%
United States	12.5%	16.6%
Asia	0.6%	0.8%
Global	21.5%	30.2%

*Source: USSIF Global Sustainable Investments Report 2012-2014

One main difference between conventional investment and socially responsible investment is the scope of the returns considered. That is to say, while in conventional investment the main return on ones' investment is a financial return, in SRI financial return is complemented by non-financial (Social Environmental and Ethical) returns (Heimann et al., 2013; Brill and Reder 1993; Nilsson, 2009). Brill and Reder (1993) made this difference clear by identifying SRI as an investment decision made in accordance with both ethical and financial criteria. Domini's (2001) understanding of SRI is as an integration of deep personal and moral concerns held into the investment decision. While Nilsson (2009) identified SRI as investment with duality at its core, incorporating SEE concerns with the financial concerns. Also, the

United States Social Investment Forum - USSIF (2014) described SRI as an investment that considers environmental, social and corporate governance criteria (ESG) to attain long-run financial returns in addition to achieving positive social impact (USSIF, 2014). Thus, the rapid growth and adoption of SRI suggests that not all investors are wealth maximizers (Cheah et al., 2011; Hallerbach et al., 2004; Hofmann, 2014; Hofmann et al., 2008; Khan and Khan, 2015; Nilsson, 2008; Nilsson, 2009; Rivoli, 1995; Sandberg and Nilsson, 2015) rather there are also socially responsible investors (SR-investors) who make investments that provide important environmental and/or social benefits.

With this understanding, early researchers exploring SRI and SR-investors viewed all SR-investors as a homogeneous group who were almost entirely preoccupied with SEE issues, thereby largely neglecting the financial motivation of SRI (Cheah et al., 2011; Nilsson, 2009). Interestingly, an examination of the literature regarding the financial performance of SRI reveals the presence of substantial research addressing and comparing the objective performance of SRI to that of a conventional investment (Bauer et al., 2005; Dorfleitner and Sebastian, 2014; Friede et al., 2015; Hong and Kacperczyk, 2009; Renneboog et al., 2008). Some studies claim that SRIs may outperform the non-SRIs. Derwall and colleagues (2005), for instance, identified that companies performing well on the environmental aspects also show better financial returns in comparison to the ones having comparatively worse environmental records (USSIF, 2014). The majority of the studies however conclude that no significant difference in financial performance exists when comparing SRI with conventional investments (Cheah et al.,

2011; Schro¨der, 2007; Statman, 2000; Kreander et al., 2005). Also, though a couple of studies did not find any strong link between financial return and the choice to socially responsibly invest (for example, Williams, 2007; Haigh, 2008), a number of studies displayed a strong link between the financial performance and SEE considerations (USSIF, 2014; Cheah et al., 2011). As a result, it was soon understood that both financial and non-financial motives are important when exploring SRI (Lewis and Mackenzie, 2000; Nilsson, 2008; Woodward, 2000; Pérez-Gladish, 2012).

Scholars like Cheah (2011) and Nilsson (2009) argue that different aspects of SRI offerings – financial return and/or social return- are expected to motivate each SR-investor differently. This argument is backed by the findings of other studies (e.g. Derwall et al., 2011; Lewis and Mackenzie, 2000a; Nilsson, 2009; Pérez-Gladish et al., 2012). However, except for a few studies (such as Derwall et al., 2011; Barreda-Tarrazona et al, 2011; Khan and Khan, 2015; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014; Sandberg and Nilsson, 2015), the literature of SRI largely neglectes this differences in investors' motivations, viewing all SR investors as a homogeneous group.

Additionally, the results of studies analysing the interplay between SR-investors' social (SEE) and financial motivations (such as, Barreda-Tarrazona et al, 2011; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014), and classifying them in terms of the balance between these two motives, have mixed findings (Derwall et al., 2011) and it remains unclear to what degree the SR-investors are ready to give-up financial returns for a social pay-off (Sandberg and Nilsson, 2015). Therefore, there is a need for more research to

understand what balance, between financial and social return, different SR-investors seek when choosing SRI. This also raises the question of whether SR-investors could be classified in terms of the motivational balance (different balance between financial return and social return) that they may adopt. As aforementioned, apart from a small minority of studies (for example Barreda-Tarrazona et al, 2011; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014), relatively little research has addressed this question.

Additionally, those studies that have attempted to classify SR-investors in terms of the balance each SR-investor seeks or accepts between financial return and social return motives (Mackenzie and Lewis, 1999; Lewis and Mackenzie, 2000a; Nilsson, 2009; Sandberg and Nilsson, 2011; Dorfleitner and Utz, 2014; Wins and Zwergel, 2015), mainly explore SR-investors of mutual funds. Table 1.2 gives an overview of individual level SRI studies carried out to date, highlighting the industry considered for data collection for each study. Given that the motivational heterogeneity among SR-investors is important to understand SRI fully (Nilsson, 2009), it is reasonable to argue that an examination of SR-investors, who choose other form of financial institutions than mutual funds, could bring more insight into the SRI literature and reduce the ambiguity regarding heterogeneity among SR-investors.

Table 1.2. Overview Of Relevant (Individual Level) SR-Investors' Studies.					
No	**Author(s) & Year**	**Paper Title**	**Method**	**Finding**	**Industry**
1.	Anand and Cowton (1993)	The ethical investor: exploring dimensions of investment behaviour.	Principle component analysis of 125 ethical investors investing in EIRIS Services Limited.	This paper, via principle components analysis, presents a snapshot of a growing group of unique investors who, contrary to the traditional financial theory, tend to incorporate social or moral concerns into an otherwise a risk and return driven decision. An attempt is made to highlight the possible "non-financial" investment dimension of this investor group.	Screening Of Individual Stocks
2.	Barreda-Tarrazona, I.,Matallin-Sáez, J.C. and Balaguer-Franch, R. (2011)	Measuring investors' socially responsible preferences in mutual funds.	Regression for experimental analysis of 166 Bachelor students.	This study presents an experimental analysis under controlled condition to analyse the investment decisions taken by the participants when presented with different parameters of information regarding alternative investment opportunities and the related return expectations. Each participant was required to distribute and allocate investment budgets to two different funds having unclear returns, changing over time. The experiment was divided into two parts where, for one of the two investment options, different degrees of information regarding the SR character was provided to each participant. Results revealed that though returns and diversification drive the investment decision for the majority of the participants, explicit information regarding funds' SR nature does increase the investment budgets' percentage invested in that fund significantly. Especially those claiming to be concerned about SR issues actually allocate significantly more investment to the SR alternative. Moreover there did appear to be a small group of investors having a high level of faithfulness to SRI as they invested a major share of their investment budget in SR funds despite the returns being highly unfavourable. Hence it is suggested that clear information regarding investments' SR characteristic needs to be provided to the investors for them to express their preferences accurately and fully.	University Students
3.	Borgers and Pownall (2014)	Attitudes towards socially and environmentally responsible investment.	Exploratory analysis carried out on survey data collected from 1766 members of CentERdata	This paper looks at the varying attitudes of customers towards consideration and implementation of SR screening while undertaking investment decisions regarding ones' pension plans. Institutional investors, without knowing much about individual investors' SEE preferences, invest billions of dollars on their behalf, hence highlighting that understanding individuals' attitudunderstandings is vital for higher customer satisfaction. Results reveal that though investors do express their SR attitudes, they face difficulty in amalgamating these non-financial preferences into their financial decisions at the time of investment. Households' low financial sophistication is identified to be partially responsible for this lack of amalgamation. It is further suggested that highlighting the positive utility achieved by the majority of beneficiaries through	Pension Investment/ Mutual Fund

				implementation of SEE investment screens and promoting positive attitudes towards SEE screened pension investments can help the most in resolving this dilemma faced by individual investors.	
4.	Cheah, E.-T., Jamali, D., Johnson, J. and Sung, M.-C. (2011)	Drivers of corporate social responsibility attitudes: The demography of socially responsible investors.	Generalized ordered logistic regression (gologit) on 2464 SR investors' data obtained through global questionnaire survey carried out in 20 countries.	Varying CSR views are held by SRI groups, formulated on the bases of demographic characteristics – age, gender, income and education. Furthermore, younger and female SR investors give equal or higher value to companies' environmental and social performance in comparison to its financial performance. SR investors with higher income and female SR investors most likely believe it to be companies' responsibility to benefit not only the shareholders but also the broader society. Moreover, younger investors, well-educated investors and those with a higher income perceive SR companies to be at least as profitable as their counterparts.	Mutual Fund
5.	Dorfleitner, G. and Utz, S. (2014)	Profiling German-speaking socially responsible investors	A series of statistical tests including x^2 test, the rank correlation Goodman and Kruskal $_\gamma$, t-tests and ANOVA carried out on survey data collected form 338 German investors via online survey.	The paper looks at the main motives driving investors' fund allocation preferences in SR-profiled mutual fund. Multivariate analyses reveal little influence of investment volume and gender, while none of educational level, as the determinants of SR investing. Hence demographic factors do not play the most important role in explaining SRI attitudes. Percentage invested in SRI and the willingness to sacrifice financial returns is significantly affected by the risk-return-liquidity preference of investors. Furthermore their results highlight the existence of a possible gap between SRI supply and demand. Moreover, expectation of a high financial performance is identified as one of the major inducement towards SRI selection. This study being one of the very few studies that expands the SRI literature by stating novel empirical explanations regarding SR investors' non-demographic preferences and investment selected.	Mutual Fund
6.	Escrig-Olmedo et al. (2013)	Sustainable development and the financial system: society's perceptions about socially responsible investing	Percentage analysis and logistic regression model implemented on 345 Spanish investors (out of which only 20 identified themselves as SR investors).	This paper attempts to highlight the general perception held by Spanish investors regarding SEE criteria, investors' real-life investment needs, SRI and most relevant SRI offerings. Analysis of self-administered survey data reveals that SRI is in an early developmental stage in Spain and more extra information regarding SEE criteria could help lead the investors invest more in SR driven products and companies. Furthermore, guidelines and recommendations regarding Spanish market and how institutions, managers and foreign managers aiming to enter Spanish SRI market can promote growth at a bit faster pace are also presented.	General Public/ Investors

7.	Jansson and Biel (2011)	Motives to engage in sustainable investment – a comparison between institutional and private investors	ANOVA and Bonferroni-adjusted t-tests carried out on 60 institutional investors, 71 institutional investors and 453 private investors.	This paper investigates if the financial beliefs and the social beliefs (psychological determinants) associated with SRI influences different investor groups uniquely or not. Three different investor groups were considered for this study, these being; fund managers/employees of Swedish financial institutions, international investors and private investors (with no difference identified between SR and conventional investors). Results display a different set of values and beliefs regarding risk and returns guiding the institutional and private investors in comparison to the third group of investment institutions' fund managers. It is also highlighted that the institutional and private investors give more importance and value to the SEE concerns in comparison to the investment institutions.	Institutional , Retail And Investment Institutions – Mutual Funds
8.	Jansson et al. (2014)	Should pension funds' fiduciary duty be extended to include social, ethical and environmental concerns? A study of beneficiaries' preferences	Exploratory analysis of 1119 Swedish pension fund investors.	The paper highlights the lack of importance given to social aspects of investment, by fund managers, academics and lawyers, as the majority of the aforementioned bodies consider pension funds' aim to manage assets as maximizing beneficiaries' financial returns. This effectively rules out consideration of any SEE concerns while investing on the beneficiaries behalf. The authors suggest that inclusion of SEE could add more value for the beneficiaries. Results reveal that the beneficiaries, as suggested by the authors, wish to amalgamate financial concerns with SEE concerns when undertaking pension fund investment decisions. Hence the analysis displasy beneficiaries' preference for both financial and value based motives regarding pension fund investment.	Pension/ Mutual Fund
9.	Junkus and Berry (2010)	The demographic profile of social responsible investors	x^2 test and *t*-tests carried out on data collected via self-reporting questionnaire filled by 4156 Members of the American Association of Individual Investors (AAII)	This paper aims to investigate the demographic profile of SR investors and conventional investors to see if SR investors can be identified to hold a specific demographic profile that differs from that of a typical conventional investor. The participants, well-informed individual investors (members of AAII), are segregated into SR investor and conventional investor groups based on their self-reported clams towards SRI involvement. Results identify SR investors to be more likely to be young, better educated, less wealthy, single and females in contrast to the conventional investors. The research proposes that an extra effort should be made to convince male and wealthier investors regarding SRI merits for a future spread of SRI.	Mutual Fund Investors.
10.	Lewis, A. and Mackenzie, C. (2000a)	Morals, money, ethical investing and economic psychology	Exploratory analysis of paper based survey data collected form 1146	This paper, in an exploratory manner, identifies who SR investors are and what demographic and psychographic characteristic represents the majority of them. Results reveal that ethical investors are commonly middle-income professionals holding a mix of ethical and non-ethical investments	Ethical Unit Trust

			individual ethical investors from Friends Provident fund.	in their portfolio. With the minority having a perception of lower expected returns associated with SRI, a clear majority of these investors prefer to maintain their investment profile even when there are substantially lower level of return associated with SRI, hence making their investment decision somewhat price inelastic. Furthermore, their analysis reveals an absence of a simple trade-off between ethics and profits, hence calling for more research.	
11.	Mackenzie, C. and Lewis, A. (1999)	Morals and markets: The case of ethical investing.	Semi-structured interviews of 20 ethical investors	In an exploratory manner this study analyses 20 semi-structured interviews of investors in a SRI profiled mutual fund. Conclusions are drawn about the financial and ethical beliefs and desires of SR investors. It is concluded that in spite of having ethical concerns, investors are not willing to sacrifice financial returns for the sake of social returns. Furthermore, results highlight that investors opt for different ways to deal with this dilemma, with the four most common ways being: avoidance of rigorous ethical thinking; dividing the investment into core and surplus money to invest accordingly; choosing to be a partial ethical investor; and avoiding detailed consideration of ethical investments' costs. The responses disclose the existence of a portfolio approach to ethics; i.e. opting for a softer assuaged approach towards ethical investment by allocating only a small portion of their portfolio investment to SRI while allocating the rest to non-ethical conventional investment vehicles, is followed by majority of the SR investors as a way towards reaching equilibrium.	Mutual Fund
12.	McLachlan and Gardner (2004)	A comparison of socially responsible and conventional investors	x^2 test and t-tests carried out on data collected via 109 self-reporting questionnaires.	This paper aims to provide a comparative analysis of SR investors and conventional investors, especially in an Australian context. Analysis was carried out on 55 conventional investors and 54 ethical investors' responses to a mailed questionnaire regarding their general behaviour, attitudes and beliefs. Results highlight the presence of differences between SR investors and conventional investors' beliefs towards the importance of ethical issues, their perception of moral intensity, and their investment decision-making style. The paper calls for further research to fully understand SR investors.	Individual investors: Shares and/or Mutual Funds
13.	Nilsson, J. (2008)	Investment with a conscience: Examining the impact of pro-social attitudes and perceived	An ordinal logistic regression of 528 private Swedish mutual fund investors.	The paper carries out an ordinal logistic regression of 528 private mutual fund investors to explore the impact of several pro-social, socio-demographic and financial performance variables on investment behavior to explain why different SR investors invest varying proportions of their portfolio in SRI profiled mutual funds. Pro-social attitudes and perceive consumer effectiveness	Mutual Fund

		financial performance on socially responsible investment behavior.		(PCE) positively impact the portfolio proportion invested by an individual in SRI profiled mutual funds. Furthermore, non-altruistic motives play an important role as investors having a perception of equal or higher returns associated with SRI in comparison to regular mutual funds, invest a higher percentage of their investment portfolio in SRI. Furthermore, better-educated investors and women are more likely to have a higher percentage of their investment portfolio invested in SRI mutual funds. Hence both pro-social attitude and financial perception impact investors' investment in SRI.	
14.	Nilsson, J. (2009)	Segmenting socially responsible mutual fund investors: The influence of financial return and social responsibility	Cluster analytic (for clustering) and discriminant analysis and chi2 tests (for profiling the segments) carried out on 563 private Swedish mutual fund investors.	Three segments of SR-investors on the bases of the importance given to perception of financial return and social return associated with SRI appeared. These sub-groups have different socio-demographic profiles. Further analysis to highlight the uniqueness of the sub-groups based of factors other than demographics can add a lot more to the existing body of literature.	Mutual Fund
15.	Nilsson, J., Jansson, J., Isberg, S. and Nordvall, A.-C. (2014)	Customer satisfaction with socially responsible investment initiatives: The influence of perceived financial and nonfinancial quality.	Correlation Matrix and factorial ANOVA(s) carried out on data collected from 369 Swedish SR mutual fund investors.	This paper analyses the post-purchase customer satisfaction of Swedish SR mutual fund investors. To understand this aspect of SRI behaviour of final investors a theoretical model of satisfaction focused on SRI-profiled mutual funds is established and verified through various analyses. The results reveal perceived financial performance associated with SRI-profiled mutual funds to be the main predictor for customers' post-purchase satisfaction. Although the perceived SEE performance also add positively towards the element of satisfaction, however, financial perception plays a higher role in comparison to the former. Hence results suggest that providers of SRI initiatives should mainly highlight the traditional financial attribute, since generation of customer satisfaction via good SEE records alone is very unlikely.	Mutual Fund
16.	Peifer (2014)	Fund loyalty among socially responsible investors: the importance of the economic and ethical domains	Multivariate regression analysis of 499individual mutual fund investors, including 177 dual investors and 322 SR investors belonging to	This paper analyses the importance placed by SR investors and conventional investors on both the financial and social domains of SRI when undertaking investment decision. It further talks about how these two SRI domains impact investors' loyalty to the fund. Study of unprecedented survey data collected via telephone questionnaires undertaken by investors of an ethical mutual fund, reveal that the dual investors (investors indulging in both conventional and SR investment) are more loyal to the social funds they opt for in comparison to their conventional funds. Results	SR Mutual Funds

			Mennonite Mutual Aid (MMA) Praxis Mutual Funds	further suggest that investors attracted via ethical dimension of the fund are more loyal and patient towards returns. This is an important point to be kept in mind by SR organizations while considering the degree of CSR they should engage in. Moreover it is identified that economic motivations reduce, while ethical motivations induce, the level of SR fund loyalty, hence opening up a new arena for future research.	
17.	Pérez-Gladish, B., Benson, K. and Faff, R. (2012)	Profiling socially responsible investors: Australian evidence	Ordered probit regression analyses of 145 Australian investors from RIAA (Responsible Investment Association Australasia)	Through an online survey of 145 Australian SR investors the study aims to explore investors' financial preferences; social, ethical and environmental concerns; and socio-demographic characteristics. Adding on to the SR investors' profiles and investment motivations' literature, the findings propose that SR investors seek both financial as well as non-financial returns. Furthermore SR investors are usually middle-aged professionals with tertiary qualification and middle-income, and value social issues more than environmental issues. Hence stating, "We conclude that Australian SR investors seek to satisfy both performance and social objectives, yet the group is heterogeneous with respect to their individual investment style (p. 19)."	SR Mutual Fund
18.	Rosen et al. (1991)	Social issues and socially responsible investment behavior: a preliminary empirical investigation	Exploratory analysis of 4000 US based Individual investors having invested with Calvert Social Investment Fund and the Working Assets Money Fund.	This paper attempts to investigate individual investors rather than institutional investor, unlike studies before this. Analysis of data collected from investors of two US mutual funds offering SR options, highlight that these SR investors are better educated and younger than their conventional investment counter parts. Furthermore labour relation and environmental concerns are most important to this set of SR investors. Interestingly, though the SR investors give high importance to SR behaviour incorporations by the companies one invests in, these investors are unwilling to sacrifice financial return for the sake of social gain.	SR Mutual Fund
19.	Sandberg, J. and Nilsson, J. (2011)	Conflicting intuitions about ethical investment: a survey among individual investors	Exploratory analysis of 369 SRI individual fund investors recruited from the database of a large Swedish mutual fund.	Through an exploratory survey this study attempts to understand the SR beliefs of SR investors, especially towards the question of whether or why one thinks an ethical fund is actually ethical. The survey was constructed using past research and was mainly focused on identifying participants' perception of different investment strategies being ethical or not. Results indicate that investors value both moral purity and moral effectiveness, however they face a difficulty in creating a balance and choosing between the two perspectives. It was further identified that this conflict of achieving balance between the two perspectives is not only faced by different groups of SR investors, rather many individuals struggle with conflicting ethical intuitions. It is concluded that the results challenge the belief that ethical investors restrict themselves from too	SR Mutual Fund

				much knowledge regarding ethical investment and from thinking too much regarding this investment strategy just so that they can invest a proportion to non-ethical investment. The argument is further developed using the psychological literature regarding intuitions in ethics.	
20.	Sandberg, J. and Nilsson, J. (2015)	Do ethical investors want purity or effectiveness? An exploratory study on the ethical preferences of mutual fund investors	Exploratory analysis of 369 paper based exploratory survey.	Exploratory analysis of 369 paper-based exploratory survey responses designed to better understand individual investors' ethical preferences in SRI-profiled mutual funds selection. Results reveal that both the moral purity and moral effectiveness perspectives hold importance for the majority of investors. However many of the investors were still unsure about which perspective is more important.	Mutual Fund
21.	Tippet and Leung (2001)	Defining ethical investment and its demography in Australia	Descriptive analysis of data collected from 296 investors belonging to three different investor groups, i.e. 122 members of ASA, 57 clients of a private SR-focused financial adviser, and 117 members of Australian public equity investing.	This paper aims at highlighting the demographic profile of SR investors and attempts to differentiate the conventional investors from the SR investors on the bases of demographics. The indings identify SR investors as predominantly female, who are relatively better educated, younger and opt for smaller portfolios, in comparison to conventional investors. The authors suggest that a way for SRI providers to expand more rapidly in the Australian investment market will be to not only appeal to and attract more younger women investors, but also to approach and promote SR investment more strongly to male investors.	Institutional investors and private SR investors – Mutual Fund
22.	Vyvyan et al. (2007)	Socially responsible investing: the green attitudes and grey choices of Australian investors	Conjoint analysis, a multivariate decision method is implemented on 318 institutional investors.	By analyzing the data collected from members and employees of two large Queensland-based organizations, this paper attempts to highlight the attitudes and investment decisions of both the SR concerned and the conventional investors. Results highlight that those holding environmentalist attitudes give a higher rating to SRI criteria. However, at the time of undertaking the investment decision no significant difference between the non-environmentalist and environmentalists' utility score appear, since both rank financial performance as being highly important compared to SRI criteria when undertaking investment decisions. Hence this observed mismatch between attitude and behaviour regarding SRI calls for more future research.	Managed Funds' Institutional Investors – Mutual Fund

23.	Wins and Zwergel (2015)	Comparing those who do, might and will not invest in sustainable funds - A survey among German retail fund investors	Ordinal logistic regression (OLR) and classification tree (CT) method is used to analyse responses of 421 private German mutual fund investors.	This paper analyses online data collected from private mutual fund investors from Germany. For exploratory purposes the researchers investigated differences between three investor groups: SR investors, conventional investors generally interested in SR funds (INT) and conventional investors with absolutely no interest in SR funds (CONV). Through empirical analyses of the attitudes and motivations of these investor groups it is proposed that the INT and the SR investors are quite similar to each other, while differing greatly from the CONV investors group. All groups believe that SR funds perform worse than conventional counterpart, with CONV leading this belief. Nevertheless, SR investors still opt for SRI. Interestingly despite of depicting similar attitudes and motivations the INT group and SR investor group differed majorly from one another on bases of behaviour, as the INT investors did not undertake SRI despite showing attitudes similar to SR investors, hence leaving a gap for future research to look into.	Mutual Funds

An important avenue of SRI research involves the examination of investors in building societies. Building societies are financial institutions that are "partly or wholly exempt from bank licence requirements, and therefore regulated under separate rules." (Satyanarayana, et al., 2015. Pp. 337), thus making them unique, yet important in the UK financial market (a detailed discussion of building societies is presented in chapter two). Therefore, an understanding of heterogeneity among SR-investors of building societies, in terms of the balance they pursue between financial and non-financial motives, could help to better understand SR-investors heterogeneity/homogeneity, and help to resolve some of the uncertainty created by the mixed findings provided by similar studies in the past.

Furthermore, more recently Sandberg and Nilsson (2015) highlight the lack of knowledge regarding "ethical investors' ethical beliefs or attitudes" (pp. 35). Their study is "one of the first that systematically goes into the ethical beliefs of ethical or socially responsible investors" (pp. 44). Additionally, they call for further empirical research along these lines. Another avenue of future research they highlight is to examine weather different sub-groups within SR-investors have a different interplay of ethical attitudes and beliefs. As a response to this call for research, this thesis aims to explore how different groups of SR-investors in a building society vary in terms of theirattitudes and beliefs/values. This clarity could bring novel understanding to the bedrock of knowledge in the SRI domain.

In summary, the present research first of all seeks to explore if SR-investors in a building society could be classified into unique segments in terms of the balance they attain between the financial and social return aspect

of SRI, and secondly to explore any variations in values and attitudes that these segments may hold.

To serve this aim, the rest of this first chapter is divided into eight sections. Section 1.2 offers an overview of the theoretical background of the current study, section 1.3 further elaborate the research gap, section 1.4 provides the research aims and objectives of the study and formulates the research questions, section 1.5 gives the justification for the study while section 1.6 highlights the contributions of this research, section 1.7 discusses the research methodology and the chapter concludes with section 1.8 which presents the structure of the thesis.

1.2. Theoretical Background

1.2.1. History of SRI:

Historically SRI can be traced back hundreds of years to when it was closely linked to religious concerns and was practiced specifically by religious groups only (Heimann, 2014). In the early biblical times directives regarding ethical investment were laid down by the Jews. The New Testament contains passages regarding the proper use of money. Passages about avoiding investment in "sin industry" – alcohol, tobacco, gambling, or pornography business – and guidance towards the right use of money are prominent within the Quran. Even today the Islamic Sharia code prohibits investments in gambling and adult entertainment (Baker and Ricciardi, 2014; Renneboog et al., 2007).

SRI in the modern context, outside of its original religious connotations, is frequently traced to the 1960s (for example Anderson and Cunningham, 1972; Kinnear et al., 1974). During this era a series of events

including civil right concerns, the anti-Vietnam war movement, pressure for greater equality for women, and the cold war, all made their way into the public conscience contributing to a spread of concern about social issues that extended beyond religious boundaries and began to impact many social spheres including investment. Later on, investors also included anti-nuclear sentiments and labour issues to their list of concerns. Events like the campaign against South African apartheid played a major role in raising the importance of human rights in every walk of life, including investment, thus expanding the scope of SRI even further. During the 1980s, the environmental challenges caused by the disasters linked to Chernobyl, Bhopal and the Exxon Valdez, along with growing public awareness of ozone depletion and global warming, led to environmental concerns becoming an important consideration in SRI. Most recently, globalization issues linked to working conditions and human rights concerns have moved to the forefront of the minds of investors with dual motives – social return and financial return - for their investments (Bengtsson, 2008; Bray et al., 2011; Heimann, 2014; Louche and Lydenberg, 2006; Lozano et al., 2006).

Evolving concept of SRI means that past research associates it with a variety of terms including ethical, social, and sustainable investment (Adam and Shauki, 2014; Frankel, 1984; Bruyn, 1987; Hylton, 1992; Nilsson 2008; Nilsson, 2009; Schlegelmilch, 1997; Sparkes and Cowton, 2004; Renneboog et al., 2008). The *Forum for Sustainable and Responsible Investment* (USSIF, 2014) identifies several labels - including ethical investing, impact investing, community investing, mission related investing, value-based investing and sustainable investing amongst others – being used within the broad field of

SRI. Similarly signatories to the United Nations Principles for Responsible Investment (UNPRI) use a range of terminologies: SRI (43 percent), sustainable investment (10 percent), responsible investment (9 percent), sustainable and responsible investment (5 percent), ethical investment (3 percent), socially, and environmentally responsible investment (2 percent), governance and SRI (1 percent). While these terms have oftem been used inter-changeably by researchers, SRI and ethical investment (EI) have been the most extensively used terms (Adam and Shauki, 2014; Schueth, 2003). However, some investors are averse to the idea of representing their investment principles by the term 'ethical' as it would show excessive deference to the moral and religious values (Adam and Shauki, 2014; Sparkes and Cowton, 2004). Only three institutional investors in Europe (none from the US) use the term 'ethical investing'. The selection of term SRI is justified not only by the large popularity of SRI in US and EU (used by 43 percent of signatories), but also because it can cover multiple investment strategies; i.e. incorporation of social motivation, financial motivation or both (USSIF, 2014). This thesis will therefore use the term SRI from here onwards. Table 1.3 gives an overview of different definitions of SRI used in the past.

Table 1.3: Definition(s) Of SR and SRI Presented Over Time		
Context	**Author (s)**	**Definition**
SRI	Huimin et al. (2010)	Investment that integrates social, environmental and/or ethical considerations into the investment "decision-making" process.
	Sparkes and Cowton (2004)	Investment processes that consider the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis.
	SIF (2003) and Cheah et at (2011)	Identifying and investing in companies that meet certain standards of Corporate Social Responsibility (CSR).
	Sparkes (2002)	A dual natured investment. "The construction of equity portfolios whose investment objectives combine social, ecological, and financial goals".
	Knoll (2002)	Integrating regular financial dimensions with social responsibility dimensions.
	Eva Hofmann, Erik Hoelzl and Erich Kirchler, (2008) and Lewis et al. (1998)	On one hand, investing in companies or funds that guarantee compliance to certain positive ethical criteria. On the other hand, deliberately not investing in companies and funds according to certain negative ethical criteria.
	Nilsson (2009) and Sandberg & Nilsson (2015)	Incorporating social, ethical, and environmental (SEE) issues, in addition to financial criteria, into the investment selection process.
	Social Investment Forum (2014),	Includes social screening (i.e., the consideration of social criteria to either avoid or seek out specific investments for a portfolio), community investing, and shareholder advocacy.
SRI Mutual fund	Sullivan and Mackenzie (2006a)	Funds that, in addition to regular financial dimensions of investment, incorporate social responsibility issues into the investment process.
	Nilsson (2009) and McCann et al. (2003) and Michelson et al. (2004) and Sparkes (2002)	Funds that apply an investment process where social, ethical, or environmental (SEE) criteria are combined with the traditional financial criteria in the investment decision.
	Social Investment Forum (2005)	Funds that invest in organizations whose objective is both profit and living up to a certain standard of corporate social responsibility (CSR) to be considered for investment by SRI mutual funds
SR Investor	Social Investment Forum: Socially Responsible Investing Facts (2007)	One who owns stocks and, or funds of, or in companies which are concerned about sustainability, making a positive contribution towards society.
	McLachlan and Gardner (2004)	Whose investment decisions are influenced by social responsibility and ethical notions.
Socially Conscious Consumer	Frederick E Webster JR (1975)	One who take into account the public consequence of his/her private consumption or one who attempts to use his/her purchasing power to bring about social change.

1.2.2. Acceptance and Growth of SRI

Europe has a long history regarding the incorporation of corporate social conducts into investments (Baker and Ricciardi, 2014; Reinhardt et al., 2008; Sutton, 2004). European corporate boards frequently advocate employee representatives, this is because European law puts anemphasis upon stakeholders' involvement in corporate governance. Profit-sacrificing corporate behaviour is codified as traditional for corporate social conscientiousness in countries practicing Civil law (Hofmann et al., 2008), whereas in more politically liberal United Kingdom the corporate managers are permitted to partake in socially beneficial activities to the point that these are still in the shareholders' greater interests. Stakeholders' interests are legally backed in the social democratic countries like France and German-speaking countries (Lynch-Fannon, 2007; Reinhardt et al., 2008; Roe, 2000). Under German corporate law the management is not explicitly obliged to maximize shareholder value (Baker and Ricciardi, 2014; Corfield, 1998). While demonstrating a rapid growth and acceptance in Northern and Central Europe, SRI exhibited a comparatively slower acceptance in Southern Europe. Nevertheless, excluding the Nordic region, the European SRI market comprising of roughly 400 social, ethical, and green funds worth €1.138 billion (approximately $1.5 billion U.S. dollars) represented 18 percent of the overall market share in 2008 (European Social Investment Forum Report, 2012). The SRI movement by 2006 was led by the United Kingdom with €8.0 billion ($10.5 billion U.S. dollars) in total assets, with Germany (€6.7 billion, $8.8 billion U.S. dollar), Austria (€5.3 billion, $6.9 billion U.S. dollar), France (€3.1 billion, $4.1 billion U.S. dollar), Switzerland (€2.9 billion, $3.8 billion

U.S. dollar), Italy (€2.7 billion, $3.5 billion U.S. dollar), and Sweden (€2.5 billion, $3.3 billion U.S. dollar) following the lead.

Victorian concerns about employment conditions ignited concerns about corporate social conduct in the United Kingdom - the European SRI leader (Sparkes, 2002). Ethical finance, which was initially established by the Mercury Provident in 1974, was later introduced into retail banking in 1992. A campaign focused on environmental and ethical pension funds was launched by a group of university affiliates in 1997. In accordance with the responsible and sustainable investment policies, since 2000, all occupational pension funds are legally required to formally adopt social, environmental, and ethical policies (Baker and Ricciardi, 2014; Sparkes and Cowton, 2004; Williams, 2005). Pension funds are bound, under the U.K. government regulations, to disclose the degree to which they considered social, ethical, or environmental considerations during the realization, selection, and retention of investments (Sparkes, 2002). Sweden and Germany have already implemented similar regulations, with the European Parliament also considering such regulations (Steurer, 2010). On the other hand, community investing (for a detailed discussion of community investing see section 1.2.3) is quite common and accepted in Latin influenced countries such as France, Spain, and Italy.

Similarly, practicing the political divestiture, in 2007 the Belgian government restricted Belgian investors from investing in warfare. The Nordic European countries are famous for their Scandinavian legal framework. Under Sweden's 2000 Public Pension Fund Act, all Swedish national pension funds are required to report their investments' social and environmental externalities and impacts (Steurer, 2010). The law provides a gateway to SRI awareness

and information while giving a certain leeway as to what extent the funds need to comply with the regulations. Furthermore, a joint ethical council facilitates the process by offering investment recommendations. The Dutch Green Funds Scheme promotes SRI tax exemption information (Steurer, 2010).

Likewise, The French Pension Research Fund in Continental Europe offers insurance plans aligned with SRI principles. SRI was propelled into the German-speaking Roman law countries, after the 1970s green wave fostering environmental protection in the wake of peace movements. With Ökobank and Gemeinschafts being the first SRI traders, SRI's profile is largely attributed to, and influenced by, European green parties, tax exemptions, information campaign, and the 1991 Renewable Energy Act (Williams, 2005).

The above discussion reflects the rapid growth in popularity and practice of SRI in past few decades, showing that there does exist a group of investors who give due importance to SEE issues and concerns while investing (Cheah et al., 2011; Hofmann et al., 2008; Khan and Khan, 2015; Nilsson, 2008; Nilsson, 2009; Sandberg and Nilsson, 2015). This evidence by the growth in support for SRI amongst investors, organizations, as well as the general public (Adam and Shauki, 2014; Cheah et al., 2011; Heimann, 2014; Heimann et al., 2013; Nilsson, 2008; Pérez-Gladish et al., 2012; Sandberg and Nilsson, 2015; USSIF, 2014). This makes SRI an important phenomenon for the 21st century worthy of study (McLachlan and Gardner, 2004; Williams, 2007; Nilsson, 2008; Sandberg and Nilsson, 2015). This rapid growth of SRI in the past few decades can also be linked to the increased significance of sustainability as a core concept of business sustainability is the 'triple bottom line' which focuses attention concerning corporate performance onto a

balanced set of metrics covering economic, environmental and social outcomes (Richardson, 2003).

1.2.3. SRI, A Step towards Sustainability

Sustainable investing through SRI is not a new concept and can be traced back hundreds of years (as discussed in section 1.1.1). Nevertheless the concept gained popularity outside the religious domain during the 1960s. The publication of "Limits to Growth" in 1972 by the club of Rome highlighted the consequences that the expanding economies of modern western societies had on the Earth (Meadows et la., 1972; Fongers, 2010). In 1987 the World Commission on Environment and Development produced their report "Our Common Future" (World Commission on Environment and Development, 1987). This report defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their needs" (Bansal, 2005, pp. 181). This definition is known as the Brundtland definition (named after the Chair of the World Commission on Environment and Development) (Balderjahn et al., 2013; Bansal, 2005). Brundtland brought the concept of sustainability into mainstream debate including within politics, business and finance. The publication of the Brundtland Report marked the starting point of a long, and still on-going, discussion about what sustainability is (Costanza and Patten, 1995). Defining sustainability is a complex task (Schaefer and Crane, 2005) and over 100 definitions of sustainability have been developed (Labuschagne and Brent, 2005) with no single one universally accepted (Heimann, 2014). Despite controversies about its exact meaning, sustainability principles are increasingly reflected in the policy goals of governments, the business

strategies of corporations and in academic debates across a range of disciplines.

The European Union (EU) acknowledged the possible influence that financial institutions can have towards sustainable development (Richardson, 2003) in its Fifth Environment Action Programme (1992-2000). The EU declared that: 'financial institutions which assume the risk of companies and plants can exercise considerable influence - in some cases control - over investment and management decisions which could be brought to play for the benefit of the environment' (EU, 1992. Pp.27). A report by the United Nations Environment Programme Finance Initiative (UNEP FI) and Principles for Responsible Investment (PRI, 2011) assessed a total of $6.6 trillion as the overall environmental cost due to greenhouse emissions, pollution and overuse of water, equating to 11% of the global GDP in 2008. It is argued that financial institutions could act as a means of carrying and amplifying core environmental policy aspirations throughout the economy (Richardson, 2003). Thus recognizing SRI as a key player towards attaining a sustainable future (Sandberg and Nilsson, 2015; USSIF, 2014).

1.2.4. Different forms of SRI

Gaining popularity rapidly, SRI is being practised by both institutional investors and private investors all over the world (Hoepner and Mcmillan, 2009; de Marcillac, 2008; USSIF, 2014). According to USSIF (2016) SRI investors comprise institutions, such as pension funds, foundations, non-profit organizations, religious institutions and universities, as well as of individuals, including very high net worth family offices and individuals to average retail investors. With hundreds of investment management firms offering various

forms of SR products, SRI can be found flourishing throughout the world. Some examples of practitioners of SRI are:

- Individuals who invest in organizations specialized in seeking companies with good labour and environmental practices.
- Credit unions and community development banks/building societies that are focused on serving low- and middle-income communities.
- Medical schools and hospitals that decline investment in tobacco companies.
- Foundations supporting community development loans and other forms of investments having a high social impact, which are in line with the foundations' missions such as building societies.
- Religious institutions that urge companies in their portfolios to meet strong governance and ethical standards, via shareholder resolutions.
- Venture capitalists that develop and identify companies that create jobs in low-income communities and provide environmental services and other societal benefits.
- Responsible property funds that help retrofit or develop commercial and residential buildings in accordance with the high energy efficiency standards.
- Public pension plan officials encouraging companies to incorporate strategic plans that factor in climate change and efforts to reduce their greenhouse gas emissions.

SRI has become increasingly popular among both individual and institutional investors, during the last couple of decades (Sandberg and Nilsson, 2015), resulting in dynamic growth worldwide with mutual funds being one of the most flourishing segments (Nilsson, 2009; USSIF, 2014). In the United States the number of mutual funds offering SRI grew from 333 to 456 between 2012 and 2014. Displaying an increase in collective assets from $641 billion to $1.93 trillion. Thus SRI mutual finds enjoyed an over 200 percent increase (USSIF, 2014).

Following mutual fund is the ***community investing*** segment that experienced a massive growth over the last decade. Between 2010 and 2012 this sector enjoyed a 47 percent increase in assets, especially when the "Move Your Money" campaign, encouraging investors to move their deposits from "too big to fail" banks to local, smaller, community-based financial institutions. Hence the sector witnessed an approximate 5 percent increase in assets between 2012 and 2014, totalling to $64.3 billion (USSIF, 2014).

1.2.5. Community Investing as a Platform for SRI

Community investing channels private and public investments towards providing credit, capital and training to low income and otherwise underserved communities. Though several initiatives can fall under community investing, some of the core areas it finances are:

- Economic development (infrastructure development, quality job creation)
- Needed services (food access, education, healthy communities, child care, access to jobs, access to transit, affordable housing)

- Sustainable communities (environmentally focused community investment, mixed use/income smart growth)

Community development banks, credit unions, building societies and similar depository institutions are popular community investment possibilities that a SR-investor can choose from. With such available options, community investing is seen as a vital platform to reflect SEE concerns in investment (USSIF, 2014).

Within community investing, building societies are expected to play a major role in the future of UK financial sector (HM treasurer, 2012). Building societies are argued to be the "best place to influence the environmental activities of individuals" (Richardson, 2003, pp.126), and as will be discussed in detail in chapter 2, an understanding of retail SR investors in this thriving sector has implications for environmental and social sustainability (Michie, 2011). Despite the potentially significant role of building societies, the majority of SRI studies, particularly at the level of individual investors, are focused on analysing investors in mutual funds (for example see Adam and Shauki, 2014; Nilsson, 2008, Nilsson, 2009, Pérez-Gladish et al., 2012) while ignoring other sectors of SRI, as presented earlier in table 1.2. This lack of clarity concerning investors in building societies, despite being an important and rapidly growing SRI sector (USSIF, 2014) with a significant position in the UK financial sector (BSA, 2016), calls for more research.

Given that investors' selection of SRI can be expected to vary in terms of the relative importance they place on the financial and social return aspects of SRI, this thesis aims to identify if SR-investors of building societies are homogeneous or they too show variation in terms of the motivational balance

they acquire, and if they do vary, whether this motivational balance can be used to classify these investors into meaningful, unique segments?

1.2.6. Variation amongst SR-Investors in Terms of the Two Return Motives

Research indicates that exploring SR-investors as a homogeneous group can generate confusion, therefore a breakdown of SR-investors is needed for a better and complete understanding of the SRI phenomenon (Derwall et al., 2011). Through a synthesis of the literature on SRI one can find different means of segmenting SR-investors. Initially socio-demographic variables were used to segment SR-investors (Nilsson, 2008), however as SRI research evolved, other means to classify/differentiate SR-investors were identified. Amongst these, the return motives were most important. As aforementioned in section 1.1 and 1.2.1, two return motives are associated with SRI: financial return and non-financial (SEE) return motives. Though initially SRI was understood as "values-driven"- that is to say investors choosing SRI were expected to "accept a loss of financial performance in exchange for non-financial utility derived from the SRI attributes of their investment. But according to the latest research within the SRI movement, SRI can be seen as a "profit-seeking" approach that accommodates investors in their pursuit of traditional financial goals." (Derwall et al., 2011, pp. 2).

Studies exploring SR-investors and their motives provide mixed findings. Rosen and colleagues (1991) performed a survey on 1493 investors in two American SRI-funds. Their study found that investors were not willing to sacrifice returns and these investors expected SR-investments to pay off as well as other conventional investments. Soon after, Lewis and Webley (1994) interviewed 184 people including 84 students and found that although

attitudes towards SRI was enhanced by the presence of green attitudes, investors were not willing to sacrifice and accept lower financial returns from SRI.

However, later Beal and Goyen (1998) compared 318 employees/members of two Australian organizations, one being an overtly 'ethical' company and the other being more conventional in nature. Their results indicated that individuals choosing SRI were willing to sacrifice some financial returns, as SEE issues like environmental concerns, conservation of endangered animals and plants and other similar issues were more important to investors than financial considerations. Later, Beal and colleagues (2005) used the concept of "psychic returns" and "non-wealth returns" to elaborate their point. Under the concept of non-wealth return, the investor feels satisfied by the sense of doing a good deed and contributing to the benefit of other people or by contributing to a worthwhile cause. Whereas with regards to the psychic return notion, Beal et al. (2005, p. 72) debated that SRI can offer "SR investors with more than financial return. Investing in an ethical company or ethical funds is to a certain extent like investing in fine art – in addition to financial returns, the investment yields a flow of pleasure and even social status".

Mackenzie and Lewis (1999) did 20 interviews and found that investors valued both financial and non-financial returns equally. Their study suggested that individuals who invest extra money ethically are willing to sacrifice returns. Later, Vyvyan et al., (2007) did a conjoin analysis with 318 members and employees of two Australian organizations. Their study found that though individuals with higher (lower) environmental attitude gave more

(less) importance to environmental features of a fund, and rated financial returns less (more) significant, however their actual investment preferences showed otherwise. These investors were not willing to sacrifice returns, as they were concerned about wealth maximization. Lewis and Mackenzie (2000) examined 1146 investors of two U.K ethical trusts and found that investors were willing to sacrifice some financial returns as 40% of these investors believed that SRI generated lower returns than equivalent investments in conventional trusts, and many of these investors were relatively price inelastic towards financial loss. Similarly, Benson and Humphreys (2008) while exploring 144 U.S. SRI funds and 4449 conventional funds found that individuals were willing to sacrifice some degree of financial returns. The same was found by Renneboog et al., (2009) while exploring 410 equity mutual funds in 21 countries.

Interestingly, Nilsson (2009) understood the importance of both financial and non-financial returns and took a different approach towards SR-investors. He explored 536 SR-investors in SRI funds, in terms of the importance they placed on both returns –financial and non-financial- and came up with a classification system of SR-investors in mutual fund. He identified three types of socially responsible mutual fund investors:

1. Socially responsible and return driven;
2. Primarily concerned about profit;
3. Primarily concerned about social responsibility.

The first types of SR-investors identified by Nilsson (2009) were the investors who chose SRI for the sake of both financial and social aspects. This segment represented investors who opt for SRI with the aim of making some

positive contribution towards solving environmental/social issues as this segment possessed a high level of perceived consumer effectiveness, but at the same time these investors were focussed on the financial return that their SRI provided. Such investors were highly educated and comprised more females than males.

The second segment that was identified consisted of investors whose prime focus was financial returns, as this group of investors did not care much about the social aspect of SRI when compared to the other two segments. This group consisted of investors who believed that individuals do not have much impact towards solving social/environmental issues and thus exhibited low levels of trust in SRI. This group was comparatively less educated and comprised mainly of males.

The third segment identified by Nilsson (2009) was that of investors who place more importance on the social return aspect of SRI. This group cared less about the financial return aspect of SRI. This segment also had the strong belief that an individual's actions can make a difference when it comes to solving social/ethical issues.

Additionally, in a more recent study, Pérez-Gladish and colleagues (2012) concluded that SR investors are concerned about both the financial as well as non-financial returns associated with their investments. Cheah and colleagues (2011) also identified the existence of mixed results regarding the acceptance of low financial return when SR investors from over 20 countries were analysed. They concluded that there are different groups of SR investors that respond differently to the financial return aspect of SRI, with some being more/less tolerant of lower financial returns than others. Thus, suggesting that

there are different groups of SR investors with different levels of tolerance to an “ethical penalty”, i.e. the tolerance to accept some financial penalty for the sake of social benefit. Dorfleitner and Sebastian’s (2014) study and work done by Sandberg and Nilsson (2015) exhibited similar findings regarding the perception of financial compared to social returns.

Although the classification of SR-investors of mutual funds done specially by Nilsson (2009) is a step towards better understanding of SR-investors, there is a need for research to explore if similar segments emerge when considering investors who choose other form of SRI. As discussed in section 1.2.4, building societies are an important platform for SRI and thus an examination of SR-investors in building societies can prove to be very beneficial.

Additionally, Sandberg and Nilsson (2015) identified that along with an understanding of heterogeneity among SR-investors, an understanding of attitudes and values the SR-investors hold and how these attitudes and values vary among different segments of SR-investors is vital for generating new and important insights into SRI phenomenon (Sandberg and Nilsson, 2015). Though an individual’s decision regarding SRI is highly influenced by their attitude to SEE issues as well as financial goals (Bollen 2007; Nilsson 2008; Glac 2009), the question of “what factors motivate investors to consider SRI remains unanswered.” (Adam and Shauki, 2014, pp.6). Given that values shape attitudes (according to value-attitude-behaviour theory by Homer and Kahle, 1988; Jobbar et al., 2000), and attitudes are a good predictor of behaviour (Ajzen, 1988; Campbell, 1963; Sherman & Fazio, 1983), an

understanding of the values that drive SRI-attitudes can bring out important insights.

1.2.7. Attitudes and values in SRI research

Allport (1935) defined attitude as: "An attitude is a mental or neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". The study of attitudes has a significant position within social psychology research (Oppenheim, 1992) as attitudes are a good predictor of intention towards behaviour (see Ajzen, 1988; Campbell, 1963; Sherman & Fazio, 1983). Despite this, apart from one study, no study has yet explored ethical attitudes, belief and values within the SRI domain (Sandberg and Nilsson, 2015).

Sandberg and Nilsson (2015), being the first, did an exploratory survey so as to understand the ethical preferences of SR-investors of mutual funds. They found that while both moral effectiveness and moral purity are important for SR-investors, they can face difficulties in choosing between them in the face of ethical dilemmas. More importantly, they call for further empirical research to understand attitudes and values among different SR-investor groups. Adam and Shauki (2014) highlight the lack of clarity about factors that motivate investors to choose SRI. According to value-attitude-behaviour theory (Homer and Kahle, 1988) values direct attitudes (Jobbar et al., 2000) while attitudes direct behaviour. Thus, an understanding of the values that predict the SRI attitudes of different groups within SR-investors generally could bring about new knowledge and clarity concerning these groups. The use of values to understand behaviour or segment consumer groups is not new

in the sustainability domain. Values have been used to explore environmental attitudes, beliefs and behaviours (Schultz et al., 2005; Grunert and Juhl, 1995; Nordlund and Garvill, 2002; Schultz and Zelezny, 2003; Stern et al., 1993; Schultz et al., 2005). However, this has not generally been the case when looking at the SRI domain, creating opportunities for research (Sandberg and Nilsson, 2015).

Additionally, *value orientations* have been identified as a significant variable that could help to profile the clusters/typology of SR investors (Nilsson, 2009). Values have been used to understand and analyse consumer decision-making in ethical and organic contexts (Baker et al., 2004; De Ferran and Grunert, 2007; Dibley and Baker, 2001; Grunert and Juhl, 1995; Makatouni, 2002; Shaw et al., 2005) and as significant determinants of socially responsible consumer behaviour (Pepper et al., 2009). In SRI the concept of the Value Similarity model (Earle and Cvetkovich, 1995; 1999) elaborated that an investor will choose SRI if his/her personal values align with the values of SRI as this will increase the trust the investor place in the investment (Heimann, 2013).

Given that value orientations have not been studied in the SRI domain, an exploration of values studied in the pro-social/ethical behaviour domain can be beneficial to hypothesize value orientations for different SR-investor groups. From the literature investigating people's values for pro-social behaviours like donating to charities and purchasing green products (Ariely et al., 2009), two broad categories of values are observed, these being intrinsic values and extrinsic values. The first category – intrinsic values - is the personal value focused on the wellbeing of others, that is to say the value of

giving or pure altruism (in the case of SRI the social responsibility factor) (Heimann, 2013; Griskevicius et al., 2010; Henrich et al., 2005; Delton et al., 2011). The second value is extrinsic value, which represents the value of gain, that is to say it involves any material benefit or reward linked with the behaviour (in case of SRI the financial factors) (Heimann, 2013). The theory of human values proposed by Schwartz (1992) uses self-transcendence and self-enhancement values, which are similar to intrinsic and extrinsic values. These values of self-transcendence and self-enhancement have been used extensively to understand socially responsible behaviour (Pepper et al., 2009) and ethical/environmental consumer behaviour (for example Hunt and Vitell 1991; Ferrell and Gresham 1985; Shafer et al., 2007). Thus, making it suitable to be used in this thesis.

1.2.7.1. Use of Schwartz value theory in SRI domain

Schwartz (1992;94) came up with a value theory which classifies all the possible values into 10 motivational values. Which are then classified into four higher order values (discussed in detail in chapter 3). Amongst these four higher order values, two are used extensively in studies related to pro-social/ethical/environmental behaviour: self-transcendence and self-enhancement. These two values from Schwartz's value theory (1992; 94) present two polar dimensions of values. *Self-transcendence* has underlining motivational values types of universalism and benevolence, while *self-enhancement* has power and achievement as underlining motivational values. Self-transcendence has been shown to correlate positively with socially conscious consumer behaviour while self-enhancement is shown to correlate negatively with SR behaviour (Phillip et al., 2009). With two motives to

choose SRI (as discussed in section 1.2.6) it could be argued that an individual who choses SRI on the basis of its financial return would see it as an opportunity to increase their wealth as this will help them increase their social status, therefore, a positive link between self-enhancement (with values of power and achievement) and financial return aspect of SRI could be expected. In contrast to this, individuals who hold high self-transcendence values (with universalism and benevolence) would care more about others and the world. These individuals, when making investment decisions would choose SRI so as to reflect their self-transcendence values. Thus, a positive link between self-transcendence and the social return aspect of SRI could be expected. Additionally as *value similarity theory* (Earle & Cvetkovich, 1995; 1999) suggests, an individual would opt for SRI if his values match with that of SRI. Given that SR-investors are expected to form different groups on the basis of different combinations of the level of importance that investors give to the social return and financial return aspects of SRI, it is reasonable to argue that these groups will have different SRI attitudes. Furthermore, according to values-attitude-behaviour hierarchy (Homer and Kahle, 1988) values direct attitudes. Thus, adopting human value theory (Schwartz 1992;94), value-attitude-behaviour hierarchy (Homer and Kahle, 1988) and value similarity theory (Earle and Cvetkovich, 1995; 1999) in SRI context it is proposed that SRI attitudes of different groups of investors would also have different values acting as antecedents of these attitudes. However, this proposition needs to be explored further.

1.2.7.2. Materialism in SRI

Materialism is another value that has been studied when exploring socially responsible consumer behaviour (Pepper et al. 2009). According to the Cambridge Dictionary materialism is "the belief that having money and possessions is the most important thing in life". Materialism has been linked negatively with pro-social behaviour and positively with power (Pepper et al., 2009). Individuals holding high materialistic values are shown to place a high degree of importance on possessions and care less about environmental and social issues (Lee and Ahn, 2016; Burroughs and Rindfleisch 2002; Kilbourne and Pickett 2008). When considering materialism in the SRI domain it could be argued that individuals who choose SRI due to expected financial return would hold higher materialism values than those who choose SRI due to its social return aspect. Thus, materialism could be useful in highlighting differences between the expected clusters of SR-investors. Also as the second aim of this thesis is to explore the values that drive the SRI attitudes of different SR-investor groups, materialism could prove useful in this aspect. Based on the above discussion, it is proposed that the group of SR-investors who value social return more would have materialism as a negative predictor of their SRI attitude, while the opposite would be true for the SR-investors who choose SRI mainly due to expected financial returns. However, this proposition needs to be explored.

1.3. Research Gap:

Under some early rational decision theories it was debated whether inefficiency increases when moral considerations are amalgamated with investment decisions (Hofmann et al., 2008). Contemporary research on

sustainable investment has challenged the long established belief that sustainability and investment success are incompatible (Bengtsson, 2008; Björklund and Persson, 2002; Brown, 1998; Kreander et al., 2003; O'Barr and Conley, 1992; Vogel, 1983), and that ethical investment belongs to a "lunatic fringe" and is not suitable for ones' life savings (Sampson, 2000). The rapid growth and adoption of SRI, along with the growing demand for it in the investment market, signifies the fact that in today's world both the social and financial considerations can affect investment decisions (Cheah et al., 2011; Hofmann et al., 2008; Khan and Khan, 2015; Nilsson, 2008; Nilsson, 2009; Sandberg and Nilsson, 2015; USSIF, 2014). The success of SRI suggests that not all investors are wealth maximizers (Hallerbach et al., 2004; Nilsson, 2009; Rivoli, 1995), and that some seek to integrate non-financial concerns, such as SEE issues, into their investment decisions (Heimann et al., 2013). However, research also argues that many investors who choose SRI are still driven by financial returns as they opt for SRI just for the sake of expected financial performance. Michelson and colleagues referred to this in terms of: "the better performing ethical funds attract not just ethical investors but more general or conventional investors as well" (Michelson et al., 2004, p. 2). Therefore, with SEE being linked positively with financial performance (Hale, 2002; Kiernan, 2002; USSIF, 2014), it is argued that while some SR-investors choose SRI to reflect SEE concerns, while others do it for financial gain (Dunfee, 2003; Nilsson, 2008; Nilsson, 2009)

Dorfleitner and Sebastian, (2014) elaborated on this understanding by highlighting two possible motivations that can lead an individual to opt for SRI, these being: the desire to gain high social returns (Lewis, 2001;

Mackenzie and Lewis, 1999) and/or the belief that SRI holds high financial returns (Cox et al., 2004; Gregory and Whiaker, 2007; Jansson and Biel, 2011; USSIF, 2014). While, Sparkes (2002, p. 26-7) expressed SRI as "the construction of equity portfolios whose investment objectives combine social, ecological, and financial goals". This duality in motives for the selection of SRI was also identified by Knoll (2002) who framed SRI on the basis of two principles: first SRI being an investment and not a charity, that is to say SR investors do not wish to give their money away, rather they seek a profit. Second, the investment decision is not made only on the basis of financial returns, but social, environmental and ethical criteria are also combined with financial criteria as a selection measure. Nilsson (2009) named these two aspects of SRI as profit generation (financial return) and considering SEE concerns (social responsibility). The presence of these two distinct motives – social return and financial return – to choose SRI, along with research indicating an interplay between these two motives when looking at SR investors, highlights the possibility of variation among SR investors in terms of the balance different SR investors acquire between these two motives. This varying level of financial return and social return could be used to classify SR-investors.

Many of these past studies are focused on identifying the growth and acceptance of SRI, or on descriptive accounts (Adam and Shauki, 2014; Cheah et al, 2011; Glac, 2009; Hofmann et al., 2008; Lewis and Mackenzie, 2000; Mackenzie and Lewis, 1999; Nilsson, 2008; Nilsson, 2009), or exploring the effect of SRI on companies and vice versa (Mohr et al., 2001). Research focusing on understanding the characteristics (McLachlan and

Gardner, 2004; Webley et al., 2001; Glac, 2009), and attitudinal motives (McLachlan and Gardner, 2004; Pérez-Gladish et al, 2012), of SR investors along with comparisons between non-SRI and SRI investors' characteristics (Lewis, 2001; Tippet, 2001; McLachlan and Gardner, 2004) and the benefits SRI can bring to society and environment in the long-run (Dam, 2010), can also be found. However, these studies explore SR investors as a homogenous group. Drawing conclusions about SRI behaviour becomes difficult when all SR investors are treated as one group, as in such a case the motivations behind the investment selection is unclear (Cheah et al., 2011; Nilsson, 2009; Sandberg and Nilsson, 2015). Thus, the understanding of heterogeneity among different SR-investors while choosing SRI due to its financial return aspects or due to its social return aspects or both, is needed to understand SRI more completely (Adam and Shauki, 2014; Sandberg and Nilsson, 2015).

Segmentation of SR-investors has been done for SR-investors of mutual funds in past (discussed in detail in section 1.2.6), with results showing both the motives at play. However, a similar examination while considering SR-investors of other financial institutions (for example building societies) is yet to be done.

Given that a building society functions under separate law as compared to banks (discussed in detail in chapter 2, section 2.3-2.6), it can be seen as a unique and distinct SRI option. Thus, an examination of investors in building societies to explore if they can be segmented in terms of the balance they acquire with respect to financial and non-financial returns, can bring understanding from a different contextual perspective. Additionally, with mixed findings from past research (as discussed in section 1.2.6), analysis

from this study could help to clarify the segmentation of SR-investors. Moreover, Mackenzie and Lewis (1999) found that majority of SR-investors they researched were unable to choose appropriate SRI when presented with a dilemma, as they "had not adopted a rigorous or well-thought-out ethical approach" (pp. 450). Similar to their work, Sandberg and Nilsson (2015) found that most investors were usually unsure about the ethical strategy they wanted. Given that building societies as a community investing reflects organization that work to improve local areas (Sairally, 2007; Carroll, 1979), with building societies playing a major role in the UK (HM treasurer, 2012) and seen as the "best place to influence the environmental activities of individuals" (Richardson, 2003, pp.126), investors choosing a building society to practice SRI could be argued to have chosen a more social responsible organization. More importantly, to make sure that the investors investigated in this thesis represent SR-investors, Ecology Building Society (EBS) was chosen to collect the data from. EBS has been ranked at the top of the list of ethical SRI providers (Move Your Money UK 2016) (discussed in detail in chapter 2, section 2.6). Thus, exploring these SR-investors can bring forward novel insights and improve our understanding of SR-investors.

In this way this thesis attempts to classify SR-investors. To do so, this thesis will empirically explore the possible balance between financial and non-financial return of SRI, SR-investors belonging to EBS exhibit, thus expanding the work of Nilsson (2009) in a new context. It will be further examined if different balance of emphasis between financial and non-financial returns these investors hold can be used to classify them into unique clusters.

Furthermore, following other segmentation studies this thesis will use non-clustering variables (variables other than the ones used to develop clusters in a given study) to validate the cluster solutions obtained (Michaelidou, 2012). Within the SEE consumer behaviour literature and the private SR investment behaviour literature, two divergent categories of profiling variables have gained attention, these being socio-demographic variables (Cheah et al., 2011; Diamantopoulos et al., 2003; Nilsson, 2008; Van Liere and Dunlap, 1980), and psychographic variables (Amyx et al., 1994; Laroche et al., 2001; Nilsson, 2009; Schwepker and Cornwell, 1991; Straughan and Roberts, 1999). Regarding the socio-demographic variables age, gender, education and income level have been used frequently in the past (e.g. Cheah et al., 2011; Diamantopoulos et al., 2003; Nilsson, 2009; Pérez-Gladish et al., 2012; Sandberg and Nilsson, 2015). Research indicates that women are more inclined towards SRI than men (Beal et al., 2005; Cheah et al., 2011; Laroche et al., 2001; Nilsson, 2009; Schueth, 2003; Sparkes, 2002) as they put a larger share of their investments into SRI (Nilsson 2009). Additionally SR investors are shown to be better educated (Rosen et al., 1991; Nilsson, 2008; Pérez-Gladish et al., 2012) and tend to be younger (Cheah et al., 2011; Diamantopoulos et al., 2003; Hayes, 2001; Sandberg and Nilsson, 2015) and have relatively better income level than their conventional counterparts (Pérez-Gladish et al., 2012; Sandberg and Nilsson, 2015). Given that this thesis expects SR-investors of EBS to be segmented into unique clusters, an understanding of the socio-demographic differences between these clusters could provide external validity on the expected SR-investor typology.

Along with these socio-demographic variables (e.g. Chan, 1999; Cheah et al., 2011), the majority of the past research has identified psychographic variables to be vital in profiling SR investors (Cheah et al., 2011; Khan and Khan, 2015; Nilsson, 2009; Nilsson et al., 2014; Pérez-Gladish et al., 2012; Roberts, 1996; Samdahl and Robertson, 1989; Sandberg and Nilsson, 2015; Straughan and Roberts, 1999). In fact Williams (2007) suggests that research beyond only demographic factors is promising. Demographic factors, although helpful, are not the most reliable profiling variables for SRI attitudes (Dorfleitner and Sebastian, 2014). Several studies identified the combination of demographic and psychographic variables to be better for profiling SR investors than using either one of them in isolation (e.g. Cheah et al., 2011; Khan and Khan, 2015; Nilsson, 2009; Pérez-Gladish et al., 2012; Straughan and Roberts 1999). Thus, this thesis plans to use both socio-demographic and psychographic variables to not only profile the segments, but also to generate external validity for these segments.

Given that attitudes are important when predicting behaviours (Fishbein and Ajzen, 1972; 1975; Kassarjian, 1971), the first psychographic variable this thesis plans to use as a profiling and validating variable is pro-social attitude. Kassarjian (1971) identified *pro-social attitude* as a strong predictor of socially responsible investment decisions. Vyvyan et al., (2007) also found a strong link between pro-social attitude and SRI. Similar findings have been shown by many others (for example Dorfleitner and Sebastian, 2014; Hofmann et al., 2008; Kinnear and Taylor, 1973; Lewis and Webley 1994; McLachlan and Gardner, 2004: Mohr et al., 2001; Nilsson, 2009; Nilsson et al., 2014; Straughan and Roberts, 1999; Webster, 1975; Williams,

2009; Wins and Bernhard, 2015). However the understanding of whether different SR investor groups differ in terms of the attitude (pro-social) they hold needs to be explored further (Sandberg and Nilsson 2015).

Given that the classification system of SR-investors that this thesis plans to develop is based on the balance between financial and non-financial return of SRI chosen by the investors. It is reasonable to argue that investors placing higher importance on non-financial (financial) returns would hold a higher (lower) pro-social attitude. This argument reflects pro-social attitude's identification as a significant predictor of an individual's positive inclination towards SRI behaviour (Nilsson 2008). Thus, logically, when an individual holds a higher pro-social attitude, he/she will give more importance to the non-financial considerations of SRI and vice versa. However this needs to be explored empirically. This understanding can not only be used to profile and validate the clusters expected in this thesis, but also could be used to understand different clusters more fully.

Another psychographic variable that has been identified in past research is *Perceived Consumer Effectiveness (PCE*). PCE reflects an individual's understanding and belief about how much impact that individual can make towards solving an SEE issue (Berger and Corbin, 1992; Nilsson 2009). PCE has been shown as most significant predictor of environmentally conscious consumer behaviour (Straughan and Roberts,1999). Wins and Bernhard (2015) identified PCE as one of the most important predictors of SRI, thus PCE is considered in this thesis. PCE in an SRI context, as Nilsson (2009) shows, implies that investors will be more willing to undertake SRI if

they believe that their investment will contribute towards resolving some social issue, while an investor is less likely to opt for SRI if he/she feels that his/her individual investment would have little or no impact towards solving the SEE issue at hand. Thus, PCE can be used to validate the expected clusters and to elaborate segments better (Nilson 2009).

Another profiling variable that has been used in past research concerning SR-investors segmentation is trust (for example Nilsson, 2009). Trust has been defined as "confidence in the exchange partner's reliability and integrity" (Morgan and Hunt, 1994, p. 23). Trust has been widely explored within the marketing literature (e.g. Garbarino and Johnson, 1999; Morgan and Hunt, 1994; Nilsson, 2008; Osterhus, 1997; Singh and Sirdeshmukh, 2000) and has been shown to be a vital element when predicting pro-social consumer behaviour (Nilsson 2008; Gardyn, 2003). However, when looking at trust one needs to understand the significance of scepticism. Gardyn (2003) in his study showed that a majority of non-green consumers were sceptical in terms of how good the green products are for the environment in practice. The existence of such consumer scepticism towards the trustworthiness of socially responsible products has been linked to the effect of misleading environmental advertising in the past (Kangun et al., 1991; Nilsson, 2009; Polonsky et al., 1998). In SRI research the question of whether SRI is actually ethical or not is asked by many (De Colle and York, 2009) and yet despite being vital, the element of trust has been largely neglected in the field of SRI (Nilsson, 2009; Straughan and Roberts, 1999). Research highlights that investors would not invest in SRI if they lack trust in the organizations' claim about resolving the social issue in hand (Nilsson, 2009). Additionally, different investors in SRI

mutual funds have been shown to vary in terms of the trust they hold in SRI (Nilsson, 2009). Given that SR-investors will invest in SRI if they have trust in the organization (Nilsson, 2009), one can argue that investors who chose SRI due to the social return aspect of SRI would hold more trust in their SRI, while the ones who chose SRI due to financial aspect would vary in terms of trust as they would be more interested in how well the organization is doing financially than how they are performing socially. Therefore, trust could be useful in exploring variations among different SR-investors, with respect to financial and social return, so as to validate the expected typology.

Finally an important variable that can be explored is the value orientations. Though, value orientations could be useful in profiling clusters/typology of SR investors (Nilsson, 2009), this has somewhat been neglected in the SRI domain. Values have been studied to explore ethical, organic (Baker et al., 2004; De Ferran and Grunert, 2007; Dibley and Baker, 2001; Grunert and Juhl, 1995; Makatouni, 2002; Shaw et al., 2005) and socially responsible consumer behaviour (Pepper et al., 2009), but has been neglected in SRI. According to the Value Similarity model (Earle & Cvetkovich, 1995; 1999) an investor will chose SRI if his/her personal values align with the values of SRI (Heimann, 2013). As discussed in section 1.2.7, sub-section 1.2.7.1., two higher order values from value theory (Schwartz 1992;94) could prove to be useful for identifying differences among different SR-investors with respect to the difference balance between financial and social return orientation that they hold. These two values are self-transcendence and self-enhancement. Self-transcendence has been shown to correlate positively with socially conscious behaviour while self-enhancement

is shown to correlate negatively with SR behaviour (Pepper et al., 2009). As the first aim of this thesis is to produce segments of SR-investors in terms of the balance that they seek between the financial and social return aspects of SRI, and to further validate this typology, value orientations could be useful in this respect. It is proposed that the segment(s) of SR-investors who would value financial (social) return more would hold a higher level of self-enhancement (self-transcendence) values. Also, materialism as a value could be useful in exploring differences among SR-investors segments. As discussed in section 1.2.7, sub-section 1.2.7.2, materialism is used in studies related to pro-social/environmental behaviour, however, it has been neglected in SRI domain. With materialism reflecting the significance an individual places on money and material possessions (Belk, 1983; Richins and Dawson, 1992), it is proposed that in a segmentation of SRI investors, those emphasising social returns would have a lower materialistic value than those emphasising financial returns. In this way, values could be useful in validating the typology of SR-investors this thesis plans to explore.

In summary, SRI literature suggests that there would exist heterogeneous groups within SR investors in terms of the importance they place on the financial return and social return aspects of SRI (Cheah et al., 2001; Dorfleitner and Sebastian, 2014; Khan and Khan, 2015; Nilsson, 2009; Sandberg and Nilsson, 2015). Thus, the first aim of this thesis is to examine if the typology of SR-investors of mutual funds (by Nilsson, 2009) could be replicated when exploring SR-investors who chose building societies as a vehicle for SRI. Furthermore, following other segmentation studies (Michaelidous, 2012; Ketchen and Shook 1996) this thesis plans to use non-

clustering variables to validate the proposed typology of SR-investors of a building society. This study plans to use four demographic –age, gender, income and education- and four psychographic – pro-social attitude, PCE, trust and values- variables to provide external validity of the typology. Given that these non-clustering demographic and psychographic variables are expected to have a specific relationship with the social return and/or financial return aspects of SRI, It is proposed that the expected clusters of SR investors would have different profiles with regards to their demographic and psychographic variables, depending on the level of importance they place on the financial return and socially responsible aspects of SRI. This knowledge is vital in bringing more understanding to the under-researched areas of SRI, which is much required (Nilsson, 2009).

Moreover, the second aim of this thesis is to explore differences in the value orientations that direct the SRI attitudes of each cluster. That is to say that as values direct attitudes (Homer and Kahle, 1988), this thesis aims to explore what values direct the SRI attitudes of each expected segment(s) of SR-investors. This is done to respond to the call or empirical research on attitudes and beliefs/values in SRI (Sandberg and Nilsson 2015). Though past research in the pro-social/environmental domain has utilized value theory several times to understand different attitudes (for example Gatersleben et al., 2010; Schultz et al., 2005; Grunert & Juhl, 1995; Nordlund & Garvill, 2002; Schultz & Zelezny, 2003; Stern et al., 1993; Schultz et al., 2005), this has not been the case in SRI domain. With the thesis's first aim to produce and validate a typology of SR-investors, the thesis also aims to highlight the differences in value orientations that would act as an antecedent of SRI the

attitudes of each expected segment. This understanding will bring forward novel knowledge relevant to the SRI domain but also potentially relevant to segmentation studies more broadly.

The next section presents research purpose, questions and objectives for the present research.

1.4. Research Purpose, Questions and Objectives

In summary, the two main purposes of this research are, to first of all investigate if all SR investors are the same or if there exist groups within SR investors based on the difference in importance they give to the financial and the social return aspects of SRI, and to further explore the unique profile of any group/cluster of the SR investors that emerges, so as to generate external validity of the clusters by showing the differences between them in terms of their demographic - age, gender, education and income level - and psychographic - pro-social attitude, PCE, trust and values - profile. And secondly to explore differences in value orientations that act as antecedents of SRI attitudes for each expected segment. The research questions which underpin the main theme and provide direction to this study are:

> Q1. Can a typology/ segmentation of SR investors based on different combinations of importance they place on financial return and social return be developed?
>
> Q2. And if there are unique segments within the SR investor community, can they be validated in terms of different demographic – age, gender, education and

income level- and psychographic – pro-social attitude, PCE, trust and value orientations - profiles?

Q3. Do these segments differ in their SRI attitudes, and which values act as antecedents of SRI attitudes for each segment?

These questions provide the central focus of the present study. In order to answer the above questions, research objectives are required to serve as a guideline for the researcher and to tell them what they must do in order to carry out the research (Burns and Bush, 2006). The research objectives set for this study are as follows:

1) To segment SR investors in terms of importance they give to financial return and social return aspects of SRI.

Survey data was collected through online questionnaire from investors of a socially responsible building society (discussed in detail in chapter 2). Questions were asked in terms of their preferences towards the social return and financial return aspects of SRI. The data was then analysed using cluster analysis in SPSS version 20 to see if the SR investors could be classified into unique clusters on the basis of different combination of financial return and social return preferences they held. This was done to understand if distinct clusters of SR investors that have been shown to exist in other SR investment situations (such as mutual funds) also exist when considering investors in a SR building society.

2) To find out whether the clusters of SR investors identified by past research also exist in customers of a building society.

Results of cluster analysis were used to explore if three unique clusters of SR investors existed. The two-step cluster analysis in SPSS version 20 was used to explore the ideal number of clusters. This was done to examine if the three cluster solution identified by past research for SR investors of mutual funds (Nilsson 2009) could be replicated when examining SR investors of a SR building society.

3) To find out whether the segments of SR investors produced could be validated.

Survey data was also collected for four psychographic variables (values, pro-social attitude, PCE and trust). Analyses using SPSS version 20 were conducted in order to find out if the clusters of SR investors, on the basis of different combinations of importance of financial return and importance of social return, were differentiated in terms of these psychographic variables. This was done so as to get external validity of the three clusters of SR investors obtained in this thesis.

4) To highlight differences in the values that act as antecedents of SRI-attitudes for each SR-investor cluster in the proposed typology

Survey data was also collected for SRI attitudes. The data was then used in a simple regression using SPSS version 20. Self-transcendence, self-enhancement and materialism were the values, which were regressed against

SRI-attitude for each cluster. This was done so as to find which values act as antecedent of SRI-attitude of each segment.

Moving the literature forward, the present study attempts to bring more understanding to investment behaviour in general and socially responsible investment in particular. Drawing upon the SR investment literature, and different aspects of pro-social behaviour literature, value theories (Schwartz 1992;94; Homer and Kahle, 1988; Earle and Cvetkovich, 1995; 1999), pro-social attitude, trust literature and perceived consumer effectiveness literature the present study attempts to provide empirical evidence of SR investors being heterogeneous in nature. The present study not only investigates the existence of different segments of SR investors according to the specific combination of financial return and social return aspects of SRI that they may exhibit, but also explores the unique profile of each segment in terms of demographic – age, gender, education and income – and psychographic – pro-social attitude, trust, PCE and value orientations – variables so as to validate these segments. Furthermore, this research takes a step further and explores which values act as antecedent of the SRI-attitudes of each segment. This is done to generate empirical knowledge regarding attitudes and values in the SRI domain. This will bring novel insight into values under SRI domain, which has not been done yet.

1.5. Justification for the Research

There are several reasons to undertake this research including the following:

a. Building Societies as a platform for SR-investors: A missing link in SRI research.

As the literature indicates, SR-investors are not homogeneous, as different SR-investors opt for SRI due to different levels of importance they place on the financial and the social return aspects of SRI (Nilsson, 2009). Though this classification is proven to exist for investors in mutual funds, it has not been explored among investors of any other form of financial institution. One important sector that has much potential of growth is building societies (HM Treasury, 2012). Building societies are seen as the "best place to influence the environmental activities of individuals and households" (Richardson, 2003). Thus, presenting an important platform for SR investors. Though these mutual societies are growing in popularity (MYM, 2015), the investors in such societies remain under researched. Thus, the examination of heterogeneity among SR-investors of a building society in terms of the importance they place on financial return and social return aspects of SRI is yet to be done.

This thesis, through examining and segmenting investors in terms of the importance they place on the financial return aspect and the social return aspects of SRI, attempts to understand why different investors choose SRI. The typology/segments of investors produced and validated in this thesis will not only highlight the heterogeneity of SR-investors of a building society, but will also help to support the understanding that different investors choose SRI because of different motives, and thus should not be seen as one (Nilsson, 2009).

b. The potential contribution of this research to SRI literature

Although past studies have attempted to explore the interplay between SR investors' financial and social motives so as to classify them (for example Barreda-Tarrazona et al, 2011; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014), the findings from these studies are mixed (Sandberg and Nilsson, 2015). Additionally these studies have missed an important sector of UK financial system, namely the building society sector. Though, the UK government considers building societies as playing a central part in the financial system (HM Treasury, 2012), there is a lack of empirical work in this area. The present study seeks to answer this call by exploring heterogeneity of SR investors who have invested in the Ecological Building Society (EBS).

Additionally, this thesis is the first to explore values differentiating the expected clusters. Also, an attempt to highlight difference in values that direct SRI-attitude of different segments in the proposed typology is made. Though studies exploring the relationship of values to socially responsible and environmental behaviour could be found (for example Gatersleben et al., 2010; Schultz et al., 2005; Grunert & Juhl, 1995; Nordlund & Garvill, 2002; Schultz & Zelezny, 2003; Stern et al., 1993; Schultz et al., 2005), values remain under-explored in studies related to SRI, thus presenting a gap. This thesis aims to fill this gap and add new insight to both SRI and value literature.

c. Psychographic profiling of different SR-investors:

The majority of past research has identified psychographic variables to be vital in profiling SR customers (Cheah et al., 2011; Khan and Khan, 2015; Nilsson, 2008; Roberts, 1996; Samdahl and Robertson, 1989; Straughan and Roberts, 1999). This thesis attempts to not only classify SR investors in terms of the importance they place on the financial and social return aspects of SRI, it also identifies demographic –age, gender, education and income- and psychographic –pro-social attitude, PCE, trust and values- differences between clusters. This understanding is important, as for example for policymakers striving to promote greater sustainability could be helped by better understanding what values are held by investors who care for social return more than financial return and are willing to make sacrifices so as to attain sustainability. Policymakers can then use this understanding to promote these values so as to make greater progress towards sustainable development.

d. Potential contribution of this study to consumer behaviour literature

The present study seeks to bring forward novel insights into consumer behaviour by attempting to classify real investors in terms of the balance they attain between the importance of financial return and social return of SRI. This segmentation/classification, if successfully developed, can help understand why individuals are investing more and more in SRI. That is to say, what is the real motive for the investors and how many are in it for what degree of social returns. This understanding will give the finance sector in general, and the building society industry in particular, a chance to better understand the different segments/clusters of SR investors. Building societies

can then use this knowledge to profile customers more accurately and market to them more effectively. The different sizes of clusters will also help to explain and interpret the rapid growth in SRI, i.e. is it because individuals are actually becoming more and more responsible or is this because the SRI seems to offer better returns? This knowledge could also be used by policy makers to examine how successful they have been in increasing SR behaviour.

1.6. Contribution of the Present Research

By analysing actual SR investors in a building society, this research, being first of its kind, not only contributes to both theory and practice, but also brings new insights into the existing literature on SRI, a subject of considerable commercial and academic interest. This thesis:

1. Explores the investment behaviour of the customers of a socially responsible building society. SRI is an important phenomenon seen in the context of the financial services industry in developed countries (Zimmermann and Mayer, 2001; Jeucken and Bouma, 2001). With building societies being a vital element of the economic system (Deloitte, 2015), the understanding of its investors sheds light on what these investors expect from the building society and thus gives direction for other institutions which are interested in developing strategies based on social responsibility.
2. Focuses on individual investors rather than industries or management. This is done to understand the motives and drives of those whose money is invested, rather than those who invest/manage others' money. Thus, being one of the few studies that are focused on understanding SRI at the "individual's level" which is much needed

for a more complete understanding of the SRI phenomenon (Nilsson 2009; Sandberg and Nilsson, 2015).

3. Expands the existing literature about SRI by exploring the phenomenon in the UK.
4. Explores differences in value orientations among different segments of SR-investors. More importantly, identifies different values that act as antecedents of SRI-attitude for different segments. Thus bringing forwards evidence relating to the usefulness of value-theories into the SRI domain.

1.7. Research Methodology

This section highlights the methods used in this thesis, to address the problem statement. Ontologically, this thesis follows Critical Realism: the approach which suggests that the world comprises of quantifiable facts that can be used as a basis for scientific knowledge (Alvesson and Sköldberg, 2009). The thesis will be studying consumer investment behaviour through the use of empirical data, and thus recognizes that such phenomenon can be measured by means of data gathering. An abductive approach- the approach that uses literature to develop explanatory hypotheses that are then tested, so as to introduce and validate a new theory/idea or concept - is taken by the present study. Under positivism it is believed that the objective truth can be reached. This thesis, however, acknowledges that the truth can never be reached fully. This thesis takes the standpoint that theories and laws are only the best available knowledge that are yet to be falsified, thus, relating to Critical Realism (Alvesson and Sköldberg, 2009). Though it is believed that generalisations can be made, based upon the findings of the research in this

thesis, yet by no means it is the definitive truth, rather these results represent the best available explanation to the investigated problem. Therefore, the findings of this thesis are subject to further validation/ falsification.

A preliminary pool of items for the questionnaire was produced from the review of the literature dealing with studies on SRI (Nilsson, 2008; Nilsson, 2009), materialism (Moschis and Churchill 1978) and values (Schwartz 1992). These items were then discussed with experts in consumer behaviour from Cardiff Business School and later with the marketing analysts of Ecology Building Society (EBS). As will be discussed in detail in chapter 4, a few of the scales were amended to cover the full spectrum of the concepts they presented. Before conducting the main study, two pre-tests were conducted, first with post-graduate students from Cardiff University, and second from investors of Triodos bank. The feedback from the panel of experts along with the results of the two pre-tests helped in finalizing a reliable and well-structured survey to be used for the main data collection. The final data for the present study was collected through online questionnaire constructed using Qualtrics - a private research software company. The survey link was then forwarded by the EBS management to their customers. The survey invitation email included details about the research and the researchers. The survey invitation email was sent out to a total of 1250 EBS investors. 298 surveys were completed during the 8 week time dedicated to data collection, giving a response rate of 24%. Mann-Whitney-U test and Wilcoxson-W test were conducted to check non-response bias and the results yielded no significant differences ($p = 0.05$) between the last quartile and the first quartile respondents.

1.8. Structure of Thesis

To achieve the research objectives presented in section 1.4, this thesis is divided into seven chapters. The first chapter gives an overview of the theoretical background of the current study. Chapter 1 highlights the significance of social return and financial return aspect of SRI. The chapter begins with an examination of what SRI is, and discusses its history, along with the current position of SRI. A focus is also placed on examining the available literature that discusses the heterogeneity of SR-investors. The lack of research into SR investors in building societies is also highlighted in the chapter. Additionally, chapter 1 addresses the research gap, research questions, and research objectives. Moreover, it provides a justification for the research and a summary of the research methodology. The chapter concludes with an overview of the structure that this thesis follows. Figure 1.1 presents a roadmap to the thesis.

The focus of the next chapter is to review the literature on socially responsible investment options, with a specific focus on building societies as a suitable platform for SRI. The chapter also discusses the Ecology Building Society and its' standing as a socially responsible building society. The first hypothesis which argues that SR investors in the building society, if classified in terms of the importance they place on social and financial return aspect of SRI, would segregate into unique clusters is also proposed in this chapter. To derive this hypothesis, the past literature investigating segmentation among socially responsible mutual fund investors (Nilsson, 2009) is discussed. The

chapter concludes by highlighting the significance of studying heterogeneity among socially responsible building society's investors.

Chapter three begins with a discussion on the literature of pro-social consumer behaviour. With SRI in its developmental stages, literature is taken from pro-social consumer behaviour so as to identify possible demographic and psychographic differences between the proposed clusters of SR-investors. The chapter discusses the literature covering several aspects of pro-social consumer behaviour that are also highlighted in the socially responsible investment literature. Specifically literature on pro-social attitude, perceived consumer effectiveness, motivational values (self-transcendence/self-enhancement and materialism) and trust in the organization is discussed with the aim of (1) using these concepts as a basis for differentiating amongst the proposed segments of SR investors and (2) as a means to empirically explore the differences in values that motivate SRI-attitude of each cluster. From here hypotheses are developed.

Chapter 4 discusses the design and methodological approach adopted by this study in order to test the hypotheses developed in chapter 2 and 3. The chapter firstly provides the justification for following the critical realism philosophy. This is followed by a discussion of the divergent approaches to the research design. The rationale for the use of research design and the research method adopted by this thesis are also postulated. Next are described the sample and sampling procedures. A justification for choosing a sample from Ecology Building Society and the sampling technique used is also provided. This is followed by a discussion on the instruments used and the

design of the survey questionnaire. Next are discussed the results of the two pre-tests of the questionnaire. This is followed by a discussion about the survey design and data collection. Lastly ethical issues are considered.

Chapter 5 presents the basic statistics related to the respondents' demographic profiles and the constructs studied. The chapter first discusses non-response bias, which is then followed by a discussion of the general configuration of respondents who participated in the study. Section four presents an overview of how the respondents answered the survey questions. Then, reliability and dimensionality of the scale used in the study is discussed. Lastly, data preparation and screening is done to ensure that the data meets the requirements for multivariate analysis that were to be done for testing the 8 hypotheses.

Chapter 6 deals with the hypotheses testing. This chapter is divided into seven sections. The first section gives an overview of the chapter. The next section involves data analysis that examines if SR investors could be classified on the basis of the importance they place on financial return and social return aspects of SRI. The third section, through using a variety of analyses, attempts to validate the produced classification/segments by identifying differences between the clusters of SR investors in terms of their pro-social attitude, PCE, value orientations and trust they hold in EBS. Demographic differences among the clusters are also examined. The fourth section explores what values motivate SRI-attitude of each cluster. The focus of this section is to not only identify differences among clusters of SR-investors, but also to understand which values motivate SRI-attitude for each

cluster. Next the chapter examines regular investors and explores if the clusters/segments obtained in this research are confined to SRI, or whether they would be the same for regular investors, if classified on the basis of importance they may place on social return and financial return aspect of SRI if they were to opt for SRI. The next section also explores the differences between clusters of both the SR-investors and regular investors. The chapter concludes with a summary. Prior to conducting each statistical analysis, it was checked whether the data meets the requirements for the specific analysis.

Chapter 7 presents a summary of the main research findings along with the key contributions of the present study. The chapter also offers avenues for future research and outlines the limitations of the research. Chapter 7 ends with the study‘s main conclusions.

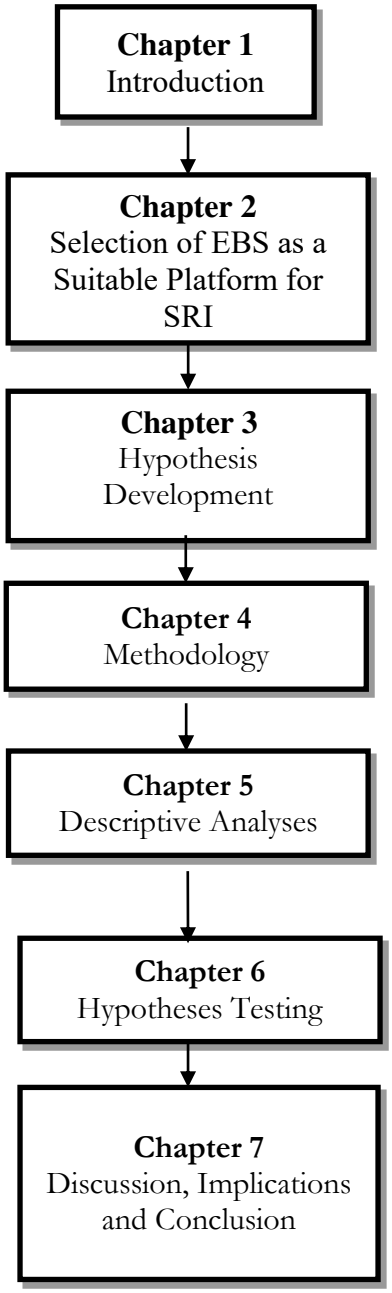


Figure 1.1: Roadmap to this thesis

CHAPTER TWO

Chapter 2 - Selection of EBS as A Suitable Platform for SRI

2.1. Introduction

When exploring consumer behaviour, it is clear that the demand for services and products that belong to corporations incorporating social, ethical and environmental (SEE) responsibilities into their strategies has been growing (e.g. Bhattacharya and Sen, 2004; Gardyn, 2003). Some argue that natural catastrophes like the floods in Pakistan in 2010 or Hurricane Katrina in the USA in 2006 resulted in increased concern amongst consumers (Jansson, 2010). One other possible reason for the increased awareness of the consequences of consumption is argued to be the attention SEE issues have received in the media (Nilsson, 2009). It is thus argued that environmental concerns are changing the attitudes of individuals towards being conscious about their behaviours (Markowitz and Bowerman, 2012). As a response to these changing attitudes, socially responsible services and products have been introduced by many corporations, and with the passage of time the numbers of these offerings have been increasing greatly (Micheletti, 2003).

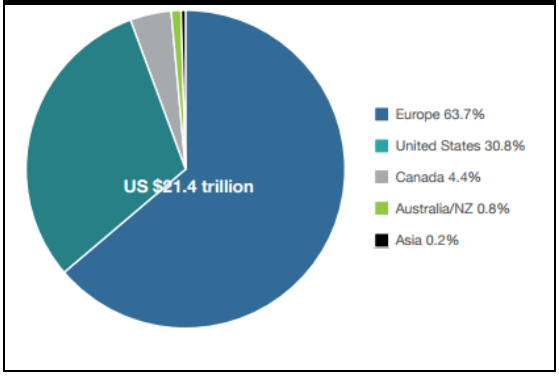
These socially responsible concerns are not only limited to consumption, rather the trend was also seen in investment services (Nilsson, 2009), making way for socially responsible investment. Socially responsible investment (SRI) represents the phenomenon where people seek to integrate extra-financial concerns (Social, Environmental and Ethical) into their investment decisions (Sandberg and Nilsson, 2015). Though initially

investment was associated with purely financial considerations (Krumsiek, 1997), the rise in SRI shows that many are now eager to reflect their SEE concerns not only through their consumption decisions, but also through investment decisions (Sandberg and Nilsson, 2014).

SRI has seen a substantial growth both in Europe (de Marcillac, 2008; Hoepner and Mcmillan, 2009; Eurosif, 2014) and in the United States (USSIF, 2014) in recent decades (Sandberg and Nilsson, 2015). This is reflected in the fact that more than 1200 companies signed up to the United Nation initiative "principles for responsible investment" (UNPRI, 2014; Nilsson et al., 2014). According to United States' Social Investment Forum (USSIF, 2014), in the US, assets under socially responsible management grew from $2.71 trillion in 2007 to $6.57 trillion in 2014. While in Europe this figure grew from €2,7 trillion in 2007 to over €6.9 trillion by 2014. The highest growth in SRI during the year 2014 was seen in Europe: representing 63.7 percent of SRI growth worldwide, as presented in Figure 2.1. Thus, SRI is an important and emerging area (Eurosif, 2014; USSIF, 2014) with many avenues yet to be explored (Sandberg and Nilsson, 2014).

The European Sustainable Investment Forum (Eurosif, 2014) highlighted that SRI is gaining acceptance in financial markets as investors are becoming increasingly concerned about SEE issues. In the contemporary era one can find a myriad of investment institutions in Britain that incorporate SEE issues. Though the question of how ethical these institutions are still remains (Richardson, 2003; Woodward, 2000), there exist several SRI selection approaches for investors to choose from, as discussed next.

Figure 2.1. Proportion of Region-Wise Global SRI Assets



*Source: The US SIF Foundation's 2014 Report on Sustainable and Responsible Investing Trends in the United States.

2.2. Different Approaches to SRI:

There are different criteria that an investor can use to evaluate if their investment is socially responsible (Nilsson, 2009; Sandberg and Nilsson, 2015; Crane, 2008). USSIF (2014) grouped these criteria under two main strategies. The first key strategy of SRI is *SEE incorporation, w*hile the second is *shareholder advocacy.* The first strategy reflects the incorporation of social, ethical and environmental (SEE) criteria into portfolio construction and investment analysis. *Community investing*, an important segment of SEE incorporation seeks explicitly to invest in and finance the projects or institutions that strive towards serving poor and underserved communities, along with focusing explicitly on development of the community and environmental protection, as discussed in chapter 1, section 1.2.1. Institutions like socially responsible building societies fall under the umbrella of community investing.

The second strategy, for those having shares in public trading companies, is *shareholder advocacy* including filing stakeholder resolutions and practicing other types of stakeholder engagement. These SRI strategies

work together to promote sustainable business practices and encourage capital allocation to social and environmental benefits worldwide. With SEE incorporation strategy leading with an investment of $6.2 trillion, as displayed in figure 2.2, USSIF 2014 report identified a total of $6.57 trillion being invested in SRI in the United State alone (USSIF, 2014).

Figure 2.2: SR Investing in The United State in 2014

SOURCE: US SIF Foundation.
NOTE: ESG incorporation assets in this figure include those in Community Investing Institutions.

*Source: The US SIF Foundation's 2014 Report on Sustainable and Responsible Investing Trends in the United States

2.2.1. SEE Incorporation

Under SEE incorporation the traditional quantitative financial analysis techniques, regarding risk and return, are complemented via quantitative and/or qualitative analysis of SEE practices, policies, performance and impacts (USSIF, 2014). SR investors, both at the institutional and the individual level, can incorporate SEE issues into their investment process in several ways. Where some may actively seek to avoid or exclude companies/projects with poor SEE track record, or to include companies/projects with strong SEE policies and practise, others may incorporate SEE factors to identify “best-in-class” investments based on SEE issues or to benchmark corporations to peers. Still others may integrate SEE factors into their investment process for the sake of a wider risk and return

evaluation. These SEE incorporation strategies as summarised by USSIF (2014) are:

1. **Negative/exclusionary screening:** The exclusion of certain sectors, practices or companies based on specific SEE criteria.
2. **Positive/best-in-class screening:** Investment in sectors, projects or companies selected for positive SEE performance relative to industry peers.
3. **Integration of SEE factors:** The systematic and explicit inclusion of SEE factors into traditional financial analysis.
4. **Norms-based screening:** Screening investments on the basis of international norms against minimum standards of business practice.
5. **Sustainability themed investing:** Investment in assets or themes specifically related to sustainability (such as sustainable agriculture, green technology or clean energy).
6. **Impact/community investing:** Typically made in private markets, these targeted investments are aimed at solving environmental or social problems. This also includes community investing, where capital is explicitly directed to traditionally underserved communities or individuals, and financing is provided to projects and businesses with a clear environmental or social purpose.

These six categories are not mutually exclusive, as the same investment vehicle can use more than one approach. For example, an investor may

automatically exclude tobacco producing companies but also assess companies and projects on a wide range of SEE issues.

2.2.2. Shareholder Advocacy

Under the second approach investors in a public traded company attempt to influence corporate behaviour via the use of shareholder power. The shareholder seeks to influence corporations through various ways such as filing or co-filing shareholder proposals, direct corporate engagement (i.e. initiating dialogue with boards of companies and/or senior management), and proxy voting guided via comprehensive SEE guidelines. A publicly traded company's shareholders are authorized to introduce proposals or shareholder resolutions to the company management which are voted on in the annual meeting. These proposals and resolutions may pertain to corporate governance, company policies and procedures, or issues of environmental or social concern. This approach is a meaningful way to discourage unsustainable or unethical company practices and to encourage corporate responsibility. Therefore, the objective of this approach is to directly influence corporate behaviour.

Although these approaches to SRI involve much more than what is covered in above discussion, an in-depth study of them all is beyond the scope of this manuscript. As discussed in chapter 1, section 1.2 this thesis is interested in analysing the individual level SR investors of a building society, falling under the umbrella of community investing. The reason being that majority of previous research is focused on mutual fund investors, hence neglecting other SRI ventures such as building societies. As discussed in chapter 1, section 1.2.1 building societies are gaining popularity in UK and are

considered key players in the UK financial market (HM Treasury, 2012). “A building society is a mutual organisation whose main activity is mortgage lending for house purchase, financed mainly but not exclusively by taking deposits from retail customers” (Alfon et al., 2004, pp. 5).

2.3. Building Societies as a Platform for SRI

Richardson (2003) reflects that building societies arose because of the banking sector’s inadequacies in providing finance for certain segments of society. Building societies, with their origin in the eighteenth century, are mutual organizations that assemble personal sector deposits and provide mortgage-lending services (Boldat, 2012). In the UK, it is the Building Societies Act 1986 which governs them, updated by the Financial Services and Markets Act (FSMA, 2000), while supervised by the Financial Services Authority (FSA; formerly the Building Societies Commission) (Richardson, 2003).

As discussed earlier in chapter 1, section 1.2, and presented in table 1.2, except for a few studies (such as Sandberg and Nilsson, 2015), the majority of past research concerning individuals has been carried out on mutual fund investors (see Adam and Shauki, 2014; Nilsson, 2008, Nilsson, 2009, Pérez-Gladish et al., 2012). This thesis, to fill the gap, attempts to explore the SR behaviour of investors in an ethical building society namely; Ecology Building Society (EBS). Before moving on to elaborate the historical development and importance of building societies, and the reasons and benefits of selecting EBS, the thesis looks at the major differences between building societies and other forms of investment, especially mutual funds, to

strengthen the argument regarding the selection of a building society for the current research.

2.4. Difference between Building Societies and Other Forms of Investment:

As highlighted in chapter one, the majority of SRI research has been carried out on investors of SRI mutual funds and/or banks. Whereas this research attempts to expand the SRI literature by analysing the SR investors of a SRI platform other than a mutual fund, this being a building society. In addition to the history, development and the current importance of building societies in the world in general, and in the UK in particular, it is important to first highlight the major differences between a building society and other investment forms, especially mutual funds, followed by the difference between customers of building societies and those of mutual funds. Diacon and Ennew, (2001) highlighted points of difference between different financial instructions. Building societies and mutual funds differ from each other on these grounds which are: distrust of the product and/or provider; the seriousness of adverse consequences; volatility of return; poor knowledge and/or observability; and failure of regulation. Also, mutual funds are shown to have higher perceived return, while building societies have lowest perceived return (Diacon and Ennew, 2001). Another difference between mutual funds and building societies is building societies are considered as fairly safe while mutual funds are seen as risky (Börsch-Supan and Essig, 2005).

The following points highlight the major characteristics and differentiating points between a building society and other avenues of investment:

- By law building societies are owned by their members and therefore have no shareholders to distribute profits to. The individuals having a saving account or mortgage with a building society are members and hold certain voting rights and rights to receive information regarding the projects undertaken and strategies implemented. In addition to this each member has the right to attend, vote and speak at meetings, regardless of the amount of money borrowed or invested by them. Board of directors of each building society is responsible for strategy implementation and the smooth running of the society.

  Banks are companies that are usually listed on the stock market and hence are run for, and are owned by, their shareholders. Building societies by contract are not companies and they do not have external shareholders who require dividends. This usually enables them to operate at a lower cost in comparison to their competitors.

- The major difference between a building society and other forms of SRI such as mutual fund and/or bank is the limitation faced by a building society regarding the proportion of funds it can generate from the wholesale money markets. The average proportion of funds building societies generate from the wholesale market is usually 30% with the maximum limit to raise up to 50% of their total assets.

  Unlike public limited companies (PLC), the profits earned by building societies are mainly reinvested towards improving the services rather

than being paid out as dividends to external shareholders. Mutual funds on the other hand comprise a pool of funds gathered from several investors to be invested in securities such as bonds, money market instruments, stocks and similar assets. These investors then share the profit/loss in the form of dividends.

In summary, based on the above discussion, a building society can be identified as a distinctive entity when compared to a mutual fund on the basis of following five main points:

1. Building society is not a public listed company hence it does not operate in the stock market – it neither offers bonds/stocks nor trades in bonds/stocks.
2. Unlike mutual funds, there are no external shareholders who need to be paid dividends.
3. Members (borrowers/lenders) have the right to participate in annual meetings of a building society and vote for or against proposed plans and strategies.
4. There are special laws (Building Societies Act 1986) that govern building societies in the UK which are different from the laws that govern, for instance, mutual funds.
5. Regulations set by government for building societies protects its investors form regulatory failure, when compared with other financial institutions such as mutual funds

After presenting the argument of a building society being a different type of investment platform in comparison to a mutual fund, it is important to highlight the differences between customers/investors of building societies

and those of mutual funds so as to highlight the importance and uniqueness of building society customers. Following section sheds light upon the same.

2.4.1. Difference between Customers of Building Societies and of Mutual Funds:

Diacon and Ennew, (2001) showed that 41% of investors of mutual fund found their financial services products complicated and confusing. These results are similar to those given by Capon et al., (1996) who, through survey of 3386 individuals, showed that only 4% of mutual fund investors were knowledgeable. The less knowledge held by mutual fund investors, about their financial institution, is also reflected by others (FSA, 2000). In contrast to this, members of building society are not only aware of where the building society is investing their money, but also have a say in these decisions (as every member of building society has voting power). Diacon and Ennew's (2001) study also placed building societies as low-risk and high-trust investment, while mutual funds are seen as high-risk investment. In these high-risk investments the investment performance depends on "decisions of company management" (pp. 397), with the shareholders not having much say or knowledge. While, in case of building societies, the members not only have knowledge, but also have a say in the investment decisions. The only owners who can direct or influence the business of building societies are its members. These members, through their rights, have more opportunity to influence and direct the affairs of their building society in comparison to the opportunities available to customers in other investment organizations. For instant, members of building society have the right to attend and use their voting rights in annual general meeting (AGM). During an AGM members can comment on

the society's business and ask questions. These members can ask for meeting agenda before AGM and can present resolutions, which are then discussed and voted for during the AGM. As mentioned in previous section, each members have one vote regardless of their saving/loan size that can be used or even be appointed to someone else through proxy voting. However, such opportunities are not available for mutual fund customers as they don't have voting rights.

Also, mutual funds are shown to have higher perceived return, while building societies have lowest perceived return (Diacon and Ennew, 2001). In this way the investors who chose building society over mutual funds are willing to take lower financial return. Mackenzie and Lewis (1999, pp.446) support this argument as they noted that investors "expect the funds to produce a higher return than building societies". Logically it can be argued that along with other motives, the investors choose building societies for non-financial returns (this logic is based on the fact that they are going for a lower financial return).

Mutual fund customers are far more likely to be influenced by an intermediary as compared to building societies' investors. This difference is worth noticing and hold high significance, as an intermediary may 'steer' investors towards products with the best expected financial performance and/or those that pay a useful commission and as a result may 'dilute' investors' tendency/intention to go for ethical investment. Whereas investors of building societies have control over where their money is invested and thus, they chose investment which match their values.

Additionally, building societies have greater connotations of local contribution, or social contribution as institutions (regardless of the 'ethical'

nature of specific investment products) that attracts people who believe in principles like mutuality, given their history as mutuals – in which case building society investors in general tend towards concern for social issues and impacts more than mutual fund investors in general

Another key difference between mutual fund and building society customers is that of being 'investors' and 'savers'. Building society customers are usually either saving money in a relatively simple way (often into an account that pays some form of interest with a low level of risk and is invested in projects that the investor is aware of) or are borrowing it (usually for a mortgage). While, Mutual fund customers are usually 'investors' looking to put money into products which mostly offer a potential level of return above current interest rates and involve a certain level of risk. So for most building society customers financial performance is more likely to be tied to the acceptability of interest rates and the nature of projects undertaken by that building society, unlike mutual funds. For these reasons the two are unique, which is worth noticing here since the current thesis involving building society customers is edifying on existing SRI research dominated that has been over focused on mutual fund customers. These differences make the building society customers more aware of the ethical issues and enable them to act in accordance with their SEE concerns. This highlight that the customers of building society are more aware of and in control of their money as they have more control over the decision of where their money is invested in, as compared to the mutual fund customers. This makes the customers of building society unique as well as more suitable to study SRI behaviour, since their SRI decision is well informed and is carried out with full consent.

Next the thesis gives an overview of the history, development and position of building societies in the current era. After that the reasons and importance of selecting Ecology Building Society for the current thesis are presented.

2.5. History of Building Societies:

Building societies have a long history in UK's retail finance. The first known example, according to the building society association (BSA 2015), appeared in the year 1775 in Birmingham. There were 2286 building societies by the year 1900, which were reduced to 101 in 1990 and to 47 by 2012 (Treasury, 2012). In the last 15-20 years the number of building societies has been reduced further to presently include 44 building societies in the UK (Building Societies Association 2016). The main reason for the reduction in the number of building societies in the last 20 years is inter-society mergers resulting in consolidation. Under this process small building societies are incorporated into larger ones. This usually happens when the business of the small societies becomes non-viable or when this subsuming results in a stronger building society. Some examples of such mergers are Portman Building Society, Cheshire and Derbyshire Building Societies, which were all taken over in 2007 by Nationwide. Similarly Scarborough Building Society was taken over by Skipton Building Society in 2009. Chelsea Building Society was taken over in 2010, while Norwich and Peterborough Building Society were taken over in 2011, all by the Yorkshire Building Society. Such mergers are seen as a means to attain economies of scale. Though it is possible for societies to pool resources or share services instead of officially consolidating, however, this has not been practiced yet (Treasury, 2012).

In the early building societies, members were supposed to pay subscriptions and once enough funds were raised one member, chosen through a selection process, received funds for the building or purchasing of a house. The society was closed once all the members had received funds for their houses (Heffernan, 2005). According to Heffernan (2005) in the year 1845 the first permanent society – the Chesham Building Society – emerged. In this society the members held an account and were eligible for a mortgage after a period of time. Over time, mortgagees and depositors were not essentially from the same group (Boddy, 1980 and Boleat, 1982 in Heffernan, 2005).

Every member (borrower or depositor) in the building society, by being a member of a mutual organisation, holds the right to vote on key managerial decisions with each vote holding the same weight regardless of the size of the loan or the deposit. Under The Building Societies Act (1986), a building society can offer a full range of retail banking products (Heffernan, 2005). However, as aforementioned banks and building societies differ from each other in terms of the rules and laws that govern them. The financial crisis of 2008 had a less detrimental effect on building societies as compared to banks (Standard and Poor, 2012 in HM Treasury, 2012). Though a detailed discussion about different investment entities in the UK can bring more understanding to the existing body of literature, this is beyond the scope of this study. This study focuses on investors of Ecology Building Society (EBS).

According to a report by the UK government's economic and finance ministry (HM Treasury, 2012) the government saw building societies as playing a central role in the UK financial services as they are key contributors

to the diverse mix of financial institutions that maintain an effective and vibrant financial sector in the UK.

2.6. The Building Societies Sector in the Contemporary Era:

According to HM Treasury (2012), in 2012 building societies in the UK presented a thriving sector with 47 building societies that employed 42,000 staff and served 25 million members (Mutuals Yearbook 2011). In 2015 there were 44 building societies that employed around 40,000 part-time and full time staff (BSA, 2016). The prime purpose of a building society, according to the Building Societies Act 1986, is to make loans that are significantly funded by members' deposits and are secured on residential property. "Nature limits" are the strict legislative limits on building societies' funding and lending activities (HM Treasury, 2012, pp. 5). According to this limit a building society must have 75 percent of their trading assets in the form of loans secured on residential property. Additionally, nature limits require that a building society must have at least 50 percent of its total funding in the form of retail deposits coming from the members of that mutual society. There are also significant restrictions on the treasury activities that a building society can carry out. The Government believes that these enforced restrictions and limits help to maintain a distinct identity of building societies and inhibits them from taking excessive risks.

According to a survey by GfK (2012), mortgagors with building societies were more satisfied than mortgagors with other lenders. Building societies also seem to have a very low level of complaints compared to banks (GfK, 2012). Building societies are considered relatively sustainable and trustworthy and are seen as providing a range of services to a high degree of

customer satisfaction (GfK, 2012). That is why the UK government sees these building societies as an independently-minded, thriving and sustainable sector (HM Treasury, 2012). As acknowledged in the HM Treasury report (2012), the government of UK aims to create and maintain legislations that will give building societies an environment to reach their potential and flourish, so as to play a major role in the UK financial services sector.

2.7. Ecology Building Society (EBS):

Among building societies in the UK (Jones, 2013), "Move Your Money UK" ranked Ecology Building Society (EBS) at the top of the list of SRI providers (Move Your Money UK 2016). Move Your Money UK identify themselves as a not-for profit organisation that is working to raise awareness about the vast array of financial instruments available to customers in the UK (Move Your Money UK 2016). This organization strives to strengthen ethical banking by providing individuals with the information they need to make decisions regarding the type of financial institutions they want to support. The Move Your Money campaign has had coverage on television – on the One Show, Newsnight and Daybreak to name a few - as well as in national newspapers – the Guardian, The Daily Mail and The Telegraph and is a well reputed organization (FORD, 2012)

Move Your Money UK is a website of a banking campaign group that gives all the main building societies and banks a "switch score" out of 100 based on how they performed in terms of customer service, honesty, culture, ethics and impact on the economy (Jones, 2013). By using this information, Move Your Money and their research partners: Ethical Consumers, produced a methodology so as to measure the activities of 72 financial institutions based

in UK. Publically available data, mostly gathered from the institutions' own annual reports, was used to calculate scores for each institution and a scorecard was produced. This scorecard is argued to be the only bank ranking system that uses public, open and quantifiable methodology to evaluate the ethical and sustainable positions of financial institutions (Move Your Money, 2016).

EBS scored 100/100 when checked in January 2016 and has achieved widespread popularity (Move Your Money UK, 2016). EBS provides funds for areas often ignored by banks, for example brownfield housing projects, along with providing loans to support small eco-businesses (Richardson, 2003).

According to Move Your Money UK (2016) environmental values are well rooted in the services provided by Ecology Building Society (EBS). EBS has a history of lending to eco-builds, communal housing and restoration projects, some areas that are often ignored by mainstream banks. They also offer discounts for the most energy efficient projects (EBS, 2016). Being a mutual society, all the members of EBS have a say in the decision-making. EBS ensures its investors that their money is used to develop sustainable and affordable housing stock (Move Your Money UK, 2016).

With community investing reflecting organizations that work to improve local areas (Sairally, 2007; Carroll, 1979), and building societies playing a major role in the UK (HM Treasury, 2012), EBS is considered as a leading SR organization, as it places environmental concerns at the heart of its business (Move Your Money UK, 2016) and only provide mortgages to projects that have a positive effect on the environment (EBS website).

As this thesis aims to explore how important financial returns and social returns are for SR investors and if they can be classified in terms of the different level of importance they ascribe to the financial and social return aspects of SRI, investors in Ecology Building Society were considered suitable for the study. This selection was based on the fact that EBS has been identified as working towards sustainability. The investors who select EBS are clearly informed about all the projects that EBS supports. With EBS being the only society providing specialist ethical mortgages (Simon, 2012) these investors know that they are choosing a socially responsible communal investment. Though there is still debate over the returns, it is claimed by BSA that building societies are able to offer better rates of interest on savings (BSA, 2016), thereby highlighting the presence of both financial return and social return aspects of SRI, and thus the investors who select EBS could be seen as suitable for examination in this thesis.

2.7.1. Assessment Criteria Used To Produce The Banks Scorecard:

This section discusses the criteria used by Move Your Money to generate the scorecard. In terms of the ***honesty dimension*** of their analysis Move Your Money examined the general conduct of a financial institution, and looked at whether the financial institution had:

1. Ever been fined for criminal activities, like money laundering or rigging markets
2. A history of utilising standard tax avoidance structures and tax havens.

3. Been involved in lobbying against effective change in the banking sector.
4. Been identified as using misleading or faulty advertising.

While the ***customer service*** category looked at:

1. The number of complaints the financial institution receives in relation to the number of customers they serve.
2. If they ever miss-sold any complex financial product like PPI.
3. How often the Financial Ombudsman Service is called in to settle complaints or disputes.
4. And the performance of the organisation in customer satisfaction surveys.

In terms of the ***cultural aspect*** of the institution the scorecard assessed:

1. The power the members or the customers of the organization had in influencing its policies.
2. If the pay given to the directors was excessive, disproportionate, or unreasonably high, in comparison to other employees.
3. The culture of bonuses at the institution, this included all forms of "variable remuneration" like deferred payments, shares, and "long-term incentive schemes".
4. The proportion of women on the board of the institution.

For assessing how much the institution ***supported the economy*** it was considered:

1. If the institution remained “too big to fail” and thus endangered the stability of the entire system.
2. What was the level of risky behaviour the institution was involved in through inconsistent use of speculative financial derivatives.
3. And finally how much did the institution provide real businesses and individuals with finances, rather than other financial markets and banks, thus exploring how much of the assets of the organization were used to support the real economy.

And lastly the ***ethical area*** of the analysis examined the ethical impact of the institution on the world by examining what practices, businesses, and activities they chose to financially support.

Through the use of the Ethical Consumer’s Ethiscore, a financial institution’s impact in a number of areas was examined including:

1. Investment in unethical industries such as industrial food production, arms and weaponry, and animal testing.
2. Respect for workers and human rights.
3. Sustainability policies and positive investment.
4. Financially supporting fossil fuel extraction and climate change.

These criteria were used to assess the financial institutions of UK.

2.7.2. Position of EBS:

With no past record of criminal activity and fines, no use of tax havens, no past record of political lobbying or of misleading advertising EBS scored best in terms of honesty. In terms of customer service it also scored best in terms of dealing with customer complaints and was not involved in any type of miss-selling and was best in terms of ombudsman referrals. The *"Which?"* Customer satisfaction survey also gave EBS top ranking (2014). When looking at the cultural aspect of the institution, EBS's customers have a high degree of power. As it is a mutual, there was no record of excessive director's remuneration and the bonus policy was ranked best as the bonus as a percentage of the basic salary given to executives was only 4.2%. Additionally, 25% of the directors were women thus placing EBS as the best in the cultural domain of the analysis. Additionally, EBS did not represent a "too big to fail" institution and did not follow risky behaviours and supported the real economy, as 70% of the loans were given to actual customers, thus placing EBS as best in terms of supporting the economy. Lastly, for the ethical aspect, Move Your Money used the rating obtained from Ethical Consumer, a consumer organization that conducts surveys. Several aspects like the effect on environment, animals, people, politics and product sustainability were used to calculate an ethical score (Ethical Consumer, 2016). Move Your Money paid particular attention to assess whether the institutions supported any controversial or damaging activities in their lending. The more it supported such activates the lower score it was given. EBS being at the top of the list thus represented a strongly sustainability oriented and ethical institution (Move Your Money, 2016; FORD, 2012). Hence, as

mentioned earlier, those investors who selected EBS were suitable for this thesis and its examination of SR investment behaviour.

2.8. Heterogeneity among Investors of EBS:

As Sandberg and Nilsson (2015) indicated, there is a growing body of literature that has endeavours to profile socially responsible investors. Many of these studies are focused on identifying demographic, psychographic or socio-economic characteristics of the SR investors, however only a few have attempted to explore the interplay between SR investors' financial and social motives so as to classify them (for example Barreda-Tarrazona et al, 2011; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014). Additionally, with mixed results past research calls for further examination of SR investors' heterogeneity. As discussed in chapter 1, section 1.2.6, Nilsson (2009) identified, on the basis of the relative importance of social return and financial return, a taxonomy of SR investors in a mutual fund with three clusters. He further called for research to explore if these results can be replicated when exploring other types of financial institutions. Given that EBS offers a platform for both social return and financial return it is proposed that investors who chose EBS would also generate heterogeneous clusters when explored in terms of the importance each SR-investor places on the financial and social return aspects of SRI. This study will bring more understanding to the existing body of SRI literature and will help explore investors of an important sector of the UK's financial sector – building societies (HM Treasury, 2012). An understanding of these retail SR investors also holds implications for environmental and social sustainability (Nilsson et al., 2014).

2.9. Summary

In summary, this chapter sheds light on the literature available on SRI with the aim of identifying building societies in general and EBS in particular as platforms for SRI. Through analysis of the existing literature on SRI, the chapter, after looking at how building societies differ from other forms of SRI especially mutual funds, discussed the history of SRI and different approaches that an investor can take towards his/her SRI. Next was the discussion of building societies as a platform for SRI. A history of building societies along with the current situation of building societies in the UK was given. This led to the selection of investors of Ecology Building Society (EBS) as a suitable focus for this study. The chapter went on to discuss the standing of EBS in the SR financial sector. In this regards a detailed discussion of EBS as a platform for SRI was undertaken and the justification for selecting EBS for the study was given. The chapter concluded with a discussion of possible heterogeneity among investors of EBS. The next chapter attempts to answer the three research questions:

> Q1. Can a typology/ segmentation of SR investors based on the different combinations of importance they place on financial return and social return be developed?
>
> Q2. If there are unique segments within the SR investors, can these be validated in terms of different demographic – age, gender, education and income level- and psychographic – pro-social attitude, PCE, trust and value orientations- profiles?

Q3. Do these segments differ in their SRI attitude, and which values act as antecedents of SRI attitude for each segment?

The next chapter begins with a quick discussion of how SRI is shown to have two motives and how these motives can be used to segment SR-investors. From there, the first hypothesis is developed. Moving on, the chapter draws upon the literature from pro-social behaviour so as to identify four psychographic variables – pro-social attitude, perceived consumer effectiveness [PCE], individual value orientations [self-transcendence/self-enhancement and materialism] and trust in the SR organization - that can be used as significant profiling variables for the current study. The next chapter first discusses possible demographic profiles of different SR clusters in terms of age, gender, education and income. Afterwards, the chapter explores each of the four psychographic variables mentioned above, so as to propose the possible relation of each variable with the financial and/or social return aspect of SRI. On the basis of this possible relationship the variations among the expected SR-clusters in terms of the four psychographic variables is proposed. This is done to not only obtain the unique profile of each SR segment, but also to achieve external validity of the expected clusters of SR-investors. From here hypotheses are drawn. Lastly, discussion of values that could drive SRI-attitude of different clusters is presented. While doing so related hypotheses are presented.

CHAPTER

THREE

Chapter 3 – Hypothesis Development

3.1. Introduction

Socially responsible investment (SRI) provides investors with an opportunity to integrate both financial and non-financial concerns into their investment decisions (Sandberg and Nilsson, 2015). These non-financial concerns could be seen as non-monetary benefits that a SRI offers. Literature reflects that many individuals are willing to sacrifice some level of financial return for these non-financial returns (Beal and Goyen, 1998; 2005; Mackenzie and Lewis, 1999; Lewis and Mackenzie, 2000; Statman 2004; Bollen, 2007; Hong and Kostovetsky, 2010; Bauer and Smeets, 2010). One possible explanation of this could be obtained by using the theory of warm glow (Andreoni, 1990). Andreoni (1990) developed this theory so as to explain behaviour of individuals who contributed to a voluntary public good. It was argued that these individuals receive a psychological benefit in terms of feeling a 'warm glow, when doing such acts.

The theory of warm glow (Andreoni, 1990) fits SRI in that individuals who chose SRI due to non-financial return, such as improving environment or human rights can be seen as investing in the public good. These individuals gain a good feeling, as they know that their investment is used in a socially responsible manner. Therefore, the investments of such SR investors are due at least in part to perceived non-financial returns. Also, SR investors are less likely to sell an under-performing fund than conventional investors (Bollen, 2007), thus reflecting the concept of warm glow. That is to say, these SR-investors gain non-financial benefit (a warm glow) from their SRI even with a

lower financial return. However, conventional investors do not feel the same. In this way theory of warm glow could be used to explain differences between SR-investors and conventional investors.

Additionally, the theory of a warm glow (Andreoni, 1990) could also help in understanding heterogeneity among SR-investors. Looking through the lens of warm glow theory, it could be argued that the individuals who value non-financial (SEE) return, offered by SRI, gain higher non-financial benefit (warm glow) from their investment than the ones who chose SRI due to financial benefits. Thus, justifying possible heterogeneity among SR-investors (Bauer and Smeets, 2010).

Furthermore, as discussed in chapter 1, section 1.2.7, a few studies have attempted to investigate heterogeneity among SR-investors (Barreda-Tarrazona et al, 2011; Cheah et al., 2011; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014). Among these studies, work by Nilsson (2009) is important for this thesis. Nilsson (2009) identified the existence of three unique segments when SR-investors of mutual funds were examined in terms of the importance they place on the financial and social returns of their SRI. Taking his work further, the aim of this thesis is to explore if the typology of SR-investors of mutual funds developed by Nilsson (2009) could be replicated when exploring investors who choose financial institution other than mutual funds. However, this thesis adds to the work of Nilsson (2009) by firstly exploring the typology of SR-investors in a different context (Ecological Building Society), and secondly by exploring the values that shape the SRI-attitudes of each segment in the typology.

As discussed in detail in chapter 1, section 1.3, and chapter 2, sections 2.3-2.6, building societies are an important part of the UK financial market and are "the best place to influence the environmental activities of individuals" (Richardson, 2003, pp.126). Therefore, making them suitable for this study. With the first aim of thesis being, as discussed in chapter one, to explore heterogeneity among SR-investors of EBS, it is hypothesized that

H1: There might exist heterogeneous clusters, similar to the clusters of socially responsible mutual fund investors, when exploring SR-investors of EBS in terms of the level of importance they give to financial return and social return aspect of SRI.

Furthermore, if there are clusters of SR-investors, in terms of the importance they place on financial return and social return, it is important to validate these clusters. Michaelidous (2012) and Ketchen and Shook (1996) pointed out that segmentation studies use variables other than those used as the clustering variables to generate external validity of the cluster solution obtained. Therefore, following other segmentation studies (Michaelidou, 2012), it is important to explore if the segments that would appear will be unique, not only in how important financial and non-financial returns are for them, but also in terms of other factors like demographic and psychographic profile. This understanding is important to identify the unique profile of each segment, and to generating external validity of the expected cluster solution.

Next, this chapter moves to a discussion of the literature concerning several aspects of pro-social consumer behaviour that are highlighted in the SRI literature. This is done to specify the variables this thesis will use to generate external validity. Starting with a discussion of different demographic

variables (age, gender, education and income) that are identified as significant segmenting factors by previous SRI research (for example Nilsson, 2008), the chapter moves on to discuss literature on pro-social factors as identified by Nilsson (2009). These SEE factors are pro-social attitude, perceived consumer effectiveness (PCE), and trust in organizations. Additionally, the chapter also discusses personal value orientations as an important variable that has not been widely studied in the SRI domain yet. While doing so, a justification for using these variables as means to validate the expected cluster/segments of SR-investors is given.

To make it easy for the reader to understand, expected relationship between each of these variables with financial return and social return aspect of SRI is discussed, which is then used to determine the relationship of each of these variables with the segments/clusters, if any, of Ecological building society's investors, according to the specific combination of return preference (financial return and social return) that the segment may exhibit. Based on this reasoning, eight hypotheses are proposed. Lastly, the chapter discusses possible values that could act as antecedents of SRI-attitudes of each expected cluster.

3.2. Profiling variables from pro-social consumer behaviour literature

When exploring the pro-social consumer behaviour literature one can find two distinct categories of profiling variables that have commonly been used by researchers (Nielsson, 2009). These being: socio-demographic variables (for example Nielsson, 2009; Diamantopoulos et al., 2003; Van Liere and Dunlap, 1980) and attitudinal/ psychographic variables (for example

Amyx et al., 1994; Laroche et al., 2001; Schwepker and Cornwell, 1991; Straughan and Roberts, 1999). Next, each of these variables is discussed in detail.

3.2.1. Socio-demographic profiling

An examination of research in behavioural finance reflects the significant potential that socio-demographic variables have in explaining the investment decisions of individuals. For example, males are shown to trade more and accordingly attain lower net returns than females (Barber and Odean, 2001). Similarly, investment decisions of old and young investors are shown to differ (Korniotis and Kumar, 2010). An understanding of these differences is important for a financial institution to perform well (Massa, 2003; Harrison, 1995). The importance of this heterogeneity is well understood by researchers who, while exploring financial services, have used socio-demographic variables to segment/classify customers of financial services (Nilsson, 2008). Different socio-demographic variables have been used in the past research to profile SR-investors. Further examination of literature shows that among different demographic variables, four are most frequently used in SRI research are age, gender, income and education (for a detailed discussion see Diamantopoulos et al., 2003 and Nilsson, 2009), which are thus included in this study. However, the results of such studies have generated mixed findings. For example some studies found women to be more concerned about social responsibility than men (Junkus and Berry, 2010; Nilsson, 2015; Schueth, 2003), whilst others found the opposite or no relationship between gender and SRI (Dorfleitner and Sebastian, 2014; Glac, 2009). The same has been the case for age, income and education level

(Dorfleitner and Sebastian, 2014; Junkus and Berry, 2010; McLachlan and Gardner, 2004; Rosen et al., 1991; Solomon, 2009a; Tippet, 2001; Tippet and Leung, 2001). Most studies however agree that typical SR-investors are well-educated, young (Pasewark and Riley, 2010; Rosen et al., 1991), wealthy, belonging to a high socio-economic class (Getzner and Grabner-Kräuter, 2004) and are mostly female (Hancock, 2005; McLachlan and Gardner, 2004; Junkus and Berry, 2010; Beal et al. 2005; Hira and Loibl, 2008; Beal and Goyen 1998).

Importantly, research suggests that SR-investors should be seen as comprising of heterogeneous groups, rather than a homogeneous group, (Sandberg et al., 2009; Sandberg and Nilsson, 2015). With this point in mind, only a few studies could be found that explore demographic profiles of SR-investors while considering them as members of heterogeneous groups (for example Mclachlan & Gardner, 2004; Williams, 2007; Nilsson, 2009). These studies reflect that the clusters of SR-investors investing in mutual funds differ in their demographic profiles (Nilsson, 2009). This understanding of SR investors' demographics in general and that of the (expected) clusters of SR investors, in particular, is very crucial to the practitioner and policy makers in order to develop strategies for and targeted at specific SR investor groups (Cheah et al., 2011; Dorfleitner and Sebastian, 2014; McLachlan and Gardner, 2004; Nilsson, 2008; Nilsson, 2009; Williams, 2007).

Next, each of the four key demographic variables – gender, education, income and age- is discussed in detail so as to further propose the expected demographic profile of each cluster. In doing so sub-hypothesis are developed.

3.2.1.1. Gender

Gender has been identified as being one of the most explanatory variable having the highest impact on investment issues, as the investment preference of men and women differ (Dorfleitner and Sebastian, 2014). Gender can play a major role in shaping behaviour towards sustainability, and this is why it is studied extensively in the domain of socially responsible behaviours (Cheah et al., 2011; Johnson and Bruce, 1993; Johnson and Powell, 1994; Nilsson, 2009). Though there are studies which show a weak or no relationship between gender and SRI (Junkus and Berry, 2010; McLachlan and Gardner, 2004), gender has generally been seen as important in the SRI domain. The majority of previous research has identified SR investors to be predominantly women (Beal et al., 2005; Junkus and Berry, 2010; Lewellen et al., 1977; Schueth, 2003; Tippet, 2001; Tippet and Leung, 2001; Diamantopoulos et al., 2003; Laroche et al., 2001). Nonetheless, Dorfleitner and Sebastian, (2014) found that men, in comparison to women, give significantly more importance to social, ethical and environmental issues, when making an investment decision. However, their results also identified women to be more return tolerant, i.e. they are ready to give up significantly more financial return in comparison to men. Additionally majority of the individuals identified in their study as SR-investors were also women. Laboratory evidence from neuroeconomics provides some support for this inclination of women towards SRI, as it is shown that women value social rewards more than men (Spreckelmeyer et al. 2009). Also, men tend to have better financial literacy (Van-Rooij et al., 2007; Bauer and Smeets, 2010), thus hinting to their orientation towards the financial returnsof an investment.

In line with the above, this thesis agrees with the majority of the relevant literature that suggests that women are more involved in SRI than men (Bauer and Smeets, 2012; Junkus and Berry, 2010; Schueth, 2003; Tippet and Leung, 2001). It is reasonable to argue a positive link between gender (female) and social return aspect of SRI. Thus it is hypothesized that women would make greater portion of the cluster(s) which gives higher value to the social return aspect of SRI, while men will dominate the cluster(s) which is more inclined towards the financial return aspect of SRI. It is therefore, hypothesized that

H2a: women would make greater proportion of cluster(s) that place more importance on SR-return aspect of SRI, while the cluster(s) with investors focusing on financial return aspect of SRI will consist of more men than women.

3.2.1.2. Education

In addition to gender, several studies have identified a strong link between SRI and education level (Cheah et al., 2011; Dorfleitner and Sebastian, 2014; Junkus and Berry, 2010; McLachlan and Gardner, 2004; Nilsson, 2009; Nilsson et al., 2014; Rosen et al., 1991; Schueth, 2003). Majority of the SRI research identified SR investors to be highly educated (Chan, 1999; Khan and Khan, 2015; Murphy et al., 1978; McLachlan and Gardner, 2004; Nilsson, 2009; Rosen et al., 1991; Schueth, 2003; Wall, 1995; Tippet and Leung, 2001). However, majority of these studies considered SR investors as a single homogeneous group (Cheah et al., 2011; Dorfleitner and Sebastian, 2014; Khan and Khan, 2015; Nilsson, 2009; Nilsson et al., 2014).

In a recent study Dorfleitner and Sebastian, (2014) found that highly educated SR investors are more willing to forego financial return as compared to the less educated SR investors. In addition to this their research highlighted that the less educated SR investors do not value social responsibility as much as the more educated SR investors do. Asset managers also identified highly educated SR investors as being more concerned about the social issues than the less educated SR investors (Dorfleitner and Sebastian, 2014). Thus it is reasonable to propose a positive link between education and the social return aspect of SRI and a negative link between education and the financial return aspect of SRI. Given that this thesis attempts to segment SR-investors into clusters based on the importance they place on financial return and social return aspect of SRI it is hypothesized that:

H2b: Cluster(s) of investors who value social return would be more educated than cluster(s) who value financial return more.

3.2.1.3. Income

With regards to income level, past research has had mix findings. Where some claim SR investors to be wealthier (Nilsson, 2009; Tippet, 2001; Vinning and Ebreo, 1990), while others see SR investors as belong to the lower income group in comparison to their conventional counterparts (Rosen et al., 1991). Nonetheless, research indicates that wealthier SR investors are more tolerant towards ethical penalty, i.e. ready to trade off financial return for social welfare (Cheah et al., 2011; McLachlan and Gardner, 2004; Tippet, 2001; Williams, 2007), thus echoing a positive link between wealth and the

social return aspect of SRI and a negative link between wealth and the financial return aspect of SRI. With this understanding it is hypothesized that:

H2c: Cluster(s) of investors placing high importance on the Social return aspect of SRI will have higher income compared to the investors belonging to cluster(s) that value financial return more.

3.2.1.4. Age

The last demographic variable this thesis explores is age. Majority of the past research has identified SR investors to be younger individuals (e.g. Cheah et al., 2011; Diamantopoulos et al., 2003; Hayes, 2001; Laroche et al., 2001; Lewellen et al., 1977; Rosen et al., 1991; Schueth, 2003). Cheah and colleagues (2011) argued that the younger generation is more concerned about the society and environment as they have witnessed environmental disasters, thus making them more conscious and concerned about SEE issues (Bray et al., 2011; Nilsson, 2009). It is also argued that younger investors are more concerned about the social and societal wellbeing, and believe it to be the companies' responsibility to care for the society (Schueth, 2003). With younger SR investors being more tolerant towards ethical penalty (lower returns) (Cheah et al., 2011; Hayes, 2001; Tippet, 2001), it is reasonable to suggest a positive link between age (young) and social return aspect of SRI. This brings us to our last sub-hypothesis regarding socio-demographic profiling of SR-investors, which is:

H2d: Investors belonging to cluster(s) placing high importance on the social return aspect of SRI will be younger as

compared to the investors belonging to cluster(s) placing a higher importance on financial return.

In summary, the above discussion related to socio-demographic variables within SRI concludes that these socio-demographic variables have some potential to highlight differences between groups of SR investors. Therefore, they can be used as non-clustering variables in this study to generate external validity of the SR investor typology that this thesis plans to generate. In line with the past research it is proposed that the clusters would vary in their socio-demographic profiles. Therefore, the second main hypothesis is:

H2: The clusters/segments of SR-investors would vary in terms of their demographic profile.

The past research on SR behaviour highlighted that along with demographic variables one should use psychographic variables in order to meaningfully profile SR-individuals (Nilsson, 2009; Roberts, 1996; Samdahl and Robertson, 1989; Straughan and Roberts, 1999). The next section discusses the main psychographic variables that are highlighted in past SRI research and are used in this thesis. While doing so, related hypotheses are developed.

3.2.2. Psychographic Profile:

Though, scholars agree that different motives can drive investors to choose SRI (Nilsson, 2009; Jansson and Biel, 2011; Anand and Cowton, 1993; Beal and Goyen, 1998; Beal et al., 2005; Haigh, 2008), very little empirical evidence exists to explain how this works in practice (Wins and Zwergel, 2016). However, when looking at the broader picture, studies can be found

that have profiled socially responsible consumers by using psychographic variables (eg. Roberts, 1996; Samdahl and Robertson, 1989; Straughan and Roberts, 1999). While segmenting green consumers, Straughan and Robert (1999) highlight perceived consumer effectiveness (PCE) as the most significant segmentation variable. Altruism is another important variable identified in their study. Nilsson (2008) was the first to use PCE along with pro-social attitude and trust in SRI domain. He showed that pro-social attitude and PCE have a significant effect on SRI behaviour. He also included risk and return in his model. Later Wins and Zwergel, (2016) also used pro-social attitude, PCE and trust to explore SRI. Their study found these three psychographic variables to have significant influence in SRI domain. They concluded that PCE and pro-social attitude, in addition to knowledge and perceived importance of SEE issues were the only variables needed to correctly identify SR investors. More importantly Nilsson (2009) identified pro-social attitude, PCE and trust to be significant in identifying differences among SR investor segments. As aforementioned, this thesis seeks to take the work of Nilsson (2009) further, and for this reason the three SEE factors, pro-social attitude, PCE and trust, which are identified as significant discriminating variables among different SR-investor segments are utilized in this thesis. Furthermore, adding to the work of Nilsson (2009), this thesis will also explore value differences amongst different SR investor segments. The main aim of doing this is to generate external validity of the expected typology of SR investors of EBS.

Next each of these four psychographic variables and their link with social return and financial return aspect of SRI is discussed. On the basis of this link the psychographic profile of expected clusters is proposed.

3.2.2.1. Pro-Social Attitude as a Profiling Variable:

3.2.2.1.1. Attitude:

The study of attitudes in social psychology has a long and complex history (Oppenheim, 1992, p174). According to the oldest definition of attitude: "An attitude is a mental or neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935 in Oppenheim, 1992, p174). Allport (1967) later indicated that constructing a comprehensive definition of attitude is a complex task. Several authors attempted to define attitude differently (for e.g. Krech and Crutchfield 1948; Doob, 1947; Katz and Sarnof, 1954 and Osgood et al., 1957), however, all of them did agree about three common elements, namely:

a) Knowledge: One needs to hold some knowledge about the thing, person or phenomenon for which the attitude is held.

b) Feelings: Attitude may also involve feelings such as hate, resentment or liking towards the thing, person, or phenomenon the attitude is held for.

c). Experience: Lastly, attitude may be developed through first-hand or second hand experience. Simply put, an individual may have

done/seen something or had something done to them resulting in the development of the attitude.

The presence of these three elements reflects that a person develops an attitude when she/he has evaluated a thing, a person, or an event. This evaluation develops the attitude, which then affects the succeeding behaviour.

Initially attitude and behaviour were confused for each other, with some arguing that "attitudes can't really be measured but only inferred from behaviour" (Mostyn 1978, p13). However, Ajzen and Fishbein (1989) and Ajzen (1991) clarified that attitudes and behaviours are different from each other, although one may influence the other. The importance of attitude as a vital determinant of behaviour (Ajzen and Fishbein 1989) made attitude significant. Ajzen (1991) elaborated that an attitude toward behaviour is seen as an individual's negative or positive evaluation of self-performance of that specific behaviour (Ajzen, 1991).

3.2.2.1.2. Pro-social attitude:

Batson and Powell, (2003, pp. 463) expressed that the term pro-social "was created by social scientists as an antonym for anti-social". As attitudes affect behaviour (Ajzen 1999) likewise, pro-social attitude affects pro-social behaviours. Pro-social behaviour refers to the broad range of actions intended to benefit one or more people other than oneself: behaviours such as helping, comforting, sharing and cooperation."

Interestingly, although attitude has always played an important role in shaping behaviour (Fishbein and Ajzen, 1972; 1975; Kassarjian, 1971), an

examination of the literature related to socially conscious and environmental consumer behaviour reveals an unclear, almost confused picture of the relationship between pro-social attitude and pro-social consumer behaviour (Nilsson, 2008). For instance, Cowe and Williams (2001) showed in their study of UK population that though 30% of individuals claimed to be ethical consumers, the market share of ethical products reached a mere 3%. They called it the 30:3 syndrome. Others labelled this difference between attitude and behaviour as "words – deeds inconsistency" (e.g. Wong et al., 1996), or "attitude-behaviour gap" (Boulstridge and Carrigan, 2000; Roberts, 1996b). The existence of an attitude-behaviour gap has also been identified in investment domain by Vyvyan and colleagues (2007). In their study, through conducting an investment preference experiment, they showed that although there were investors who rated environmental concerns highly, all investors, ranked financial performance related criteria the highest.

Nonetheless, there are studies that have found a link between pro-social attitude and pro-social behaviour (for example Amyx et al., 1994; Kinnear and Taylor, 1973; Hofmann et al., 2008; McLachlan and Gardner, 2004: Mohr et al., 2001; Williams, 2009; Straughan and Roberts, 1999; Kinnear and Taylor, 1973; Webster, 1975). Literature can also be found that presents mixed results. For instance, some studies reveal that although pro-social attitude is related to pro-social behaviour, it is not the most important determinant of behaviour (Roberts, 1996a; Straughan and Roberts, 1999; Alwitt and Pitts, 1996; Schwepker and Cornwell, 1991). Nonetheless, Kassarjian (1971) identified positive attitude towards an environmental issue

to be the only predictor that can be used to segment socially responsible individuals.

When looking at the SRI domain, Lewis and Webley (1994) empirically show that individuals who hold higher green attitudes are more inclined towards SRI. Later, Nilsson (2008) showed that pro-social attitude has a positive and significant impact on SRI behaviour. In addition to this, a positive pro-social attitude has been linked with more tolerance towards an ethical penalty (Nilsson, 2009; Dorfleitner and Sebastian, 2014), thus reflecting a higher chance of investing in SRI. Similarly, Wins and Zwergel (2015) identified a positive relationship between SRI behaviour and pro-social attitude. Thus, pro-social attitude could be used in this thesis to validate the proposed typology of SR investors of EBS. The next sub-section discusses the possible relationship of pro-social attitude with the financial and non-financial return aspect of SRI, so as to propose possible variation among SR investor segments this thesis expect to produce.

3.2.2.1.3. Variation among segments of SR-investors in terms of Pro-social attitude

Although, Lewis and Webley (1994) indicate that pro-social attitude is a strong predictor of SRI, Nilsson (2009) identifies that SR investors vary in terms of their pro-social attitudes. As discussed in detail in chapter 1, section 1.2.6, there are two forms of returns that an investor can get from investing in SRI, these being financial return and non-financial (social) return. Some SR-investors chose SRI so as to make positive impact on society or the environment. These investors place more importance on social return than on financial return. Nilsson (2009) identified a higher degree of pro-social

attitude in SR investors driven by social return and a lower pro-social attitude in financial return driven SR investors. As identified in chapter one, this proposed relationship between social (financial) return and higher (lower) pro-social attitude could also be explained through the warm glow theory (Andreoni, 1990). That is to say, individuals who hold higher pro-social attitudes gain more non-financial (warm glow) benefit from investing in SRI than the ones who hold lower pro-social attitude. Hence, it is reasonable to suggest that the same relation would exist when exploring SR-investors of Ecological building society. It is therefore hypothesised that:

> **H3:** Cluster(s) placing more importance on Social return aspect of SRI would hold higher level of pro-social attitude as compared to cluster(s) placing higher importance on financial return aspect of SRI.

Furthermore, as the literature indicates, pro-social attitude is not the most important determinant of SR-behaviour (Roberts, 1996a; Straughan and Roberts, 1999; Alwitt and Pitts, 1996; Schwepker and Cornwell, 1991), and therefore other variables should also be considered. Among other variables, perceived consumer effectiveness (PCE) has been identified as the most significant profiling variable of green consumers (Straughan and Roberts, 1999). PCE also has a strong influence on SRI (Nilsson, 2008; Wins and Zwergel, 2015) therefore it is included in this thesis.

3.2.2.2. Perceived Consumer Effectiveness (PCE):

Perceived consumer effectiveness (PCE) postulates that an individual is most likely to act on a social problem if he/she believes that his/her act can

resolve the situation under discussion (Ming et al., 2012; Nilsson, 2008). PCE also relates to an individual's perceived power in the context of the issue, that is to say, an individual may be extremely concerned about an issue, but may feel powerless to act on it (Berger and Corbin, 1992). Initially researchers (e.g. Kinnear et al., 1974; Webster, 1975) considered PCE to be a part of the attitude construct (Straughan and Roberts, 1999). In fact it was regarded as an element of attitude in itself. However, later studies identified PCE as a distinct construct, rather than a part of attitude (e.g. Berger and Corbin, 1992; Ellen et al., 1991; Nilsson, 2008; Roberts, 1996a; Straughan and Roberts, 1999). The most significant difference between the two is that attitudes refer to specific issues while PCE refer to the individuals' perceived role in solving that issue (Berger and Corbin, 1992; Nilsson, 2008). Antil (1984) looked at PCE as comprising of two components. One being the awareness of the issue, and the second being an individuals' trust that their efforts will help to resolve the issue. Furthermore, individuals' belief in their ability to influence SEE issues is more important than the depth of concern they have for these issues. That is to say, if individuals believe that their behaviour will help to resolve the issue in question, they are more likely to become a part of the related pro-social activity (Berger and Corbin, 1992; Nilsson, 2009). Lord and Putrevu (1998) defined PCE as an individual's self-belief in their ability to improve the environment. The statement "Why get involved in a losing battle?"(Straughan and Roberts, 1999) can best describe PCE, as an individual will be willing to opt for SR behaviour if he believes that his action will influence the situation in a desired positive manner. This perception of individuals about the extent of influence their action might have towards the

desired solution of the problem represents perceived consumer effectiveness (PCE) (Antil, 1978; Berger and Corbin, 1992; Glac, 2009; Kinnear et al., 1974; Lewis and Mackenzie, 2000a; b; Nilsson, 2008; 2009; Roberts, 1995; Roberts, 1996; Roberts and Bacon, 1997; Rosen et al., 1991; Straughan and Roberts, 1999; Webley et al., 2001; Webster, 1975; Weiner and Doescher, 1991).

Literature shows PCE to have a strong positive correlation with ecologically conscious consumer behaviour (Ming et la., 2012; Roberts, 1996a; Straughan and Roberts, 1999). It was also identified as the most influential variable to explain the variation among ecologically conscious consumers (Roberts, 1996a), and accordingly was the strongest segmentation variable of environmentally conscious consumers (Staughan and Roberts, 1999). .

Webster (1975) demonstrated a strong influence of PCE on both recycling and socially conscious consumers. Lord and Pitrevu (1998), while exploring the impact of low and high PCE on intention to recycle, found that individuals who held high PCE were more likely to be influenced by negatively framed messages about the cost of failing to recycle than the ones with lower PCE. Along with having a significant influence on environmental/green consumption and sustainable lifestyle (Kim and Choi, 2005; Gilg, Barr and Ford, 2005), PCE has been identified as an important construct in predicting socially responsible consumer behaviour (Mohr et al., 2001; Nilsson, 2008; Roberts, 1996a; Roberts, 1996b; Straughan and Roberts, 1999; Webster, 1975). The significance of PCE has also been highlighted in the SRI domain, as it is shown to have a strong influence on SRI behaviour

(Nilsson, 2008; 2009; Wins and Zwergel, 2015). PCE in the SRI context is conceptualized as an individuals' perception of the extent to which their investment decision can help achieve the solution to the problems under consideration (Nilsson, 2008). Nilsson (2008) showed that higher PCE and pro-social attitude results in larger investments in SRI. Wins and Zwergel, (2015) showed empirically that pro-social attitude, PCE and trust had a positive impact on SRI. Nilsson (2009) also showed that PCE varies amongst different SR investor groups of mutual funds. In his study on investors of SR mutual funds, Nilsson identified that investors who were more inclined towards the financial aspect of SRI held lower PCE compared to the investors who chose SRI due to social return aspect of SRI. In light of above discussion, it is proposed that, similar to SRI mutual fund investors (Nilsson, 2009), that the SR investors explored in this thesis would vary in terms of PCE, with the investors placing more importance on the financial return aspect of SRI having a lower PCE value than the ones investing in SRI due to the social return aspect.

3.2.2.2.1. Variation among segments of SR-investors in terms of Perceived Consumer Effectiveness

As aforementioned, both perceived consumer effectiveness (PCE) and pro-social attitudes are shown to be significant in explaining investment behaviour of SR-investors (Chea et al., 2011; Nilsson, 2009; Wins and Zwergel, 2015). Furthermore, Nilsson (2009) showed that investors are more willing to undertake SRI if they believe their investment would contribute towards resolving the social issues linked to the investment scheme. Therefore an individual investor is less likely to opt for SRI if he/she feels that his/her

individual investment would be of little or no help in addressing the SEE issue at hand. Literature also shows that individuals who hold a higher level of PCE select SRI with the belief that their investment decision will help to resolve SEE issues, in other words these investors seek a higher level of social return from their investment decisions (Nilsson, 2009). Thereby echoing a positive link between social return and PCE. Wins and Zwergel (2015) also concluded that higher PCE leads to a higher acceptance of social returns over financial returns when undertaking SRI. While on the other hand, investors who select SRI because of its financial return aspect are less tolerant of an ethical penalty: some financial penalty for the sake of social benefit (Chea et al., 2011; Nilsson, 2008). Thus suggesting that these investors are comparatively less concerned about solving SEE issue through their investment. From this a negative link between financial return and PCE can be derived (Nilsson, 2009), as investors who choose SRI due to the financial return aspect don't believe that their investment behaviour can solve SEE issues and therefore, they look primarily at the financial aspect when making their investment decision.

Thus, it is hypothesized that:

> **H4**: Cluster(s) placing higher importance on social return aspect of SRI would hold higher level of PCE as compared to the cluster(s) valuing financial return aspect of SRI.

Finally, trust in SRI claims is another important variable when exploring heterogeneity among SR-investors (Nilsson, 2009) and therefore is

be used in this thesis.

3.2.2.3. Significance of trust in SR domain

There are a large number of products that claim to be social, ethical or green (Nilsson, 2008), however, research indicates that a global crisis of ethics has developed as a result of a string of corporate scandals (Ghillyer, 2008; Sagar and Singla, 2003), in turn generating distrust in companies (Chea et al., 2011). Some also argue that advertising campaigns were misleading in terms of pro-social claims (for example Terra Choice, 2010; Kangun et al., 1991; Polonsky et al., 1998). This generated credibility issues and as a result consumers became, and still are, sceptical as to whether these organizations are really doing what they claim they are doing (Nilsson, 2008; Gardyn, 2003). Consumers see advertising by major organizations as the least credible source of information regarding environmental/social issues (Nilsson, 2008; Kilbourne, 1995).

Trust and confidence of consumers in an organization is shown to be a significant element that affects the outcome in several areas including food consumption (de Jonge et al., 2004; Squires et al., 2001), financial services (Nielsson, 2008; Heimann, 2013; Llewelyn, 2005), and fashion/clothing purchases (O'Cass, 2004). The significance of trust could be seen by the fact that many consumers, who have low levels of trust and are sceptical towards the green claims of an organization, will intentionally reject 'green' products. This tendency of rejecting green products due to consumer scepticism and confusion about social and environmental claims is referred to as a 'green backlash' (Crane, 2000). Thus it is no wonder why trust, vital for marketers in the pro-social sector (amongst others), be it related to a product, service or

financial institution (Nilsson, 2009), has been widely studied in the marketing discipline (for example Osterhus, 1997; Morgan and Hunt, 1994; Singh and Sirdeshmukh, 2000; Garbarino and Johnson, 1999; Nilsson, 2009).

Mayer, Davis and Schoorman (1995) defined trust as *the readiness of a party to be vulnerable to the arrangements of another party established on the belief that the other party will perform a specific action significant to the trustee, regardless of the capability to control or oversee that other party.* Since its theorization in 1995, this concept of trust has been utilized in several areas like agribusiness, finance, psychology, industrial engineering, information systems, sociology, political science, economics, law, communication ethics, and health care (Schoorman et al., 2007; Hiemann, 2013). In terms of consumer behaviour, it is argued that consumers would only buy a product/service or make an investment if they trust the pro-social claims of the organization (Nilsson, 2008), hence making it important when examining pro-social behaviour.

3.2.2.3.1. Variation among Segments of SR-Investors In Terms Of Trust

Trust has received much attention from marketing scholars (for example, Osterhus, 1997; Morgan and Hunt, 1994; Singh and Sirdeshmukh, 2000; Garbarino and Johnson, 1999), including those exploring the pro-social consumer behaviour domain (Gardyn, 2003). Studies have found trust to be a vital element when exploring SRI (Nilsson, 2009; Wins and Zwergel, 2015). With the misuse of the word 'ethics' (Ghillyer, 2008) by organizations, consumers have started questioning how ethical organizations are. As SRI is the platform for incorporating SEE concerns into investment, this means that

the institutions offering SRI claim that the investment made by individuals will be invested in ethically sound areas. Individuals who are eager to reflect their SEE concerns in their investment decisions and are willing to take an "ethical penalty" also want to see how ethical their investment actually is (Cheah et al., 2011). Thus, as argued by Nilsson (2008), investors would select SRI more if they trust the underlining social initiative, as this will give them the confidence that their SEE sentiments are being expressed in their investment decisions. Though Nilsson (2008) was unable to either support a negative or a positive impact of trust on socially responsible investment behaviour, he (2009) later proposed and empirically showed that SR-investors vary, in term of the trust they hold toward their SRI. It was argued that individuals who opt for SRI due to the social return aspect of SRI would be more inclined to explore how truly the organization is fulfilling its social initiatives claims. As a result these investors would hold a high degree of trust in the organization, as they will only select the particular SRI once they know it is a suitable platform to reflect their SEE concerns. Contrary to these investors, the investors who chose SRI mostly for the financial return aspect of that organization would only be concerned about the financial aspects of SRI. These investors would not be eager to explore the performance of the institute in terms of its responsible investment claims. Thus these investors would hold low trust in the organization being a true SRI. This would be due to lack of knowledge about the organization. Nilsson (2009) found support for the argument that different SR investor groups vary in term of trust.

With the above discussion in mind it is reasonable to propose that SR investors who chose EBS due to the social return aspect of SRI would explore

their investment institution and would only invest if they hold a high degree of trust in the organization, while the SR investors who chose EBS due to the financial return aspect of SRI would hold low level of trust towards EBS being truly socially responsible. This brings us to the next hypothesis:

> **H5**: Cluster(s) valuing social return aspect of SRI would hold high level of trust in their SRI as compared to cluster(s) focused on financial return of SRI.

So far this section (section, 3.2) has discussed variables that are used in past SRI research. The main purpose of this section is to elaborate variables that could be used to validate the expected typology of SR-investors of EBS (as proposed in section 3.1). In this regards, an important variable that has been researched in socially responsible behaviour domain, but not in SRI domain, is value orientation. Although, according to Value Similarity Model (Earle & Cvetkovich, 1995; 1999) investors will choose SRI if their personal values align with the values of SRI (Heimann, 2013), however, the exploration of values in the SRI domain remains underdeveloped. Given the significance of personal values in understanding SR behaviour (pepper et al., 2009; Grunert and Juhl, 1995; Dibley and Baker, 2001; Makatouni, 2002; Baker et al., 2004; Shaw et al., 2005; De Ferran and Grunert, 2007) it is reasonable to expect an examination of values in the SRI domain to contribute useful knowledge. The next sub-section discusses values in detail.

3.2.2.4. Value Orientations as a Profiling Variable:

"The importance of people's values in understanding and predicting" behaviours is acknowledged in a variety of fields (Rohan, 2000, p.255),

including consumer research (Munson, 1984), sustainability contexts (Grunert and Juhl, 1995; Dibley and Baker, 2001; Makatouni, 2002; Baker et al., 2004; Shaw et al., 2005; De Ferran and Grunert, 2007) and socially conscious consumer behaviour (Pepper et al., 2009). SRI is also seen as "the philosophy and practice of making strategic investment decisions by integrating financial and non-financial considerations including personal values" (Chea et al., 2011, pp. 305). Thus, value orientations can be meaningful in highlighting differences amongst the proposed clusters of SR-investors. But before discussing the relation of values with the segments of proposed typology/segmentations of SR-investors, it is important to understand what values are, and what the main theories are in this domain.

3.2.2.4.1. Definition of the Term Value:

The term value has been used widely in past research, however the term has been used loosely and to describe different concepts (Rohan, 2000; Dibley and Baker, 2001). The most vital point that needs clarification is the difference between value (singular) and values (plural). Both the terms, value and values, have been used in marketing literature. Value (singular) is referred to the assessment of product and/or service by an individual, whereas values (plural) are an individual's higher order goals and abstract beliefs (Rohan, 2000). Hence value defines interaction with a specific product and/or service, whereas values are said to guide ones' behaviour independently without involving any product and/or service (Flint et al. 1997). Simply stated value presents a preferential judgment whereas values, as a term, are the criteria by which these judgments are formulated (Holbrook 1994; 1999). This manuscript uses both terms i.e. value/values as beliefs, and not as an

assessment of product/service by an individual. That is to say, as far as this manuscript is concerned, the term value (whenever used) needs to be thought of as an individual's higher order goals and abstract beliefs, rather than their assessment of products/services. Similarly, following the same approach, the term "value orientations" also refers to the higher order values held by individuals.

3.2.2.4.2. Overview of Leading Theories

As defined by Rokeach values are: "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973:5). Among other researchers Rokeach was the one who reemphasized the importance values hold in the modern psychology research. Rokeach (1973) also introduced the Rokeach Value Survey (RVS), one of the most prominent measures of values. In the Rokeach Value Survey, Rokeach differentiated values into two sets; one representing preferable modes of behaviour and the second representing end-states of existence. He labelled these values as instrumental (means values) and terminal (end values) respectively (Munson, 1984). Terminal values were the desirable end state values, whereas the instrumental values were the ones that help attain these terminal values, i.e. the means to the end. It was argued that terminal values are developed during the early phase of life and are more stable, whereas, instrumental values are prone to change because of the life experiences acquired (Prakash, 1984). Table 3.1, given below, presents the 18 instrumental values from the 18 terminal values, constructing the RVS. When using the RVS to measure value orientations, an individual is required to align each and

every value identified in the RVS according to its importance and the impact it has, as a guiding principle in one's life.

Table 3.1: Rokeach Value Survey (RVS)

Instrumental values	Terminal values
1. Ambitious (hard working, aspiring)	1. A conformable life (a prosperous life)
2. Broadminded (open-minded)	2. An exciting life (a stimulating, active life)
3. Capable (competent, effective)	3. A sense of accomplishment (lasting contribution)
4. Cheerful (light-hearted, joyful)	4. A world at peace (free of war and conflict)
5. Clean (neat, tidy)	5. A world of beauty (beauty of nature and art)
6. Courageous (standing up for your beliefs)	6. Equality (brotherhood, equal opportunity for all)
7. Forgiving (willing to pardon others)	7. Family security (taking care of loved ones)
8. Helpful (working for the welfare of others)	8. Freedom (independence, free choice)
9. Honest (sincere, truthful)	9. Happiness (contentedness)
10.Imaginative (daring, creative)	10. Inner harmony (freedom from inner conflict)
11. Independent (self-reliant, self-sufficient)	11. Mature love (sexual and spiritual intimacy)
12. Intellectual (intelligent, reflective)	12. National security (protection from attack)
13. Logical (consistent, rational)	13. Pleasure (an enjoyable, leisurely life)
14. Loving (affectionate, tender)	14. Salvation (saved, eternal life)
15. Obedient (dutiful, respectful)	15. Self-respect (self-esteem)
16. Polite (courteous, well-mannered)	16. Self-recognition (respect, admiration)
17. Responsible (dependable, reliable)	17. True friendship (close companionship)
18. Self-controlled (restrained, self-disciplined)	18. Wisdom (a mature understanding of life)

Source: Rokeach (1973. Pp. 359-340)

It is further elaborated that terminal values contain both social and personal elements, with people possibly exhibiting varied priorities. Meaning that some people may have more inclination towards social values as compared to personal values, whereas others could prefer the opposite, which in turn can impact their attitudes and decision-making. Table 3.2 segregates the terminal values into social and personal values.

Table 3.2: Segregation of Terminal Values into Social and Personal Values	
Social Values	**Personal Values**
1. A world at peace (free of war and conflict) 2. A world of beauty (beauty of nature and art) 3. Equality (brotherhood, equal opportunity for all) 4. Freedom (independence, free choice) 5. National security (protection from attack)	1. A conformable life (a prosperous life) 2. An exciting life (a stimulating, active life) 3. A sense of accomplishment (lasting contribution) 4. Family security (taking care of loved ones) 5. Happiness (contentedness) 6. Inner harmony (freedom from inner conflict) 7. Mature love (sexual and spiritual intimacy) 8. Pleasure (an enjoyable, leisurely life) 9. Salvation (saved, eternal life) 10. Self-respect (self-esteem) 11. Self-recognition (respect, admiration) 12. True friendship (close companionship) 13. Wisdom (a mature understanding of life)

Source: Braithwaite, 1994; Munson, 1984; Prakash, 1984; Rokeach, 1973

It is further maintained that social values and personal values are in direct competition with each other. Additionally, the importance given to these values will vary from person to person. That is to say while some individuals would favour personal values at the cost of their social values and others would favour social value at the expense of their personal values (Braithwaite, 1994).

Though the RVS has been used widely, there are several confusions identified with it. For example there is confusion regarding the precise differences between terminal and instrumental values. This is because certain terminal values can appear as instrumental values for remaining terminal values, and likewise some instrumental values can appear as ends to other instrumental values (Schwartz and Bilsky, 1990). Due to this confusing overlap, it was argued that people usually cannot differentiate between the two categories of values (Schwartz and Bilsky, 1990).

In addition to the criticism on instrumental and terminal values (Roshan, 2000), the Rokeach Value Survey (RVS) list has been subject to criticism for other reasons. Madrigal and Kahle, (1994) highlighted the difficulty faced by individuals in ranking the large number of values along with the time required to complete such a task. Others showed concern regarding the relevance of values listed in the RVS to the behavioural settings of consumers (e.g. see Beatty et al., 1985 in Madrigal and Kahle, 1994, pp.23) and some even questioned RVS's appropriateness (Homer and Kahle, 1988). Though the work of Milton Rokeach (1973) has been widely cited (Rohan, 2000), he was unable to propose any theory regarding the value systems' underlining structure. This is why RVS has been referred to as a list of unconnected words, by some (e.g. Rohan, 2000).

To deal with the above-mentioned criticism, the List if Values (LOV) was later opted for by several studies. This list (LOV) was originally formulated and introduced by the Survey Research Centre – The University of Michigan. LOV is constructed through an amalgamation and selection of values mainly from Maslow's (1970) hierarchy theory, eighteen terminal values proposed by Rokeach, and a fusion of other renowned value scales (Kahle and Kennedy, 1989). Terminal values were included because of their closer relevance to consumer behaviour. A total of 9 values made up the LOV and thus LOV was a much briefer list compared to RVS. LOV was also considered easier to implement in research settings and was seen as more relevant to everyday life and consumer behaviour (Homer and Kahle, 1988). Table 3.3 lists these values.

Table 3.3: List of Values (LOV)
1. Well-Respected
2. A Sense Of Belonging
3. Fun And Enjoyment In Life
4. Excitement
5. Accomplishment
6. Warm Relationships With Others
7. Self-Fulfilment
8. Self-Respect
9. Security

*Source: Madrigal and Kahle, 1994

In addition to LOV and RVS, the Values and Lifestyle Segmentation (VALS) Model has also been used in values-based research. VALS was presented by Mitchell (1983) (Kahle et al., 1986). According to VALS, customers can be categorized into 9 sets based on their lifestyle. These sets of 9 lifestyles are established following the answers consumers give to 30 (sometimes 36, sometimes 33) demographic and attitudinal questions (see Kahle and Kennedy, 1989). Though widely used by commercial companies, VALS lacks empirical research to provide the robustness and applicability of the scale (Kahle et al., 1986).

Building on these past studies, Schwartz and Bilsky (1987) proposed a value theory and were successful in developing a new typology of values. Content domains rather than a single domain of values was used in their proposed theory, advocating the idea of values' key content being grounded in the motivational concerns articulated by it (Schwartz, 1992). The value typology proposed by Schwartz and Bilsky (1987) is based on the belief that values mainly signify three fundamental and universal requirements observed by all individuals and societies. These universal requirements further reinforce the value systems of individuals, motivating them to attain the desired values. According to Schwartz and Bilsky (1987) the three universal requirements are:

I - Biological needs of individuals.

II - Social needs generated from interpersonal dealings and

III - Social needs vital for group endurance.

Schwartz and Bilsky (1987) propose that through socialization and cognitive development people acquire values that are cognitive depictions of these three universal necessities. These are then articulated in culturally shared terms. Values in the Schwartz value theory could be used at both individual as well as collective level (Schwartz and Bilsky, 1990) and thus this theory represented a significant advance on previous theories (Pepper et al., 2009).

3.2.2.4.3. Schwartz Value Theory

According to Schwartz (1992, pp. 4) values are defined as: "…beliefs or concepts, (which) relate to desired behaviours/end-states, transcend particular situations, direct evaluation/selection of events and/or behaviour and are ordered by comparative significance". Schwartz' value theory presents the content and structure of human values. That is to say, this theory not only provides an understanding of the 10 different value orientations that are the components of the human value system, but also gives an understanding about how individuals vary in terms of these value priorities (Rohan, 2000). This theory has been confirmed in more than 65 countries (Schwartz, 2003, p. 266 in Pepper et al., 2009) and is widely used to study associations between values and other constructs like self-reported behaviour.

Originally eight unique motivational value types were introduced based upon the three universal requirements discussed above (Schwartz and Bilsky, 1987). Table 3.4 lists these 8 motivational values.

Table 3.4: Initial Eight Unique Motivational Values
1. Power.
2. Achievement.
3. Hedonism.
4. Stimulation.
5. Self-direction.
6. Conformity.
7. Tradition.
8. Security.

*Source: Schwartz, 1992

However, three more values namely; universalism, spirituality and benevolence, were later added to this list of values making it a total of 11 values, as shown in table 3.5.

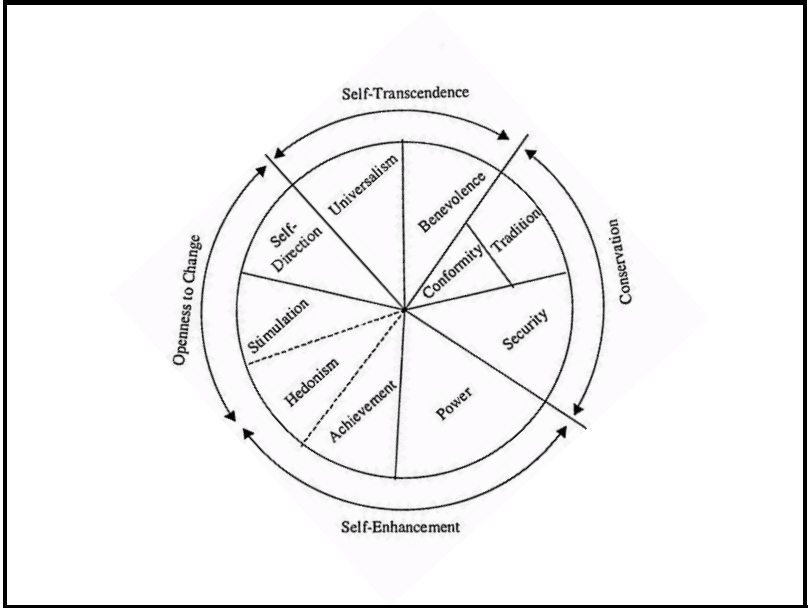
Table 3.5: List of 11 Motivational Values
1. Power.
2. Achievement.
3. Hedonism.
4. Stimulation.
5. Self-direction.
6. Conformity.
7. Tradition.
8. Security.
9. Universalism,
10. Spirituality
11. Benevolence

*Source: Schwartz, 1992

Later Schwartz (1992) excluded spirituality from the value list claiming that a range of activities could satisfy this value. In this way a list of 10 motivational values was finalized and later tested in about 65 countries worldwide, enabling Schwartz to identify varying sets of values at not only am individual level but also at the country level. These 10 individual level values are arranged in a circular structure which is called the Circumplex. The Circumplex was developed through multidimensional scaling of participants'

ratings of the importance of these ten values. Figure 3.1 represents the Circumplex of values.

Figure 3.1: Value Circumplex by Schwartz – Displaying 4 Higher Order Values and 10 Individual Level Motivational Values



Source: Schwartz (1992)

The relationship between the motivational types of values, i.e. higher order values dimension and bipolar value dimension, is represented in the Circumplex. In a circumplex, similar values or those compatible with one another are positioned adjacent to each other, whereas the contradictory values appear on the opposite ends. As presented in figure 3.1, these ten motivational values could be grouped into four higher order values that represent two bipolar dimensions, namely; Self-transcendence v/s self-enhancement and openness to change v/s conservation. In this way this theory not only looks at the values' content structure but also addresses the presence of a set of vigorous associations within and among the values.

As can be seen from figure 3.1, the higher order values of *self-transcendence (with motivational value of universalism and benevolence)* and *self-enhancement (with motivational values of power and achievement)* are

opposite to each other. On the other axis of the Circumplex the other higher order values of *conservation (with motivational values of conformity, tradition and security) and openness to change (with motivational values of self-direction, stimulation and hedonism)* lie on the opposite ends. In this way similar motivational values such as universalism and benevolence lie adjacent to each other, whereas contradictory value such as power and universalism lies opposite to each other on the Circumplex. These four higher order values along with the 10 motivational values are given in Table 3.6.

Table 3.6: Description of Higher Order Values and 10 Motivational Values

Higher order value	Value type	Description	Example values
Self-transcendence	Benevolence	Safeguarding and enhancing the welfare of those with whom one has frequent personal contact.	Helpful, Forgiving
	Universalism	Caring, appreciating, protecting and having tolerance for the welfare of all mankind and nature.	Human rights, environment protection
Self-enhancement	Achievement	Personal success in accordance to the social standards	Successful, Capable
	Power	Prestige, social status and, superiority or authority over others and over resources	Social status, Authority
Conservation	Conformity	Restraining from actions, inclinations and impulses that are likely to upset or harm anyone, and avoidance of violation of social expectations or norms	Politeness, Obedient
	Tradition	Respect, acceptance and practice of the customs backed by tradition, culture or religion.	Devout, Humble
	Security	Safety, harmony and stability of oneself, of other relationships and of the society	Social order, National security,
Openness to change	Self-direction	Independent thinking and acting – selecting, innovating, discovering	Innovation, Freedom
	Stimulation	Excitement, newness and challenge in life	Exciting life, Daring
	Hedonism	Sense of delight and sensuous gratification for oneself	Pleasure, Enjoying life

Source: Schwartz (1994; pp. 22)

Schwartz's value theory has been used for exploring consumer related attitude (Gatersleben et al., 2010), as well for exploring sustainability domain, such as research carried out on environmental and green beliefs, attitude and

behaviour (Grunert and Juhl, 1995; Nordlund and Garvill, 2002; Schultz and Zelezny, 2003; Schultz et al., 2005; Stern et al., 1993).

3.2.2.4.4. Schwartz Value Theory in Sustainability Research

Past research exploring environmental and social behaviour have utilized the self-transcendence and self-enhancement value domain of Schwartz's Value Theory (Nordlund and Garvill, 2002; Schultz and Zelezny, 1999; Steg et al., 2005; Stern et al., 1999; 1995; Pepper et al., 2009). These studies reflect a positive link between self-transcendence and pro-social/ethical behaviour/attitude and a negative link between self-enhancement and the pro-social/ethical behaviour/attitude.

Follows and Jobber (2000) showed that individuals having higher universalism and benevolence values are more inclined towards exhibiting a higher pro-social attitude. Hence a sense of responsibility towards benefiting others can perhaps lead an individual to carry out environmentally responsible behaviours. Similar results are displayed by other studies that have utilised Schwartz's values, with a prime focus on self-transcendence values, for the sake of examining environmental attitudes (such as see Nordlund and Garvill, 2002; Schultz, 2001; Schultz and Zelezny, 1999). While the self-enhancement values are negatively correlated to both the pro-social/environmental attitude as well as environmental behaviour (Poortinga et al., 2004; Schultz et al., 2005; Stern et. al., 1995).

Pepper and colleagues (2009) while examining the association between values and the socially responsible consumer behaviour also identified a similar pattern in relations of self-transcendence and self-enhancement values with socially responsible consumer behaviour: having concerns about the

protection and welfare of others. That is, their study established the existence of a positive relationship between socially responsible consumer behaviour and self-transcendence values and also showed that the opposite relation existed between self-enhancement values and socially responsible behaviour. To summarize it can safely be said that , self-transcendence/ self-enhancement values from the Schwartz value system have been utilised many times to analyse various aspects of sustainability such as environmental behaviour and socially responsible behaviour.

Given that SRI is also a form of socially responsible behaviour, it is reasonable to expect a link between self-transcendence/ self-enhancement and SRI. The next section discusses the possible link between these values and the financial return and socially responsible aspects of SRI so as to hypothesize variations in value orientations between the proposed clusters of SR-investors.

3.2.2.4.5. Variation among segments of SR-investors in terms of value orientations (self-transcendence/self-enhancement)

Self-transcendence, with Universalism and benevolence as the underlining motivational values, has been identified as an important value for those who care about social issues such as human rights or social justice (Mayton and Furnham, 1994; Wray-Lake et al., 2016). Hemingway and Maclagan (2004) and Hemingway (2005) showed that personal values have a significant impact on pro-social behaviour (Shafer et al., 2007). Likewise, Shafer and colleagues (2007) examined the possible influence of personal values (Schwartz 1992; 1994) on attitudes toward social responsibility. They observed a positive relationship between self-transcendence and support for social and ethical behaviour. This argument was based on the understanding

that values such as unity with nature, equality, social justice, protecting the environment and a world of beauty have clear relevance for social and ethical responsibility. Hemingway and Maclagan (2004) also suggested that benevolence is positively related with social responsibility initiatives as this value - represented by finding meaning in life, living a spiritual life, being loyal, honest, responsible, helpful and forgiving - echo an orientation toward altruistic and ethical behaviour (Shafer et al., 2007).

Straughan and Roberts (1999), while exploring variables useful in predicting environmentally conscious consumer behaviour, highlighted altruism as the second most important variable after PCE. They described altruism as concern for the welfare of others. Investors who have more concern for the welfare of others translate this concern into investment by selecting SRI so as to increase the wellbeing of others. Nilsson (2009) reports a positive link between altruism and SRI. Therefore, if self-transcendence values reflect care for others' wellbeing and has a positive relationship with altruistic behaviour, it is reasonable to suggest that individuals who are more concerned about the social return aspects of SRI will hold a higher level of self-transcendence compared to the individuals who choose SRI for its financial return. It is therefore hypothesized that:

H6: Segment(s) of investors giving high importance to the social return aspect of SRI would hold a higher level of self-transcendence values as compared to cluster(s) with high importance of financial return.

Occupying the opposite side of circumplex to the self-transcendence value is the self-enhancement value with motivational values of achievement and power. Value orientations like social power, success and social status represent the two motivational values of self-enhancement (Schwartz, 1992). Research indicates that individuals frequently make purchases to reflect their social status (Dermody et al., 2015; Rindfleisch et al., 2009; Richins, 2004), thus echoing a positive link between more money (to buy more goods) and higher status (Schor, 1998; Knoedler, 1999). Individuals with higher self-enhancement values are more inclined towards material goods as they use these possessions to display their achievement and wealth (Kilbourne et al, 2005; Stillman et al., 2012). It could be argued that such individuals, with a high level of self-enhancement values, would focus on financial aspect when making investment decisions. In other words it could be suggested that the regular investors who choose SRI due to the financial return aspect of SRI (Dunfee, 2003; Nilsson, 2008; 2009) hold high levels of self-enhancement values, as their choice of SRI is based on an expectation of higher financial return. Thus a positive link between self-enhancement and expected financial returns from SRI could be predicted. Given that this thesis proposes segments of SR-investors on the basis of different level of importance these investors place on financial return and social return aspect of SRI, it is hypothesized that:

H7: The cluster(s) placing more importance on financial return aspect of SRI would hold higher level of self-enhancement values as compared to the cluster(s) that value social return aspect of SRI.

Another important value that has been explored widely in consumer behaviour is that of materialism.

3.2.2.5. Materialistic value as a profiling variable:

Materialism emphasizes "possessions and money for personal happiness and social progress" (Moschis and Churchill, 1978, pp.607). Several similar definitions of materialism could be found in the fields of psychology, economics and consumer research (Torlak and Koc, 2007). Ward and Wackman (1971, p. 422) saw materialism as ''an orientation which views material goods and money as being important for personal happiness and social progress''. While, Belk (1984, p. 291) described materialism as a consumer orientation that entails the personality traits of non-generosity, envy and possessiveness. Belk (1984) further elaborated that materialism signifies the position a consumer assigns to worldly possessions. These possessions then become the greatest sources of satisfaction and dissatisfaction. Richins and Dawson's (1992) study looked at materialism as a personal value that gives significance to the ownership of material possessions. They classified material value into three categories, which were: happiness (material goods allied with well-being), centrality (material belongings have a fundamental role in life), and success (material belongings work as a source to judge an individual's success).

Materialism has been labelled as the ''dominant consumer ideology'' (Belk, 1987, p. 26; McCracken, 1988; Dermody et al., 2015) and has also been linked negatively with environmental concerns (Maio et al., 2009). Hurst et al., (2013), through meta-analysis, indicated a negative relationship between

pro-environmental attitude/behaviour and materialism. Kilbourne and Pickett's (2008) study also showed a negative relationship between environmental concerns and materialistic values in the United States. Through their research, Kilbourne and Pickett (2008) showed that the more an individual is inclined towards materialistic values, the less they become conscious about the environment. They further expressed that individuals use materialistic values as a lens through which they filter their behaviours. In this way, a person who holds high materialistic values thinks that their actions do not cause environmental problems and in this way they resolve the dissonance that is created by knowing about negative environmental conditions.

3.2.2.5.1. Variation among Segments of SR-Investors In Terms Of Materialistic Value

Taking this argument further it is reasonable to suggest that Materialism in the domain of SRI would imply that investors who hold high materialistic values would not be bothered about making any pro-social/environmental change or impact through his/her investment. This is because he/she will use his high materialistic value as a perception filter (Kilbourne and Pickett, 2008). This relationship could also be seen as a negative link between materialistic value and social return aspect of SRI. That is to say, an investor who does not value the social return of SRI, and rather is focused on financial return aspect of SRI, would hold high materialistic value. This is because the individual will tell themselves that there are no environmental problems that are caused by them (Kilbourne and Pickett, 2008) so they don't need to solve them, thus removing SEE concerns from

investment decisions. Such individual will give money much more importance as money can help them satisfy their materialistic desires. Thus the financial return aspect of SRI will become important. Contrary to this, an individual who values social return aspect of SRI more would hold low materialistic value. This argument is based on the understanding that such individuals are ready to accept an ethical penalty, which means they are ready to sacrifice some financial return for the sake of social return. Given that materialism presents significance of possessions in one's life, an individual who holds high materialistic value would always try to maximize his/her wealth as the money is a means to get materialistic products, which then provide the greatest source of satisfaction to that individual. Thus, materialism and social return could be seen as having a negative relationship. On the basis of the above discussion, the following hypothesis is drawn:

H8: The cluster(s) placing high importance on financial return aspect of SRI would hold a high level of materialistic values as compared to the cluster(s) signifying social return aspect of SRI.

3.3. Summary

As mentioned in the first chapter, the aim of this thesis is to (1) explore heterogeneity among SR-investors in terms of the importance they place on the financial return and social return aspects of SRI, so as to explore if they can be classified into unique clusters and (2) to further examine the unique demographic (age, gender, education and income) and psychographic (pro-social attitude, PCE, value and trust) profile of each cluster so as to

validate them. This chapter, while focusing on the second aim, examines and elaborates the relationship of the financial return aspect and social return aspect of SRI with demographic and psychographic variables - pro-social attitude, PCE, value and trust - so as to show how different clusters of SR-investors would be expected to have a varying profile in terms of these variables. Related hypotheses are then developed. Additionally, the difference among the clusters, in terms of these four psychographic variables - pro-social attitude, PCE, value and trust - is discussed so as to propose a means to validate the typology/segments of SR-investors. The next chapter discusses the methodological standpoint of this thesis.

CHAPTER FOUR

Chapter 4 - Methodology

4.1. Introduction

This chapter elaborates the research methodology adopted by this study. An appropriate research methodology is vital as it makes the important components of research project to work together so as to answer the main research questions (Trochim, 2006). Several important factors, such as how the research complements the previous studies and what new understanding does the research bring to the existing body of knowledge, determine the value of the research (Hackley, 2003). This chapter will shed light on the main topics that come under the umbrella of research methodology. To do so the chapter starts by positioning this study in relation to the key scientific research paradigms. The chapter also clarifies the methods chosen to assemble and investigate the data so as to test the 8 hypotheses of interest.

This chapter is organized into 8 main sections. The first section gives an overview of this chapter. Section 2 presents the justification of research philosophy. Third section presents the research design and discusses divergent research approaches and research strategy. Fourth section describes the research methods. This includes discussion of sources of data collection, sample and sampling procedure. Fifth section looks at the instruments used, this includes instruments to measure the importance of social return and importance of financial return and the four psychographic variables – pro-social attitude, PCE, trust, values (materialism, self-transcendence [universalism and benevolence)] and self-enhancement [power and

achievement]). The section also discusses the two pre-tests conducted in this study. Section six talks about the survey design and data collection. Section seven looks at the ethical considerations that this study had to keep track of. Lastly, with section eight, the chapter concludes with a summary and the process of data preparation.

4.2. Research Philosophy

Research philosophy is the position an investigator takes in conducting research (Saunders et al. 2009) and the research design revolves around this (Corbetta 2003). Research philosophy defines the way knowledge is formulated and deemed acceptable in the study and this provides direction to the investigator (Saunders et al., 2007; Bryman and Bell, 2003). Different research philosophies form different research paradigms. For a research to be good, it should rely profoundly on the research paradigm, the nature of the research questions and the context of study. Research paradigm is a framework that fundamentally influences how we perceive the world, governs the viewpoint about how things are connected and thus, is the framework in which theories are built (Voce, 2004). Ontological, epistemological and methodological assumptions are the basic beliefs that describe a particular research paradigm (Guba and Lincoln, 2008), which then directs research design (Corbetta 2003).

Both ontology and Epistemology are branches of philosophy that attempts to describe the existence of something. Epistemology is concerned with the question of how we know what we know. It looks at the origin, nature and scope of knowledge. Ontology is concerned with the nature of reality,

thus examining how something exists (Krauss, 2005). The methodology is concerned with the precise practices that the researcher uses to investigate that reality (Healy and Perry 2000) and thus attains knowledge regarding either. Therefore, ontology is 'being', epistemology is 'knowing' and methodology is 'studying' (Bryman and Bell, 2007; Burrell and Morgan, 1979; Buchanan and Bryman, 2009; Denzin and Lincoln, 2003; Guba and Lincoin, 2005; Saunders et al., 2009).

From amongst the three dominant philosophies of science - positivism, constructionism and critical realism (Alvesson and Sköldberg, 2009) - the present study employs critical realism. Table 4.1 gives an overview of these three paradigms.

Table 4.1: Research Paradigm Comparison

Phenomenology ← ---------- → positivism	Issue	Ontology	Epistemology	Methodology	Inquiry aim	Nature of knowledge
	Positivism	Naïve realism - it is assumed that the reality is understandable and driven by absolute natural laws. Testing of theories relating to actual objects, structure and processes could help obtain the true nature of reality	Dualist / objectivist; confirmation of hypothesis through empirical analysis, in pursuit of universal laws or principles.	Hypothetical- manipulative / deductive experiments; verification of hypotheses; chiefly quantitative methods	Explanation: prediction and control	Verified hypotheses established as facts or laws
	Critical Realism	"real" reality but only imperfectly and probabilistically apprehend-able	Modified dualist/ objectivist; critical tradition/ community; findings probably true.	Modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include quantitative methods	Explanation: prediction and control	Non-falsified hypotheses that are probable facts or laws
	Interpretivism / Constructivism	Relativism – local and specific co-constructed realities; the social world is produced/reinforced by humans through their action/interaction.	Transactional/subjectivist; co-created findings; understanding social world through interpretation of actions of participants; researchers' assumptions, values, beliefs, and interests intervene to shape the investigations.	Hermeneutical/ dialectical; action research; interpretive case study; holistic ethnography	Understanding; reconstruction	Individual or collective restorations coalescing around consensus

Source: Based on Alvesson and Sköldberg, 2009

Positivism became the dominant philosophy of science during the twentieth century and it has retained this position for a long time (Alvesson and Sköldberg, 2009). Positivism, with its scientific nature, tests hypothesis in a deductive manner (theory verified by observation). Under positivism it is believed that there is only one truth (reality) that is governed by immutable natural laws (Guba and Lincoln, 1994). This thesis diverges from positivism and takes the standpoint that theories and laws are only the best available knowledge that are yet to be falsified, thus, relating to Critical Realism (Guba and Lincoln, 1994). Positivism is based on the understanding that data already exists and the only task of a researcher is to gather and systematize that data into an observed reality. This thesis, however, believes that there exists a social world that is constructed and influenced by our life experiences, desires and knowledge (Bryman and Bell, 2007; Gummesson, 2000). The reality about this social world could only be understood imperfectly and as the societies change, so does this reality.

Constructivism/interpretivism, which is the opposite of positivism, posits the view that it is the mind that creates the world, thus the interpretation of world should be through the mind (Bryman, 2008; Denzin and Lincoln, 2003; Alvesson and Sköldberg, 2009; Guba and Lincoln, 2005). As Bryman and Bell (2007, pp. 19) explained that interpretivism supports much qualitative research and it is "predicated upon the view that a strategy is required that respects the differences between people and objectives and the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action". The research methodologies employed by interpretivists are influenced by this subjective view of reality, with usually

qualitatively oriented research aimed at understanding and exploring a phenomena by analysing the meaning associated with the phenomenon by individuals (Bryman, 2008; Saunder et al., 2009; Guba and Lincoln, 1994). Unlike interpretivism, this research does not discard the presence of a real world merely because the models about it are shaped as a way to simplify its complexity. Through law and concepts, one puts their models into use in the social world, and thus makes them 'real'.

Critical realism, another philosophical approach (Guba and Lincoln, 2005; Alvesson and Sköldberg, 2009; Guba and Lincoln, 1994), is often considered as the middle point between the two contrasting philosophical standpoints of positivism and phenomenology. Through incorporating elements of both, realism aims to bring together the epistemological perspectives of both positivism and phenomenology (Guba and Lincoln, 2005; Sunder et al., 2009). Realism shares two features with positivism: a) the belief that the natural and social sciences should apply similar kinds of approaches to the data collection and to explanation: b) an understanding that there exists an external reality to which researchers direct their attention. However, unlike positivism, critical realism assumes that reality is only imperfectly apprehendable (Guba and Lincoln, 1994). This study seeks to understand the different balance SR investors hold toward importance of social return and importance of financial return associated with SRI and classifying these SR investors on the basis of different combinations of these two SRI selection criteria, i.e. social return and financial return. Thus it investigates the existing reality. However it is by no means the ultimate truth, as these combinations are

susceptible to changing culture. Therefore, the ontological position of research that this study takes is critical realism.

Epistemologically this study is positioned between positivist (physical reality) and interpretivist (human cognition). Epistemologically positivism assumes that research can determine "how things really are and how things really work" (Guba and Lincoln, 1994, p.111). This viewpoint is difficult to agree with as social interactions change and drive reality. Constructivism's epistemological viewpoint is that knowledge is created as a result of interactions between the researcher and the respondents (Guba and Lincoln, 1994). This viewpoint is also difficult to agree with as the existence of real world outside our cognition cannot be denied. Epistemologically critical realism assumes that it is possible to approximate reality but it is not possible to fully know the reality. This study acknowledges that acceptable knowledge could be derived from quantitative research, however, this knowledge is susceptible to changes with the changing environment.

The methodology should also be guided by scientific research paradigms regarding the nature of reality and how understanding about reality can be grasped. According to Avision and Fitzgerald (1995) a methodology is based on some philosophical paradigm, making it more than just a collection of techniques, procedures, tools and documentation aids.

Methodologically, research could be quantitative or qualitative (Kroll and Neri, 2009). Quantitative research tests hypotheses through collection and analysis of data, while, Qualitative research, follows an inductive approach; wherein weightage is given to the significance of words, and theories are generated through this collection and analysis of data. These two approaches

provide complementary views of the social world, qualitative approach suggesting that richness (obtained through qualitative methods) can improve understanding by getting the in-depth account and information of phenomenon under study, while quantitative approach focuses on quantitatively clarifying precise or basic concepts (Cupchik 2001). Therefore broadly speaking, qualitative researchers do not employ measurements and quantitative researchers do. The chief thrust of social constructionism is qualitative, conversely, positivism is mainly quantitative. However, in critical realism there is no tendency to favour either, thus, it bridges qualitative and quantitative studies (Alvesson and Sköldberg, 2009).

Given that, under critical realism the methodology selection depends on the aim of research, the present study used quantitative data to formulate and validate a typology of investors. In conclusion, a research design was selected for the present research following a critical realist philosophy.

4.3. Research Design

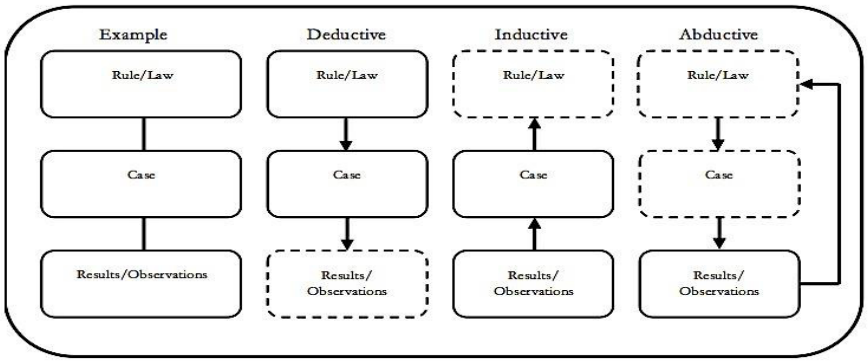
Research design offers a framework for the gathering and analysis of data (Bryman, 2004; Kroll and Neri, 2009). The selection of an appropriate research design depends on the objectives of the research and should be consistent with the chosen methodology (Halcomb et al., 2009).

The first step toward the research design is to understand and select the relation between theory and research. That is to say, a researcher must choose what should come first- data or theory - whether it is deductive (theory----confirmation), inductive (observation-------theory), or abductive reasoning. Deductive reasoning means construction of a theory that is subjected to a

thorough test. Thus, working from the theory (general), to hypothesis (rule), through confirmation (particulate), as indicated by arrows in figure 4.1. By contrast, in inductive reasoning observational statements make up the initial base, with a conclusion or hypothetical rule developed which cannot be proven with ultimate certainty. The objective of deductive approach is to get a better understanding of the phenomenon under study. Induction has reverse relation with law, case and observation, as displayed in figure 4.1. That is to say, while deductive approach follows testing of hypothesis already developed through examination of existing knowledge (Saunders et al. 2000; DeVaus 2001), an inductive approach follows collection and analysis of data resulting in generation of some theory. However, the occurrence of the two in isolation is rare and usually both methods are used simultaneously (see e.g. Glaser 1992: p.18).

The third form of inference is abductive reasoning, with formation and evaluation of explanatory hypotheses (Thagard and Shelley 1997). Abductive approach starts with a guiding principle, be it a developed theory or just a fuzzy intuitive concept, developed from previous literature (Fischer 2001b). Through literature, explanatory hypotheses are developed and tested, so as to introduce and validate a new theory/idea or concept.

Figure 4.1: Forms of Inference (Source: Fischer 2001b)



Boxes with continuous lines contain premises/hypotheses that are presupposed as given true. Boxes with dotted lines contain hypotheses that are inferred.

Given that this thesis attempts to produce and validate a typology of consumers by developing hypotheses based on the available literature and testing these hypotheses through empirical data analysis with no generally accepted theory or framework already available, abductive reasoning seems most suitable for the present study.

Traditionally three categories of Research design are available: descriptive, exploratory and causal. Descriptive research presents a precise sketch of events, situation or persons (Robson, 1993) and is considered valuable for hypothesis testing. Descriptive research is utilized to measure and describe marketing phenomena such as the questions of where, what, when, how and who. It is dealt with as a means to an end (Saunders et al. 2000) and is usually cross–sectional in nature. Cross-sectional in nature means that data collection takes place at one single period in time and is often described as a snapshot of the population (Burns and Bush, 2006). Longitudinal studies, in contrast, are aimed at the study of a phenomenon over a period of time in order to map the changes. In order to achieve this goal, sample is surveyed and

is again surveyed at least one more time. However, given its high demands of time and cost it is used relatively little in business and management research (Bryman and Bell 2007).

Exploratory research is focused on finding new insights into phenomena (Robson, 1993) by gaining background information to establish research priorities, to define terms and to clarify hypotheses (Burns and Bush, 2006). A number of methods could be used to conduct exploratory research. These involve secondary data analysis, case analysis, experience survey, projective techniques and focus groups. Exploratory research has several advantages over the other two kinds. For example exploratory research is fast if secondary data analysis is used. Additionally, it is inexpensive as compared to primary data collection. Lastly, exploratory research is a means to designing the proper causal or descriptive research study (Burns and Bush, 2006).

The third and final research design is causal research design. The difference between this and both descriptive and exploratory research design is that the causal design is concerned with identifying the cause and effect relationship between variables (Burns and Bush, 2006). Experiments are used to determine the causal relationships. In a classical experimental design there is usually an experimental group and a control group. Usually the independent variable is directed to the experimental group and not to the control group, while collecting data for the same dependent variables for both groups. True experiment must have control, manipulation and randomization. Although true experiments are rare in business, nonetheless, they tend to be very strong in internal validity (Bryman and Bell 2007).

Given that this research focuses at testing structured hypotheses, the descriptive approach was most suitable for the present study, as it is suitable for hypotheses testing purposes. Therefore, the present study used a descriptive research design.

To accomplish the aims and objectives of this particular research as stated in Chapter 1, the collection of data through quantitative methods was considered most suitable. Quantitative technique gives importance to objective measurements and the statistical, numerical or mathematical analysis of data gathered through questionnaires, polls and/or surveys. It can also manipulate pre-existing statistical data via computational techniques. As the current study is focused on analysing hypotheses constructed via literature review, therefore quantitative technique is best suited for this manuscript.

The current study used quantitative method and two pilot tests were conducted before carrying the final survey. The first pilot test was carried out to analyse the questionnaire, while the second pilot test was carried out on investors who had some investment in Triodos bank - a global pioneer of SRI in banking sector. The first pilot data collection took place through self-administered and face-to-face surveys whereas the second pilot test was carried out using an online survey. The final data was also collected through an online survey developed using Qualtrics. Details regarding all the two pilot tests are discussed in sub-section 4.5.3.

4.4. Sample and Sampling Procedure

This section discusses the sample and the sampling procedure adopted by this study for survey data collection. A sample is seen as a subset of the

population that is representative of the entire group (Burns and Bush, 2006). A sample is more suitable than a census because of two reasons: 1) given that a sample involves a smaller population size, it is cheaper than a census and 2) analysing data generated by sample is easier compared to the huge data generated by a census. The suitable sample size is dependent on the purpose of conducting the survey. If the sample size is too large, the researcher ends up wasting valuable resources and time. But if the sample size is too small, then there is a possibility that the researcher will overlook important research findings causing type II error. Thus an appropriate sample size is vital for research (Hair et al., 2008).

There are two basic sampling categories called probability sampling and non-probability sampling. All sampling methodologies are classified under these two general categories. In probability sampling the investigator knows the exact possibility of selecting each member of the population, while in the non-probability sampling the exact size of population is not known, thus in this case the chance of being a part of the sample is unknown. Both these methods have their pros and cons. The results obtained from probability samples are the only results that can be generalized. Also, this sampling technique allows the investigator to specify the sampling error. Under probability sampling, five sampling methods could be used: systematic sampling, simple random sampling, stratified sampling, cluster sampling and multi-stage sampling (Agresti and Finlay, 2008; Burns and Bush, 2006). Non-probability samples tend to be less time consuming, less complicated and easier to administer than probability samples. Nonetheless, non-probability sampling method prohibits the study's findings to be generalized and the

investigator must limit the findings to the elements or person sampled (Fairfax County Department of Systems Management for Human Services, 2003). Under non-probability sampling technique there are four types of samples: quota sampling, convenience sampling, snowball sampling (referral sampling) and self-selecting sampling (judgement sampling) (Burns and Bush, 2006).

The present study consisted of 298 respondents from a population of 1250, recruited by multistage sampling. The sampling techniques used are discussed in detail in the later part of this section. When making a decision about the suitable sample size, an unavoidable trade-off between added statistical accuracy, information and added cost, time and resources have to be taken into account. According to Luck and Rubin (1987) a sampling decision depends upon and is influenced by the desired data-analysis technique along with its requirements and constraints. Normally, as the data analysis gets sophisticated, the needed sample size gets larger (Luck and Rubin 1987).

The present study aims to use cluster analysis as one of the main data analysis technique. Given that the sample size plays a critical role in generating meaningful clusters, the question of adequate sample size is an important concern in the application of cluster analysis (Hair et al. 1998). The rule of thumb recommended by Hair et al. (1998) is that if the researcher is interested in identification of small groups in the population then a large sample should be used, whereas if the researcher is interested in only large groups then a small sample would do. However, there is no rule of thumb for determining minimum sample size for this technique (Siddiqui, 2013). Sample size in studies that compare groups range from 150 to 1200 (Siddiqui, 2013). Given that discriminant function analysis is the main analytical techniques,

other than cluster analysis, used in this particular thesis the decision of sample size was based on this technique.

Hair et al., (2008) indicated that for Discriminant Function Analysis the minimum sample size should be 5 observations per predictor, even if the predictor is not used in the analysis (like in the case of step-wise discriminant analysis analysis). There are 9 independent variables in this study, thus the minimum sample size when considering discriminant analysis should be 45. Hair et al. (1998) classified samples as less than 100 to be small, and more than 400 to be large. This thesis took a moderate approach and the aim was 250 useable questionnaires. However scholars suggest that one should increase the count of sample size by 40-50% to account for uncooperative subjects (Salkind, 1997; Fink, 1995; Kotrlik and Higgins, 2001).

4.4.1. Sample Generated from EBS

Keeping the required sample size in mind, multistage sampling was adopted. Multistage sampling is a probability sampling technique where one uses a combination of different sampling technique so as to achieve the technique that suit their study the best. For this thesis, both stratified sampling and simple random sampling technique was combined. Following stratified sampling, EBS customers were divided into two groups (strata); the active member group and the non-active member group. The active member group comprised of individuals who were active online [EBS had their active emails and these customers were also participating in EBS activities virtually]. The second strata was that of non-active members [these members were not active virtually/online]. This grouping was done as the questionnaire used in this thesis was online. In stratified sampling once the strata are developed sample

is chosen from each stratum through simple random sampling, however, in this thesis sample, through simple random sampling, was generated only from one stratum: the active member group. The survey link was sent out to the entire online database of Ecological Building Society (EBS). In simple random sampling each member of the statistical population has an equal probability of being the part of the sample. A simple random sample is an unbiased representation of the population or group. Simple random sampling allows generalisations of the statistical inferences from the sample to the population of interest. However, as already mentioned, the data is collected from an SR based institute hence this sample cannot fully represent the investment population in general, however as it generates a sample focused on SR-investors, it is argued that the sample is a good representation of the SR investors of UK in particular. Moreover, simple random sampling is the most common sampling technique if the total contactable population is known. A criticism of this methodology is that not all lists regarding the population may be available in the public domain and their purchase may be expensive; this being the case for SR investors. As mentioned earlier, general population/investors can not present the SR investors as SRI still occupies a niche. Hence a lot of time and effort was invested in getting access to EBS. However, given the importance of reducing SDB, it was considered appropriate to use this method. Thus following a multistage sampling technique, the survey link was emailed to a total of 1250 EBS active investors. The aim was to obtain at least 250 fully filled questionnaires within a period of 8 weeks. This time span was based on the resources and time available to the researcher. The final survey link was kept active for a period of 8 weeks,

commencing in the first week of December 2013 until last week of January 2014. The survey link was sent out by the EBS management to its database and only the members of EBS had access to the survey, hence decreasing the possibility of social desirability bias (SDB) by reducing the likelihood of non-SR investors being a part of this research. This is because the population of interest for this study is investors who are actually involved in SRI rather than the ones who wish to or claim to be SR investors.

As SRI is a niche industry gaining access to this population is difficult. Therefore, generating a sample from the general population was not a good option as this would have resulted in very few SR-investors being included in the sample. In order to address this issue, as discussed in chapter two, it was decided that the sample be generated from the database of a SRI provider. After several months of communication and negotiation, EBS management agreed to be a part of this research. In this way, a large enough sample of SR-investors was generated to meet the objective of the study. Although this sampling procedure means that the sample cannot fully represent the investment population in general, however it generates a sample of true SR-investors and that is one of the unique advantages of this research over past research. The benefits of this method thus outweigh the disadvantages. Moreover, as the sample was generated from a larger SR organization in UK, it is argued that the sample, at least to a certain extent, represents the greater private SR-investor population. As a small token of appreciation, participants were offered entry to a moderate prize draw. This was subject to participant's willingness to enter the draw.

In 8 weeks a total of 298 questionnaires were filled online. For the purpose of data collection, EBS sent out the online survey link via email to its investors. Additionally EBS also added the information about the research on its monthly newsletter that goes out every month to its customers only. The participation in the survey was voluntary. The survey link was kept active for 8 week during which a total of 298 investors started and completed the survey, out of a total of 1250. Thus giving a response rate of 24%, this was in excess of the initial anticipation.

4.4.2. Steps towards Finalization of Survey

Table 4.2 present an overview of steps involved leading to the final survey in this thesis. A literature review, including analysis of periodicals, books, academic journals and conference and workshop proceedings, was conducted throughout the research. The initial phase was the sorting round. Scales to measure importance given to social return and importance given to financial return were collected and discussed with group of two judges (2 PhD student) and a Lecturer at Cardiff Business School. The aim was to develop construct validity of the scales. Furthermore, the scales to measure the four psychographic variables, studied in this thesis, were also discussed with the lecturer (the then Supervisor of this author) and later with the management of EBS. The aim of this step was to see if the items used to measure different constructs in the study are suitable for SR investors of UK in general and consumer of EBS in particular. As a result of the discussions changes were made to some of the items.

Table 4.2: Overview of steps taken to develop the final survey in this study			
Method	**Type**	**Number**	Year
Literature Review	Examination of academic magazines and journals, periodicals, books, conferences and workshops proceedings.	-------	September 2010- January -2016
Sorting Rounds	Sorting of items for questionnaires by a group of 2 judges (PhD student) and Feedback from the supervisor. The objective was to ensure content validity.	1st Round	September 2013
	Sorting of items for questionnaires by a group of data analysts from EBS. The objective was to ensure survey feasibility for EBS customers.	2nd Round	November 2013
First Pilot Study	Paper questionnaires to post-graduate students in business school. The aim was to get feedback on the structure of questionnaire	20 usable replies	October 2013
Second Pilot Study	Survey link sent to investors of Triodos bank (SR Bank). The aim was to establish initial reliability and validity, and to get feedback on the structure of the questionnaire	25 Usable Replies	November 2013
Final Online Survey (1st Data Set-EBS)	Online survey link of the questionnaire sent to the database of Ecological Building Society (EBS) consumers from Cardiff	298 Usable Replies	December 2013 - January 2014
Final Survey (2nd Data Set)	Paper questionnaires to general population of Cardiff (based on their willingness). The aim was to see the uniqueness of 1st dataset (EBS) by analysing the existence/absence of proposed investors' clusters.	100 Usable Replies	March 2015 – April 2015

*Source: This Research

The finalized items were then used to construct a questionnaire. Two pilot surveys were conducted to obtain feedback on the questionnaire. A detail discussion of these steps is presented in next section 4.5. The strongest and most significant in terms of the used methods is the final online survey. The online survey was utilized as the main data collection instrument as it allows investigators to inspect real investors (Bryman and Bell, 2003; Saunder et al., 2009).

4.5. The Instrument

This section describes the instrument used in this study. This section first discusses all the measurement scales this study has utilized. Next is a discussion

on designing the survey questionnaire, and lastly is the discussion of the two pre-tests conducted prior to the main data collection.

4.5.1. Measurement scales used in this study

This section looks at the scales that were used to measure different constructs being studied in this research. The conceptualization of these constructs has been described in Chapter 3. Discussion on the form of response to these measurement scales is also presented. All the variables used were generated from past research within either pro-social/ethical consumer behaviour literature or from SRI specific literature. All the constructs were modified and altered to avoid the problems faced while opting for too general measures to study pro-social behaviour (e.g. Follows and Jobber, 2000) and to make the variables fit in SRI context, instead of general consumer behaviour.

To ensure valid and reliable measures, all the modified constructs were measured through multiple items. Moreover, these items were pre-tested through two pilot studies. The items used for this study are displayed in Appendix one. Details of variables incorporated in the questionnaire are given next.

4.5.1.1. Clustering Variable

As stated earlier the first aim of this manuscript was to see if SR investors are homogeneous or can they be clustered into heterogeneous groups based on the importance given by them to the two SRI returns: social and financial. In order to see the existence/absence of the clusters proposed in chapter one and two the first component of this construct "Importance of social responsibility and financial return in SRI" was to address and reflect

importance given by an individual investor to the "financial return" and "social return" aspects of SRI while investing. Two questions were chosen to serve the purpose. The first question asked the participants to grade the level of importance given to financial returns and social responsibility while making an SRI decision. Whereas, the second question required the participants to imagine that two forms of returns, namely: "social return" (socially responsible gain to society through SRI) and "financial return", could be generated through SRI and then they were asked to identify the importance given to these different forms of return. Question 1a and 2a formulated the SR index, whereas 1b and 2b represented financial return index. This scale was chosen from Nilsson's (2008; 2009) work on SRI mutual fund. However, as the questions were designed for SRI mutual funds, therefore they were amended to fit for general SRI rather than just for mutual funds.

4.5.1.2. Profiling Variables for External Validity of Clusters

After looking at the clustering variables the focus is shifted to the external validity of the proposed clusters. For this purpose four psychographic variables: pro-social attitude, PCE, trust and values (materialism, self-enhancement: achievement and power, and self-transcendence: universalism and benevolence), as identified through past research are chosen by the current manuscript. Each variable is individually discussed in detail below.

4.5.1.2.1- Operationalization of Pro-Social Attitude

The aim of this component was to address and reflect investor attitude towards specific pro-social issues, relevant to SRI. In addition to this, the researcher also wished to analyse the attitude towards these SEE issues within

an investment context, as the majority of the studies in the past were more focused on a single or only a few of the SEE issues, with a majority of them focusing on environmental attitude (e.g. Roberts and Bacon, 1997; Van Liere and Dunlap, 1980) rather than all the issues addressed in the context of SRI. In this regard, Nilsson (2008) constructed a new scale that focused on all issues relevant to SRI behaviour. Human rights, workplace rights, corruption, production of harmful goods and environmental care were the five major categories of issues that were observed with regards to SEE aspects of investment. A single item reflecting each issues' perceived importance in the context of investment was created, resulting in a 5-item scale. Participants were asked to rate the issue on a 5 Likert scale, with 1 representing ''not at all important'' and 5 representing ''very important''. This scale received a high internal reliability with "0.847 Cronbach α" in Nilsson's (2009) study. It also displayed a good reliability with "0.773 Cronbach α" for the current work. However, as this scale was developed while focusing on SRI mutual funds, therefore it was slightly modified to fit the current piece of research.

4.5.1.2.2- Operationalization of Intention

This scale was opted from Hofmann et al.'s (2008) research work, which was done to understand behaviour towards SRI and non-SRI businesses. The scale was reworded a little to fit into the current research context. As it is focused on SRI only, so it was modified slightly to be suitable for SR-investment in general, instead of being specific to a particular business. However, after several discussions with the EBS members it was decided to drop this variable as the participants were actually carrying out SRI hence

asking them regarding their intention/willingness to be a part of SRI was considered inappropriate, as their actions already revealed their willingness.

4.5.1.2.3- Operationalization of Perceived Consumer Effectiveness (PCE)

Literature has identified PCE as an important influencer on SR behaviour. PCE, as conceptualized by Berger and Corbin (1992), is considered as the evaluation of self in the context of issue. Previous literature has widely measured PCE (such as Ellen et al., 1991; Kim and Choi, 2005). The measures opted for PCE were based on previously used scales. This research used the measures opted for by Nilsson (2008, 2009) in his research towards SRI mutual funds. These measures were, in turn, opted for by Nilsson from previously used scales (Roberts, 1996a; Straughan and Roberts, 1999). Nilsson's (2008, 2009) work was focused on SRI mutual funds, however, as this research in not focused on mutual funds only, thus an effort was made to avoid too much specification (as mentioned above). Therefore two items were modified (reworded) to fit the context of SRI in general, rather than SRI mutual fund in particular. The measure consisted of four items with 5 point Likert scale, which were originally selected from previous literature (Roberts, 1996; Straughan and Roberts, 1999) by Nilsson (2008, 2009), which were further reworded, albeit slightly, to fit in the context of current research work.

4.5.1.2.4- Operationalization of Trust

This scale for trust was opted for from Nilsson's (2009) research work. However, the scale was reworded a little to fit into the current research context. So it was modified slightly to be suitable for SR-investment in general and for EBS in particular.

4.5.1.2.5- Operationalization of Values

With regards to values, the survey was divided into 2 sub sections. The first dealt with materialistic value while the second measured the 2 higher order values via 5 underlying motivational values, namely self-enhancement (, power and achievement) and self-transcendence (universalism and benevolence), identified by Schwartz in his Value theory (1992; 1994) .

4.5.1.2.5.1- Operationalization of Materialism

This study utilizes modified version of Moschis and Churchill's (1978) scale to measure materialistic values. Different studies have adopted the scale. Lui et al., (2012) and Schaefer et al., (2004) have used a seven-item version of materialistic attitude scale. For this particular thesis, the scale was discussed with two judges (1 PhD student and 1 academician) from Cardiff Business School and one item "people judge others by the things they own" was replaced by "the things one own says a lot about how he/she is doing in life" taken from Richen and Dawson's (1992) materialistic value scale. Additionally one more item "some of the most important achievement in life includes acquiring material possessions" was taken from Richen and Dawson's (1992) materialistic value scale. Moschis and Churchill (1978) defined materialistic attitudes as ''orientations emphasizing possessions and money for personal happiness and social progress''. This thesis thus operationalized materialistic attitude with 8 questions measured on a five point Likert scale with (5) being 'strongly agree' and (1) being 'strongly disagree'. Sample questions include "My dream in life is to be able to own expensive things" and "it is true that money can buy happiness."

4.5.1.2.5.2- Schwartz Value Survey (SVS) for measurement of the motivational values

Schwartz value survey (SVS) with a 25 items inventory (Schwartz, 1992) was used without modification to measure the five motivational values. Following Hansen (2008), a five point Likert scale ranging from 1 being 'not important' to 5 being 'very important' was used to measure respondents' assessment of how important the values were to them in their life.

In summation, multivariate measurements were used for each variable. These scales are known as summated scales. Summated scale is are those scales where a number of single variables are measured into one amalgamated measure. The purpose is to avoid the use of only one variable to characterize a concept (Hair et al., 1998). There are two specific benefits of a summated scale. First, the use of multiple variables decreases the reliance on a single response and thereby providing means of overcoming measurement error. It could be argued that multiple variables can help attain the true response better than what could be attained through a single response. The second benefit is the ability of a summated scale to signify various aspects of a concept in a single measure with the purpose of attaining more well-rounded standpoints (Hair et al., 1998).

All but five constructs – universalism, benevolence, achievement and power- in the study were measured by asking participants questions to be answered on a five-point Likert scale. Though originally these scales (of Schwartz Value survey) used 7-point Likert scale, however Daws (2008) stated that 5 and 7 point scales produce similar results. Participants usually avoid the extremes when there is a bigger scale, in responding to the questionnaire items (Hair et al., 2008), thus selection of a five-point Likert

scale offers appropriate choice (as the scale will not be too big to display the extreme points as too far from the centre point) and yet makes things manageable for participants, as a seven-point or higher scale could result in only a few respondents having a clear idea of the difference between these options (Dawes, 2008). This was done to keep comparability of results.

4.5.2. Designing the questionnaire

A questionnaire is an important ingredient in the research process and it helps to translate the research objectives into specific questions, to standardize the feedback from participants, speed up data analysis, and serve as the quality control of any feedback given by the respondents (Burns and Bush, 2006). A questionnaire with measurement scales for importance of financial return, importance of social return, pro-social attitude, PCE, trust, materialism and five motivational values was developed. Given its importance it is vital to have a good questionnaire design. Figure 4.2 presents the steps involved in the process of initial preparation of questionnaire design and finalisation of online survey.

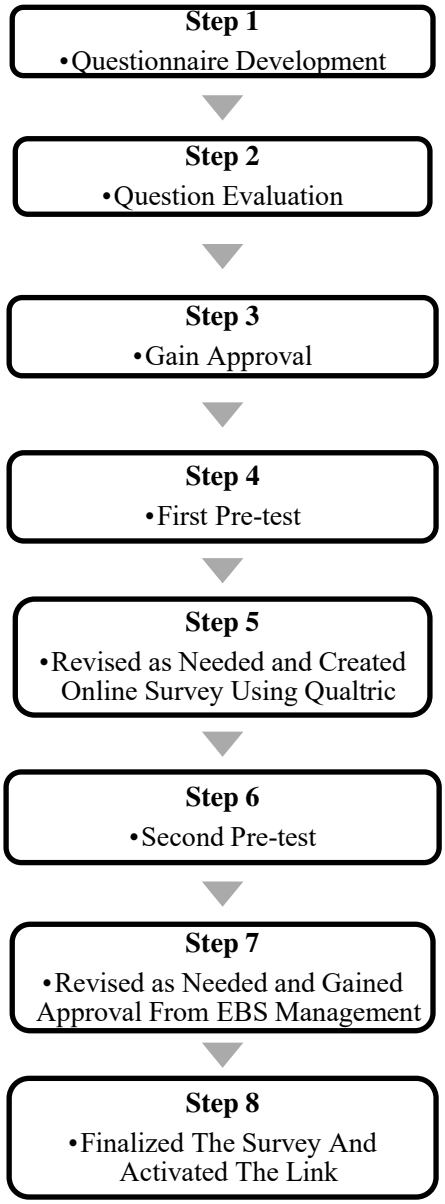


Figure 4.2: Steps involved in the Survey Design Process

The aim of the study was to examine the balance between importance given to financial return and importance given to social return by SR investors so as to classify these investors with respect to difference in this balance. Apart from that, the study wanted to measure investors' values, level of pro-social attitude, level of trust and PCE so as to validate the classification. As represented in figure 4.2 the first step in the questionnaire design is the questionnaire development. Sequence of the questions in a

questionnaire is considered vital for success of a study (Churchill, 1992). Due to the importance of structure of a questionnaire, considerable emphasis was placed on the layout of the questions for the questionnaire. Following the guidelines proposed by Churchill (1992), the first set of items were simple and non-threatening, this encouraged respondents to relax and motivated them to answer the complete questionnaire with a relaxed mind. Personal questions, which could be sensitive, like personal profile or demographics, were placed in the last section of the questionnaire. Also, the only two open-ended questions, which asked respondents for a feedback or comments about the questionnaire, and contact detail to be considered in the prize draw, were placed at the end of the questionnaire. The supervisor and research ethics committee members then evaluated the questionnaire and approved the same.

The next step was to conduct pre-tests among selected respondents. Two pre-tests were conducted. Both the pre-test were aimed at identifying potential problems with the survey design. Details are discussed in sub-section 4.5.3. Following the first pre-test, changes were made to the survey design and online survey was created using Qualtrics. This followed a second pre-test with the online survey having an improved design. The two pre-tests led to finalization of the online survey and the survey was then discussed with the management of EBS. With the approval on design, outlook and presentation of the survey by the supervisor and EBS management the survey link was ready to be distributed among the actual EBS investors.

4.5.3. Pre-Tests

Pilot study is a vital stage in the process of designing a questionnaire. The aim of the pilot study is to determine the performance of the questionnaire under the actual conditions of data collection. It is considered the most important step in survey development (Churchill and Iacobucci, 2002; Cooper and Emory, 1995). This research carried out two pilot studies before going for the main data collection. The two pilot tests are discussed below.

4.5.3.1. First Pilot Test

An initial pilot test of the overall instrument was the next stage of the development process. Pilot testing acts as a crucial aid in the development of a good questionnaire (Churchill, 1992; Dillon et al., 1990). This stage provides an opportunity to detect a range of potential mistakes, ranging from the merely inconvenient ones to potentially catastrophic ones that can ruin the whole study. Therefore, this thesis viewed pilot testing as the best safety net. Being an initial test the sample size was kept quite small. Questionnaires were given to a convenience sample of 20 randomly selected post-graduate students from Cardiff University. This sample was selected because the researcher wanted opinions about the questionnaire from participants who had good questionnaire and research related knowledge and skills. With Cardiff University ranked 5th in the UK (REF, 2014) and among the top 125 Universities in the world (QS World Rankings 2014/2015) for research excellence, this sample was considered suitable. Pilot-test revealed that on average, participants took about 20-30 minutes to complete the questionnaire.

The goal of the pre-test was to confirm that the mechanics of composing the questionnaire had been ample. To accomplish this, the respondents were asked to first complete the questionnaire, and then comment on its wording, questions layout, length, and instructions.

The design of the questionnaire was criticised by some participants as it had a cluttered appearance. To deal with this issue related questions were put together in a group to give the illusion of reduced length of the questionnaire. Each question was numbered so one could keep track of their progress. Largely, this step aimed to satisfy the guidelines for the ordering of the questions agreed to by many researchers (e.g. Churchill, 1992; Malhotra, 1996), while using the pre-tests as a mode of improving and validating the structure of the questionnaire.

4.5.3.2. Second Pilot Test

After the first pre-test the questionnaire was revised and an online survey was developed using Qualtrics. Special attention was paid to the structure and wording of the questions. The full-scale pilot test of the revised questionnaire was the penultimate stage of the validation process. For the purpose of data collection for the second pre-test the researcher attended the annual meeting of Triodos Bank held in Bristol in first week of October 2013. People who attended the meeting were approached by the researcher and were asked if they held any investment or saving with Triodos bank. The individuals who replied yes to the first question were then introduced to the research and were asked if they were willing to be a part of the research. They were informed that their participation was voluntary and they could

withdraw from it at any time without giving any reason. This was done through verbal communication as well as a one page flier comprising information regarding the research and the researcher. About 70 people were introduced to the research. The willing investors were asked to either give their email to the researcher for her to contact them with the survey link or alternatively contact the researcher via the information given on the flier. A total of 25 investors showed interest in the research and provided the researcher with their email for further contact. 5 individuals contacted the researcher later that week.

The principal aim of this test was to not only validate the appropriateness, reliability and comprehensiveness of the measurement scales and the layout of the online survey. But to also get data from actual SR investors to gain an initial set of results to analyse the proposed phenomenon in actual SR investors. The survey link along with an introductory email was then sent to these 30 individuals and they all completed the online survey. Hence at this stage 30 participants took the online survey. Among the respondents 46% were female and 54% were male. Data obtained at this stage was used for initial tests.

Reliability refers to the consistency, accuracy, reproducibility and stability over time of a measurement instrument (Kerlinger, 1979). Many statistical methods, such as split-half technique, Cronbach's alpha, and test-retest approach, could be used to examine reliability (McDaniel and Gates, 2005). The internal consistency method - Cronbach's alpha - is the most prevalent method for determining reliability (Koufteros, 1999). Generally, scales with an alpha score over 0.7 are considered reliable (Churchill, 1979).

The results of the second pilot-study showed that Cronbach's alpha values for all the measures were found to be above 0.7. Table 4.3 gives the alpha values for each scale obtained through the second pilot-test.

Table 4.3: Reliability Analysis For Scales Based On Second Pilot-Test

Variables	Cronbach's Alpha	Number of items
Importance of Social Return	.847	2
Importance of Financial Return	.841	2
Pro-Social Attitude	.798	5
PCE	.689	4
Trust	.814	5
Intention to Invest in SRI	.925	6
Materialism	.823	9
Schwartz Values		
Universalism	.685	8
Benevolence	.659	5
Achievement	.643	4
Power	.677	5

Given the small sample size any other analytical test was not considered suitable at this stage. This second pre-test was a rehearsal for the actual survey. According to Churchill (1992), most academics experience a vocabulary problem since the majority of them are more highly educated compared to the typical questionnaire respondent. As the samples for the second pre-test were similar to those of the proposed main sample, their feedback on instructions and wording of the measurement scales along with the outlook of the survey was considered important to validate the online survey. Respondents were asked to comment on the wordings, ease of understanding and sequence of the questions. They were also asked to give feedback on the display and visual appearance of the survey. Evidently, the extensive literature review, and the recommendations and feedback received

from the lecturers and researchers could be viewed as a valuable means to improve content validity. Most of the participants affirmed that all the items as well as instructions were easily understandable. A few elder participants recommended a bigger font sizes. On average it took 25 minutes to fill the questionnaire.

Based on the feedback from the second pilot-test the font size of the online survey was increased by two points. Special commands were applied to make sure no question is left unanswered. After a few adjustments in instructions the online questionnaire link was ready for the main survey. A copy of the final questionnaire used in this study is provided in Appendix two.

4.6. Survey Design and Data Collection

In this study the survey approach of a structured online questionnaire was employed as the main method for data collection. A structured questionnaire has several benefits, one being that a structured questionnaire ensures that all the respondents answer questions in the same order, thus confirming a degree of uniformity. Also the length of a structured questionnaire is better controlled compared to an unstructured one (Churchill and Iacobbucci, 2002; Saunders et al., 2009). Moreover the questionnaire being online eliminated the geographic barrier as the link was emailed to EBS database which included investors from throughout the UK.

The survey approach was suitable to generate data that was used to testing the research hypotheses presented in chapter 3. Survey approach has several advantages like ease of administration, standardization, suitability for statistical analysis, and suitability for tabulation (Burns and Bush, 2006).

With regards to the administration of the questionnaire, two types of administration methods are available. These two types are interview administered and self-administered (Bryman and Bell, 2007; Saunders et al., 2009). For self-administered questionnaires postal services, delivery and collection or internet could be used as a means of distribution. Whereas the interview administered questionnaires are usually completed via telephonic or face-to-face interviews. Self-administer method, wherein the participant completes the survey on her/his own, was adopted as the main method to administer the survey. Whereas a face-to-face survey is where the investigator reads questions to the participant and records his/her answers. This approach offers feedback, adaptability, rapport and quality control of participants (Burns and Bush, 2006). Additionally, this method of survey administration helps the investigator to avoid any uncompleted questionnaires. Nevertheless, this approach has its drawback such as slowness, human error, fear of interview evaluation caused by the presence of researcher which may create nervousness, and cost.

For the final study, as mentioned above, the option of Internet survey was considered, as they are lower in cost than paper based questionnaires and they eliminate the geographic boundaries and barriers by being available everywhere.

In summary, this study used survey for main data collection. The main data collection involved several procedures. Participants were contacted directly by the EBS management via email containing an introduction of the researcher and a brief description of the research along with a link to the survey. Additionally the research was also promoted via advertisement of the

research in the EBS monthly newsletter. Participants were encouraged to feel free to ask any questions related to the research via emailing the researcher. At the end of the survey the participant were asked to provide their email or phone if they wanted to be a part of the two draws - two £75 lazy weekend gift hampers - as a token of appreciation. Due to the length of the questionnaire, it took from 20 to 45 minutes to complete a questionnaire. Participants were willing to participate because they found the research topic interesting and very relevant to them. A few of the participants were interested to know more about the findings of this research project. Additionally 8 participants agreed on becoming part of (a proposed) future project to understand SRI phenomenon via in-depth study of SR investors via in-depth-interview.

Furthermore a second dataset was collected using non-probability convenience sampling technique. This data was collected via paper based questionnaires, using self-administer method, from general public. The questionnaire included questions regarding importance of financial return and importance of social return. However as it was assumed, based on past research (Nilsson, 2009; Nilsson et al., 2014), that general population would have less SR investors, hence the questions were reworded a little to say "if you invest in an SR organization…" rather than having a more affirmative statement about SR investment (Nilsson 2009, Nilsson, 2015). A total of 100 questionnaires were filled over a period of 4 week starting from the mid-March 2015 till mid-April 2015.

4.7. Ethical Issues

Considering ethical issues is important when conducting research. Several ethical issues had to be considered for the present study. The first ethical issue is invasion of privacy of the respondents. It is not uncommon for a respondent to refuse to answer a question whose answer contains information that the respondent does not want to make public. Such could be questions about age, income, specific beliefs or even their actual investment undertaken. A researcher must respect participant's privacy and anonymity. To deal with this ethical issue, several steps were taken. Firstly the link to the survey was sent out by the EBS management so that the information about the participants is kept safe. The participants were given an option to leave the section empty that required them to give their contact information for the draw, as several participants did not disclose their identity; hence the issue of participants' identity was kept in mind from the beginning. Moreover, the respondents were informed that that they could withdraw from the research at any time without giving a reason. Additionally, the respondents were assured that the information they provided would be treated as confidential and anonymous.

Informed consent was another ethical point to be considered. Ethically a participant should be fully informed about the research process before he/she makes the decision to participate. The researcher provided as much information as might be needed by participants. This way the participants had full information about this research project before deciding to participate and thus they made informed decision as to whether or not they desired to participate. A copy of the ethics form for this study is provided in Appendix

three. The last ethical consideration was maintaining the confidentiality of records. This means the findings of research should be clear of any individual identification. In this regards the researcher was extra careful when dealing with the identities of participants. Respondents were assured that the research findings would not have any individual identifier.

The participants of this research were not required to give any contact details. However, the participants who wanted to be a part of the prize draw were asked to provide some contact detail with which the researcher could contact them in case they were one of the winners. Also the participants who wanted to know about the findings of this study were requested to provide a working email address on which the researcher could email them the findings once the research was published. The above said was done for both the surveys.

4.8. Summary

The current research used quantitative method in order to develop, validate and explore investors' categories with respect to the importance they give to the financial return and the social return aspects of SRI. This chapter also gives justification of the selected methodology. The rationale for selecting EBS investors for this study has already been covered in chapter two, therefore it was not repeated in this chapter.

The various steps that were taken to transform the data before it could be used for quantitative analysis are presented in Chapter 5. Quantitative data obtained for this thesis came from the self-administered online survey. The raw data was entered into an SPSS file using a standard SPSS version 20

statistical program. There was no need to manually enter the data as the data was already available online and hence a lot of time and effort was saved. The items that needed to be reversed coded were changed. SPSS's transform data option was used for this purpose.

The next step was to group items. Given that the items measuring different variables were presented randomly in the questionnaire, it was necessary to group different items that were measuring a single variable. For example five items measuring trust were grouped together. Similarly, nine items measuring materialism were grouped together and 4 items measuring PCE were grouped together. The same was done for the items measuring other variables under examination in this thesis. The values of the items in each group were then added together and an average was taken. This process was done for all the variables to obtain a composite measure. The next two chapters present the results of the quantitative analysis of data collected.

CHAPTER
FIVE

Chapter 5 - Descriptive Analysis

5.1. Introduction

This chapter summarises the rudimentary statistics related to the participants' demographic profile and the constructs inspected in the present study. An initial understanding of collected data (298 respondents) is formulated through use of SPSS version 20 and the relevant literature (Bryman, 2004; Burn and Bush, 2006; Hair et al., 2010; Malhotra et al., 2012; Pallant, 2007). The chapter presents the descriptive analyses in order to explore respondents' characteristic (Burns and Bush, 2006).

This chapter comprises of seven sections with the first one giving an overview of the chapter and the order of presentation. When dealing with human study it is considered beneficial to gather information about socio-demographic profile of the sample, in addition to other relevant background information of the sample, as it helps in understanding the characteristics of the sample and in dealing with specific questions (Pallant, 2007). Therefore, after looking at the non-response bias in section two, a description of participants' characteristic via statistical concept of percentage is presented in the third section.

An overview of respondents' answers to the survey questions is presented in section four. Statistical concepts of central tendency (mean), dispersion (Standard deviation) and percentage frequencies are chosen for this section. Cronbach α and item-total correlation for scale reliability and exploratory factor analysis for scale dimensionality is presented in section five.

After looking at the reliability and dimensionality, the data is prepared for multivariate analysis carried out and presented in the next chapter. For the sake of data preparation, screening is carried out via missing data's evaluation and its impact on the data, outlier(s) identification, and normality assessment. This is achieved through the utilization of Mahalanobis D^2 to analyse multivariate outliers and through skewness and kurtosis for assessing normality in section six. The final section gives the summary of this chapter.

5.2. Response Rate and Non-Response Bias:

The process of final data collection took place over a period of 8 weeks, commencing in December 2013 and ending in January 2014. An online survey link was sent out in the first week of December to a mailing list of 1250 members of Ecological Building Society (EBS). A total of 298 participants completed the online survey in due time, giving a response rate of 23.84% of the original sample. The response rate was higher than the initial anticipation. The survey link was sent out by EBS authorities, and the entire mailing list comprised of account holders only. Although it was anticipated that non-respondents did not differ from the respondents, however Wilcoxson-W test and Mann-Whitney-U test were carried out to deal with non-response bias. Lambert and Harrington (1990) back Armstrong and Overton's (1977) advice to compare the responses of last quartile participants to those of first quartile participants to investigate any potential non-response bias. A series of t-tests for all variables with Likert-scale, including importance of social return, importance of financial return, pro-social attitude, PCE, trust, materialism, universalism, benevolence, power and achievement, reveal no significant difference between the two quartiles

($p>0.05$). On this note it was presumed that the respondents and non-respondents did not differ (see Appendix four).The next section, gives an overview of the participants demographic.

5.3. Overall Sample Demographic Profile

This section highlights the demographic characteristics of SR-investors. An awareness of these SR-investor characteristics will empower the SRI providers to specify their sales strategies targeting explicit SR-investors group(s), while dealing with the internal matters regarding the selection and retention of employees sharing similar orientations and affinities (McLachlan and Gardner, 2004; Williams, 2007). In addition to this, it is crucial and critical for the organizations to have an understanding of the SR-investors' demographic characteristics (along with the issues considered important by them when making investment decisions) specifically because of their increasing importance, alongside the increasing demand by the SR-investors to further engage with the directors and decision makers of publicly listed companies in an attempt to influence the corporate decision-making.

The demographic profile of the survey's respondents generated through preliminary data analysis presented in Table 5.1 and Figure 5.1 shows that more men (56 percent) than women (44 percent) were in the sample. Literature had revealed that women are expected to make a higher proportion of SR investors than men (Beal et al., 2005; Junkus and Berry, 2010; Lewellen et al., 1977; Schueth, 2003; Tippet, 2001; Tippet and Leung, 2001). As for the current survey, it is noted that men make up a higher proportion. However, no conclusions regarding men/women being more

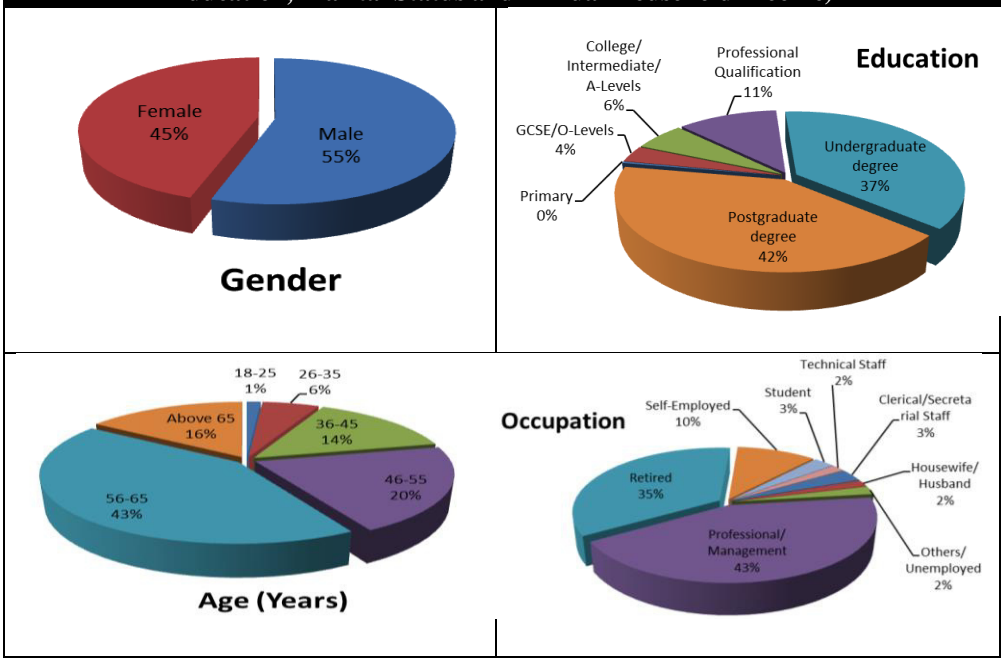
socially responsible while undertaking investment decision can be drawn from the above.

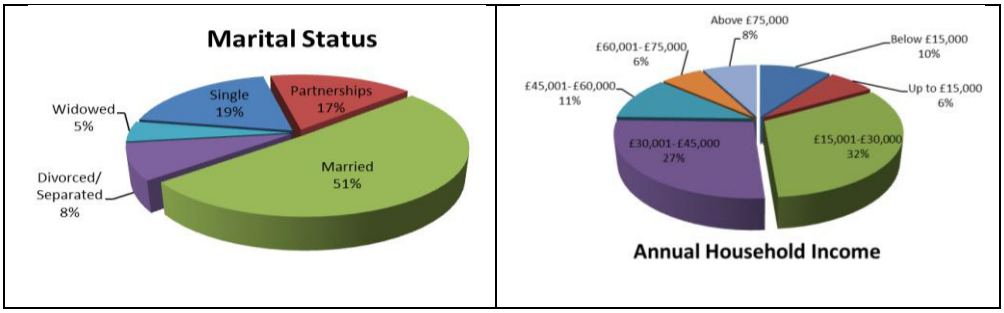
Table 5.1.: Overall Demographic Profile of Survey Respondents (Source: This Research)

Demographic Variable	Category	Research Sample (n = 298)	
		Frequency	Percentage
Gender	Male	166	56
	Female	132	44
Age	18-25 Years	4	1
	26-35 Years	16	5
	36-45 Years	44	15
	46-55 Years	61	21
	56-65 Years	126	42
	Above 65 Years	47	16
Highest Educational Qualification	Primary	1	0
	GCSE/O-Levels	11	4
	College/Intermediate/A-Levels	20	7
	Professional Qualification	35	12
	Undergraduate degree	111	37
	Postgraduate degree	120	40
Occupation	Student	9	3
	Housewife/Husband	6	2
	Retired/Pensioners	103	35
	Management/Professional	126	43
	Clerical/Secretarial Staff	10	3
	Technical Staff	6	2
	Self Employed	31	10
	Others/Unemployed	7	2
Annual Household Income	Below £15,000	31	10
	Up to £15,000	20	7
	£15,001-£30,000	101	34
	£30,001- £45,000	73	25
	£45,001- £60,000	33	11
	£60,001- £75,000	17	6
	Above £75,000	23	8
Marital Status	Single	54	18
	Partnerships	50	17
	Married	154	52
	Divorced/Separated	26	9
	Widowed	14	5
Percentage Invested in SRI	1-20%	132	44
	21-40%	57	19
	41-60%	53	18
	61-80%	20	7
	81-100%	36	12
Risk Perception	Much Riskier Than Ordinary Ones	80	27
	A Little Riskier	149	50
	About The Same	39	13
	A Little Less Risky	1	0
	A Lot Less Risky	29	10
Return Perception	A Much Lower Rate of Financial Return	12	4
	A Slightly Lower Rate of Financial Return	172	58
	A Similar Rate of Financial Return	96	32
	A Slightly Higher Rate of Financial Return	17	6
	A Much Higher Rate of Financial Return	1	0

The largest ***age group*** consisted of those aged 55-65 years (42%), followed by the age group 46-55 years (21%). This was followed by two age groups, i.e. above 65 and 36-45, representing 16% and 15%, respectively, of the respondents. 5% of the respondents fell in age group 26-35, with only 1% between 18-25 years. As the age trend in the current study is more inclined towards middle to elder age with mean age of 49 years, thus the argument that in general younger investors will display greater SRI behaviour (Cheah et al., 2011; Diamantopoulos et al., 2003; Hayes, 2001; Laroche et al., 2001; Lewellen et al., 1977; Schueth, 2003) is not supported by the current research. However, several researchers had previously identified SR investors belonging to middle-age to elderly age group (Mackenzie, 2000; Pérez-Gladish et al, 2012; Rosen et al., 1991; Woodward, 2000), hence supporting the current findings.

Figure 5.1: A Pictorial Profile of the Survey Respondents (Gender, Age, Occupation, Education, Marital Status and Annual Household Income)





Source: This Research

For ***education level*** the results showed a greater concentration towards the upper end of the scale. 40% of the participants had postgraduate university education, 37% had undergraduate university education, 12% had Professional Qualification, 7% had College education, and only 4% of the participants had secondary education. Thus the current study support the link between education and SRI, as majority of the past research identify SR investors to be well educated (Cheah et al., 2011; Dorfleitner and Sebastian, 2014; Junkus and Berry, 2010; McLachlan and Gardner, 2004; Nilsson, 2008; 2009; Nilsson et al., 2014; Rosen et al., 1991; Schueth, 2003).

By ***occupation*** the largest group of respondents were professionals (43%), followed by pensioners (35%) and self-employed (10%). This is in line with past research as SR investors have been identified as professionals (Lewis and Mackenzie, 2000; Pérez-Gladish et al, 2012).

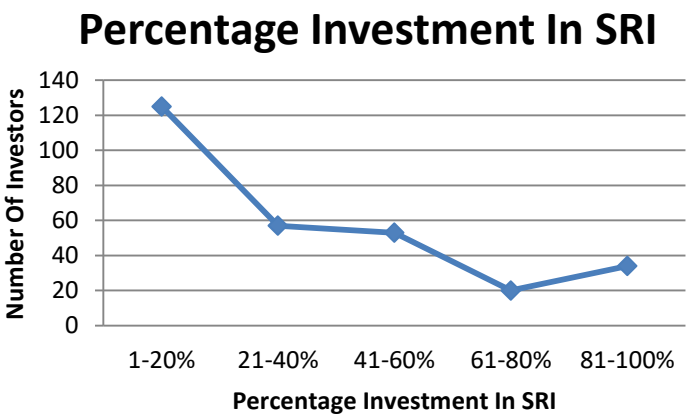
With regards to ***relationship status*** more than half of the respondents identified themselves as married (52%), with the remaining being single (18%), in partnership (17%), divorced (9%) or widowed (5%). Though past research show single, living alone individuals to be more inclined towards SRI (Haigh, 2008; Junkus and Berry, 2010), however the current research identify SR investors as being married (52 percent) or in a partnership (17 percent).

The ***annual household income*** varied widely among the respondents. The majority of respondents had an annual household income of £15,001-£30,000 (34%), followed by respondent group having £30,001- £45,000 annual household income (25%), followed by respondents with an annual household income of below £15,000 (17%), followed by those having income above £60,000 (14%) and few with an annual household income of £45,001-£60,000 (11%). Thus the SR investors of the current study can be identified as those belonging to middle income level; earning between £15,000 and £45,000 annually. Past research display mix results regarding SR investor's income level, where some have identified SR investors having higher household income (e.g. Beal and Goyen, 1998; Tippet and Leung, 2001; McLachlan and Gardner, 2004; Williams, 2007; Haigh, 2008). Others identify them as middle-income professionals (Lewis and Mackenzie, 2000; Rosen et al, 1991; Woodward, 2000) thus supporting the results of the current research.

With regards to the pattern of the '***percentage investment in SRI'***, figure 5.2 suggests that majority of the respondents (44%) had only 1-20% of their total investment placed under SRI, followed by 19% having SRI between 21-40%, decreasing to 18% of the respondents having 41-60% of their total investment under SRI, whereas only 12% of the respondents had 81-100% of their investment under SRI, with 7% having 61-80% of their total investment in SRI. The results evidenced a decrease in percentage of respondents with the increasing *percentage invested in SRI*. This is in-line with previous research; as Nilsson (2009) indicates that majority (23%) of the

individuals invest only a small percentage (1-20%) of their entire investment portfolio (100%) in SRI (Cheah et al., 2011; Nilsson, 2009).

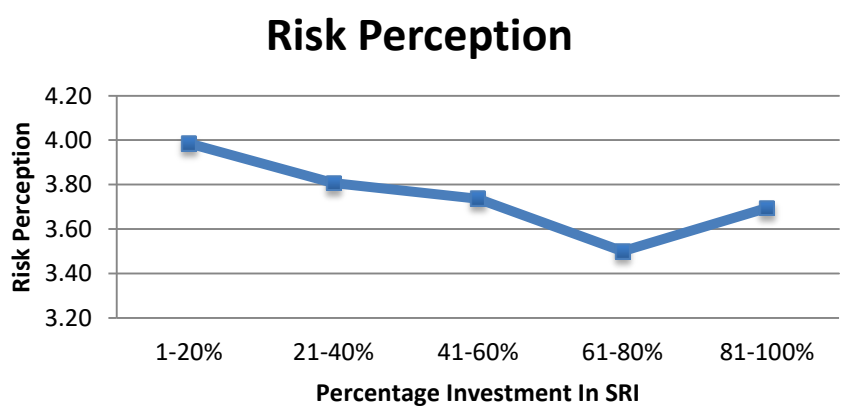
Figure 5.2. : Decreasing Investor Number With Increasing Investment Percentage



*Source: This thesis

Regarding the ***perception towards risk and return*** linked with SRI in comparison to conventional investment, the research highlighted that 50% of the respondents perceive SRI to be slightly riskier as compared to conventional/traditional investment, followed by 27% perceiving SRI to be much riskier, whereas 13% perceived it to have similar level of risk in comparison to conventional investment, and only 10% perceived SRI to be a lot less risky in comparison to conventional investment. This is in line with past research as majority of the research indicate that individuals perceive SRI to have same to slightly higher level of risk involved in comparison to conventional investment (Lewis and Mackenzie, 2000a; Nilsson, 2008; Pérez-Gladish et al, 2012).

Figure 5.3. : Decreasing Risk Perception With Increasing Percentage

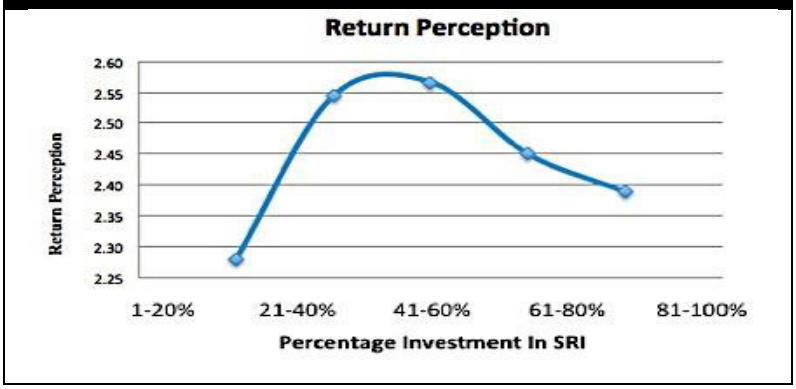


Source: This thesis

Interestingly, as displayed in figure 5.3 above, when investors of current research are grouped on the basis of percentage invested in SRI and then the groups' risk perception is analysed, it is highlighted that investors having a higher percentage invested in SRI believe SRI to be less risky in comparison to those having less percentage invested in SRI. Thus it is argued that perception of low risk will influence individuals to invest more in SRI. This is backed by several researches that identify the same link between risk perception and the percentage invested in SRI (Jansson and Biel, 2011b; Nilsson, 2008).

With regards to ***perception towards return***, more than half of the respondents (58%) believe that SRI gives slightly lower return (Bauer and Smeets, 2012), followed by 32% respondents perceiving it to have same return, and only 6% perceiving SRI to have a slightly higher return as compared to conventional/traditional investment. Furthermore 4% of the respondents perceive SRI to give a much lower return in comparison to conventional investment. This implies that majority of the SR investors perceive SRI to give lower financial return and hence their selection of SRI is more influenced by the non-financial return, as an SR investor who gives less value to a higher financial return has a higher tendency to accept social penalty. This is in line with past research (such as Dorfleitner and Sebastian, 2014; Lewis and Mackenzie, 2000; Nilsson, 2008) that identified SR investors' perception of lower returns. However, no pattern appears when return perception was analysed for investors after grouping them on the basis of percentage invested in SRI, as displayed in figure 5.4.

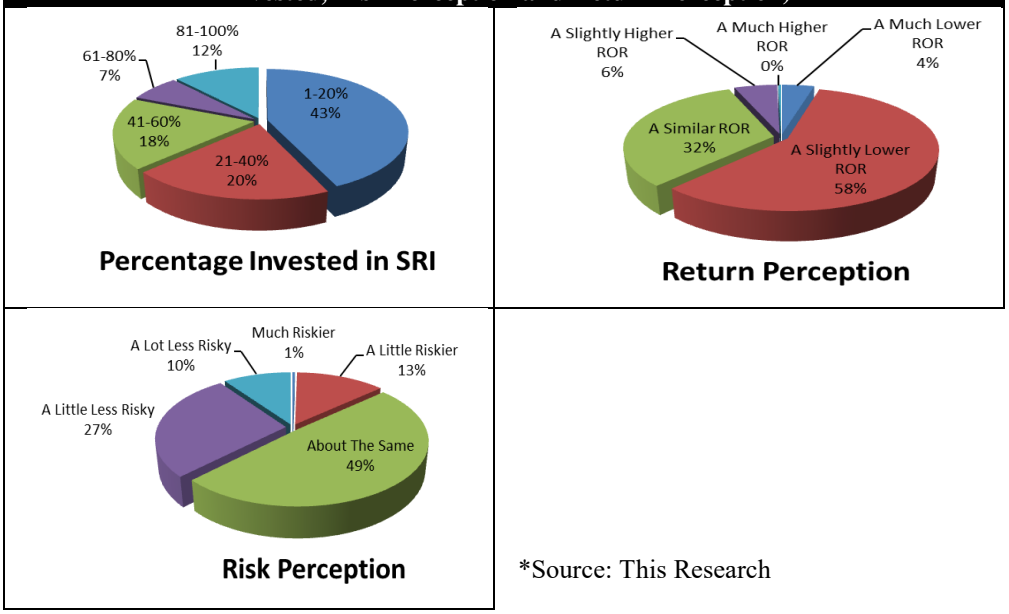
Figure 5.4. : SR Investors' Return Perception



*Source: This thesis

Figure 5.5 pictorially present the survey results regarding percentage invested, along with risk and return perception of the participants.

Figure 5.5: A Pictorial Representation of the Survey Respondents (Percentage Invested, Risk Perception and Return Perception)



*Source: This Research

Hence, the demographic profile of a typical SR-investor according to the current study would therefore be: highly educated middle aged to elder individual with a medium to generally better-off income level (Dorfleitner and Sebastian, 2014; Solomon, 2009a; Tippet, 2001; Tippet and Leung, 2001; Vinning and Ebreo, 1990). Our results suggest that SR investors are generally older (mean age 49) than the age range stated by Hayes (2001), which is between 18 and 24, and several other studies that have identified SR investors

to be younger investors (e.g. Cheah et al., 2011; Diamantopoulos et al., 2003; Laroche et al., 2001; Lewellen et al., 1977; Rosen, Sandler and Shani, 1991; Schueth, 2003). Moreover, the respondents comprised of a greater proportion (56%) of males, which was similar to the sample used by Cheah et al. (2011) and by Dorfleitner and Sebastian (2014), but in contrast to several previous studies (e.g. Nilsson, 2008; Schueth, 2003; Sparkes, 2002; Tippet and Leung, 2001). These investors are better-educated with a majority having either postgraduate university education (41%) or undergraduate university education (38%). This has also been highlighted in other SRI studies that profiled SR investors as highly educated individuals (e.g. Dorfleitner and Sebastian, 2014; Junkus and Berry, 2010; Nilsson, 2008; Rosen et al., 1991; Schueth, 2003; Starr, 2008; Williams, 2007). In addition to this, majority of the SR investors (44%) place a small portion (1-20%) of their total investment portfolio under SRI which is in line with Nilsson (2008) findings. These SR investors believe that SRI is similar (50%) to slightly less risky (27%) as compared to a conventional investment. However, in terms of financial return majority of respondents perceived SRI to give slightly lower (58%) to somewhat similar (32%) financial return as compared to conventional investment. This is somewhat in line with Lewis and Mackenzie (2000) results comprising of a higher percentage of SR-investors believing that SRI execute worse returns than the 'regular' funds.

5.4. Descriptive Analysis of Responses

After identifying the demographic characteristics of the respondents and their percentage investment in SRI, along with their perception toward SRI linked risk and return, attention turns to how the survey questions

regarding the latent constructs in the survey have been answered by the respondents. Table 5.2 provides the percentage frequencies for all items along with their central tendency (mean) and dispersion (Standard deviation).

Table 5.2.: Descriptive Statistics for Study Constructs

Construct		Response Scale (%)					Mean	SD
		(1)	(2)	(3)	(4)	(5)		
Financial Returns	F-Return 1	1	7	30	56	6	3.59	0.75
	F-Return 2	1	4	30	61	4	3.62	0.69
Social Returns	S-Return 1	0	0	0	21	79	4.79	0.41
	S-Return 2	0	0	1	27	72	4.72	0.46
Pro-social Attitude	Pro-Soc Att1	0	4	10	54	32	4.13	0.76
	Pro-Soc Att2	0	1	2	26	71	4.67	0.56
	Pro-Soc Att3	0	1	4	34	61	4.55	0.61
	Pro-Soc Att4	0	1	3	25	71	4.65	0.61
	Pro-Soc Att5	0	0	1	23	76	4.75	0.45
Perceived Consumer Effectiveness (PCE)	PCE1	0	1	4	56	39	4.34	0.59
	PCE2	2	2	5	55	36	4.23	0.76
	PCE3	1	0	3	34	62	4.55	0.68
	PCE4	1	5	5	42	47	4.28	0.87
Trust In SR Bank	TRUST1	0	1	3	32	64	4.60	0.59
	TRUST 2	0	0	2	42	56	4.54	0.54
	TRUST3	0	1	6	52	41	4.34	0.62
	TRUST4	3	3	9	53	32	4.06	0.92
	TRUST5	0	0	6	51	43	4.36	0.61
Materialism	MAT1	27	39	22	10	2	2.20	1.00
	MAT 2	29	40	24	7	0	2.10	0.91
	MAT 3	40	38	15	6	1	1.90	0.93
	MAT4	18	28	42	11	1	2.50	0.95
	MAT5	16	45	27	11	1	2.36	0.91
	MAT6	66	25	9	0	0	1.44	0.68
	MAT7	61	28	9	2	0	1.51	0.73
	MAT8	48	32	16	4	0	1.76	0.87
	MAT9	42	37	11	9	1	1.89	0.99
Perception of Risk and Return	RISK	0	13	50	27	10	3.33	0.84
	RETURN	4	58	32	6	0	2.41	0.68

Source: This Research

The respondents were firstly asked to identify the importance given to *financial return and the social return* aspects of SRI, affecting their investment decision. Importance of financial return was measured through a

two-item, five point Likert scale ranging from 'not at all important' (1) to 'extremely important' (5). Findings highlight that:

1. 62% identify good financial prospect of investment to be an important aspect when selecting the investment (FRet1: mean = 3.59; SD = 0.75).
2. 65% think it is important to them that their investment generates a good financial return (FRet2: mean = 3.62; SD = 69).

The importance given to *social return* while making the investment decision was measured using a two item scale. Results suggest that:

1. 100% think it is extremely important that the investment they undertook had a good socially responsible initiative (SRet 1: mean = 4.79; SD = 0.41).
2. 99% think it is extremely important to them that the investment they chose generated a good socially responsible return (by following socially responsible guidelines and thereby having a positive effect on social and environmental issues) (SRet 2: mean = 4.72; SD = 0.46).

A five item scale measuring participant's *pro-social attitude* suggests that:

1. 68% believe it is extremely important that the investment they undertake respect workplace rights (possibility to freely join the trade unions) (Pro-Soc Att1: mean = 4.13; SD = 0.76).
2. 97% want their investment to be with an organization/project that works actively with environmental issues (i.e. by reducing environmental effects of products and production) (Pro-Soc Att2: mean = 4.67; SD = 0.56).
3. 95% give extreme importance to human rights and want their investment to be in such projects that respect these rights by working against

discrimination based on race, gender, or religion (Pro-Soc Att3: mean = 4.55; SD = 0.61).

4. 96% would not want to invest in organizations/projects that produce or support the production of goods that could harm people (i.e. weapons) (Pro-Soc Att4: mean = 4.65; SD = 0.61).
5. 99% of investors would not invest in businesses that are involved in unethical business practices such as bribery and corruption (Pro-Soc Att5: mean = 4.75; SD = 0.45).

A four item scale measuring *perceived consumer effectiveness (PCE)* highlights that:

1. 95% believe that by undertaking socially responsible investment (SRI) every investor can have a positive effect on the environment (PEC1: mean = 4.34; SD = 0.59).
2. 91% strongly disagree to the belief that an individual alone cannot make a difference therefore one should not invest in SRI (PEC2: mean = 4.23; SD = 0.76) (reversed).
3. 96% disagree that it is useless for the individual investor to do anything about pollution (PEC3: mean = 4.55; SD = 0.68) (reversed).
4. 89% believe that every individual can influence social problems by investing in responsible organizations (PEC4: mean = 4.28; SD = 0.87).

The level of *trust* investor holds in the SRI bank they invest in was measured using a five item scale. Findings indicate that:

1. 96% trust that their selected SR bank does not invest their capital in companies/projects that manufacture weapons and tobacco (Trust1: mean = 4.60; SD = 0.59).
2. 98% believe that the SR bank they invest in follows the SR guidelines used in their marketing (Trust2: mean = 4.54; SD = 0.54).
3. 93% think that the SRI options offered by their selected bank are an honest attempt to improve social issues such as pollution (Trust3: mean = 4.34; SD = 0.62).
4. 85% condemn and disagree with the thought that providers of SR and ethical investment have no genuine interest in improving the environment since they, like every other organization, primarily want to make a profit (Trust4: mean = 4.06; SD = 0.92).
5. 94% trust that the SR bank they have invested in does its best in trying to get companies to act in a way that reduces social problems such as pollution and global poverty (Trust5: mean = 4.36; SD = 0.61).

A nine item scale opted for analysing *materialism* highlighted that:

1. 66% disagree with the statement that their lives would have been better if they owned certain things they don't have (Mat1: mean =2.20; SD = 1.00).
2. 69% do not believe that the things they own say a lot about how well they are doing in life (Mat2: mean = 2.10; SD = 0.91).
3. 78% do not feel that affordability to buy more things would make them happier (Mat3: mean = 1.90; SD = 0.93).

4. 46% disagree to the statement that buying things give them a lot of pleasure (Mat4: mean = 2.50; SD = 0.95).
5. 61% claim that they try to keep their lives simple, as far as possessions are concerned (Mat5: mean = 2.36; SD = 0.91).
6. 91% do not admire people who own expensive homes, cars, and clothes (Mat6: mean = 1.44; SD = 0.68).
7. 44% do not like to own things that impress people (Mat7: mean = 1.51; SD = 0.73).
8. 80% show extreme disagreement to the statement that they like a lot of luxury in their lives (Mat8: mean = 1.76; SD = 0.87).
9. 79% believe that it does not bother them at all that they can't afford to buy all the things they would like to (Mat9: mean = 1.89; SD = 0.99).

A two item scale measuring *perception of risk and return* highlight that:

1. 50% believe that SRI has the same amount of risk involved as does the conventional/traditional investment does (Risk; mean = 3.33; SD = 0.84)
2. 62% perceive SRI to offer slightly lower to much lower financial return in the long run, in comparison to that offered by conventional/traditional investment (Return: mean = 2.41; SD = 0.68)

After looking at the descriptive analysis of respondents, the next section deals with the purification of items and scale via reliability analysis. Cronbach α and item-total correlation is elected for this purpose. Towards the end the section sheds light on the dispute of dimensionality of scale which is then dealt with via exploratory factor analysis.

5.5. Item and Scale Purification:

After looking at the general demographics of the data we turn our focus to item and scale purification. Reliability being the initial step in item and scale purification is analysed through the frequently used measure of internal consistency. Internal consistency suggests the presence of consistency between variables in an enumerated scale (Hair et al., 2010, pp. 125). The main idea behind internal consistency is that each and every item that formulates a scale should be highly inter-correlated as they are supposed to measure the same underlying attribute. At this point items exhibiting correlation below the acceptable value of 0.3 (Field, 2009; Pallant, 2007, pp.98), along with the ones not loading in the anticipated direction should be removed. Cronbach's alpha (α) along with the item-total correlation (Pallant, 2007) is opted for to calculate the internal consistency in this manuscript.

5.5.1. Cronbach's Alpha:

Cronbach's alpha is identified as the most commonly selected and a well-recognized measure to evaluate multi-item scales' reliability (e.g. Hair et al., 2010; Pallant, 2007). Though there is still debate regarding the best acceptable limit, a value of 0.70 is commonly considered as the Cronbach's alphas' established lower limit (Hair et al., 2010, pp. 125). Nevertheless some scholars advocate the acceptance of a relatively lower value of 0.6, in case of exploratory research (Price and Mueller, 1986, pp. 6; Robinson et al., 1991). In case some items do not represent the same value or do not share the same meaning, they would give a lower coefficient alpha value. These poor performing items can then be identified and dealt with or removed accordingly.

The preliminary reliability analysis of all the scales used in current study is given in table 5.3. As displayed, the coefficient alpha value for almost all the scales is higher than 0.70, except for a few. Nevertheless the individual values' reliability value is within the commonly accepted variation range, normally seen for individual value type (Joshanloo and Ghaedi, 2009; Schwartz et al., 1997).

On a broader spectrum it can be seen that for all the variables the estimates of reliability values are fairly good as they all fall above the cut-off point identified by Hair et al., (2010) and/or by Robinson et al., (1991) supra. Despite the general acceptance, there is still criticism regarding Cronbach's alpha value as Kline (2005) state that the positive relationship between the number of items composing the scale and the Cronbach's alpha value needs to be kept in mind and used carefully. The reason being that it is an estimate that can increase positively with an increase in number of items making up the scale, even if these items have identical degree of inter-correlation (Field, 2005). Similarly, Pallant (2007) argues that as Cronbach's alpha values are somewhat sensitive to the quantity of items in scale, hence it is recommended to also calculate the item-total correlation for the items. Hence this value is also given in table 5.3. and discussed next.

Table 5.3.: Descriptive Statistics for Study Constructs

Construct		Item-total correlation	α if item deleted	α
Clustering Attitudinal; Variables	Cluster-1F	0.334	-	0.775
	Cluster-2F	0.334	-	
	Cluster-1R	0.314	-	0.832
	Cluster-2R	0.314	-	
Pro-social Attitude	Pro-Soc Att1	0.371	0.732	0.773
	Pro-Soc Att2	0.341	0.764	
	Pro-Soc Att3	0.285	0.681	
	Pro-Soc Att4	0.309	0.709	
	Pro-Soc Att5	0.366	0.759	
Perceived Consumer Effectiveness (PCE)	PCE1	0.364	0.538	0.630
	PCE2	0.321	0.553	
	PCE3	0.361	0.527	
	PCE4	0.336	0.633	
Trust	TRUST1	0.329	0.532	0.713
	TRUST 2	0.315	0.499	
	TRUST3	0.273	0.492	
	TRUST4	0.347	0.728	
	TRUST5	0.308	0.540	
Materialism	MAT1	0.388	0.788	0.816
	MAT 2	0.315	0.798	
	MAT 3	0.283	0.776	
	MAT4	0.386	0.801	
	MAT5	0.362	0.828	
	MAT6	0.316	0.800	
	MAT7	0.380	0.792	
	MAT8	0.324	0.796	
	MAT9	0.330	0.796	

Construct				Item-total correlation	α if item deleted	α
Value Orientation	Self-Transcendence	Benevolence	V11	0.391	0.702	0.714
			V17	0.396	0.696	
			V19	0.328	0.643	
			V21	0.323	0.650	
			V22	0.353	0.632	
		Universalism	V1	0.360	0.786	0.801
			V5	0.328	0.776	
			V6	0.358	0.771	
			V7	0.332	0.775	
			V9	0.354	0.773	
			V10	0.333	0.761	
			V13	0.330	0.807	
			V14	0.350	0.776	
	Self-Enhancement	Achievement	V12	0.348	0.643	0.722
			V15	0.344	0.705	
			V16	0.398	0.682	
			V23	0.309	0.604	
		Power	V2	0.348	0.709	0.703
			V4	0.338	0.663	
			V8	0.331	0.624	
			V18	0.323	0.626	
			V25	0.383	0.646	

Source: This thesis

5.5.2. Item-Total Correlation

Item-total correlation score presents the degree to which an item correlates with the total alpha score (Hair et al., 2010). A value of less than 0.3, according to Pallant (2007; pp. 98) and Field (2009), suggests that the item is not measuring the same construct as that measured by the scale as a whole. On the other hand, an optimal range of 0.2 to 0.4 is considered acceptable according to Briggs and Cheek (1986).

As table 5.3 highlights, the majority of the items display an item-total correlation above 0.3, indicating a good item to scale correlation. However, three items did display an item-total correlation score below 0.3 (item Pro Soc-Att 3, Trust 3 and Mat 3). Despite having an item-total correlation value below 0.3 it is not considered suitable to remove the items as this stage, reason being as Pallant (2007, pp.98) suggest that if the Cronbach's alpha value is below 0.7 only then omission of item should be considered to obtain a well validated scale. Under this argument, it is noted that pro-social attitude, trust and materialism scales have alpha value greater than the recommended cut-off point (0.70), 0.773, 0.713 and 0.816 respectively. Hence the values are considered acceptable.

Based on the above discussion, the Cronbach's alpha values along with the item-total correlations values, displayed in table 5.3, the scales used by the current manuscript are considered reasonably reliable and all items are retained. Though table 5.3 also highlight that for certain scales, the Cronbach's alpha values can be increased by deleting certain items, such as for materialism the Cronbach's alpha values increases to 0.828 from 0.816 if

MAT5 is deleted, however as the difference is very small, this technique is not considered suitable for the current study.

After looking at reliability, the dimensionality of scale is measured and analysed via factor analysis.

5.5.3. Dimensionality of the Scales

Uni-dimensionality is an important requirement to obtain a summated scale. For this sake the most appropriate and accepted technique used is factor analysis (Hair et all, 2010). Considered as a data reduction tool, factor analysis examines the correlation between two or more variables to see if the factors exist. Furthermore, it is also useful to identify and refine the constructs underlying an observed variable (Hair et all. 2010; Pallant, 2007). Factor analysis is considered different from other dependent techniques like multivariate analysis of variance because of its purpose of structure identification.

Two main approaches fall under factor analysis, namely (a) exploratory factor analysis (EFA) and (b) confirmatory factor analysis (CFA). The EFA technique is preferred when the aim of analysis is to see the likely interrelationship between set of variables, without committing to a predetermined outcome. CFA on the other hand is a set of comparatively complex techniques, which are usually opted for during the later stages of research in order to verify the factor structure and for hypothesis testing between observed variables (Hoyle, 2000; Pallant, 2007). Though all the scales used in the current manuscript are well established and are opted for from past research, nevertheless, EFA is conducted in order to validate their structure.

Furthermore, a variety of different related techniques fall under factor analysis: Principal Component Analysis (PCA) and Factor Analysis (FA). Though being similar in many ways, these two sets of techniques do differ in several aspects as well. Where under the PCA technique all the variables in the data are transformed into smaller set, which are then analysed. In FA technique the shared variance is analysed after engaging the factors through a mathematical model (Tabachnick and Fidell, 2001). PCA being a more robust technique is selected for the current research. Additionally, it is claimed that some of the possible problems related to factor interdependency in factor analysis can be avoided through PCA technique as it is identified to be a simple mathematical model (Stevens 1996 cited in Pallant 2007). With large loadings obtained (Cooper 2002 cited in Brace et al., 2006), factor analysis via PCA helps explain as much data variance as possible (Kim and Mueller 1978). Hence for simple empirical summary of data it is concluded that PCA is a superior selection (Tabachnick and Fidell, 2001). Though PCA and FA are two techniques of factor analysis, to avoid confusion this manuscript consider factor analysis as a term expressing the entire family of techniques in general, with FA being one of these techniques.

5.5.3.1. Steps Involved In Conducting Factor Analysis

Factor analysis comprises of three main steps, those being:

a) Assessment of data suitability for factor analysis,

b) Principal component analysis – for the sake of extracting factors from correlation matrix.

c) Factor rotation – *in case more than one factor is extracted*.

The above-mentioned steps were carried out for all the variables used in the current manuscript. The results are summarised below.

5.5.3.1.1. Assessment of Suitability of Data

A matrix of correlation displaying total affective variable combinations along with Kaiser-Meyer-Olkin (KMO), Bartlett's test of Sphericity and sample adequacy are used to assess data's suitability for factor analysis. Data is considered suitable for factor analysis if it displays a value of 0.6 or above for KMO analysis and exhibits significant results ($p<0.05$) for Bartlett's test of Sphericity (Pallant, 2007). Table 5.4 summarise KMOs' and Bartlett's test results for all the variables used in the current thesis. As displayed in table 5.4, the KMO value for all variables is above the generally accepted limit of 0.6. Moreover all the values are statistically significant according to the results of Bartlett's test of Sphericity. Hence the data is considered suitable for factor analysis.

Table 5.4: Tests For Assessment Of Suitability Of Data

Variables	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig
Perception Towards Social Return	.685	210.321	1	.000
Perception Towards Financial Return	.613	352.11	1	.000
Pro-Social Attitude	.768	405.541	10	.000
Perceived Consumer Effectiveness (PCE)	.699	158.157	6	.000
Trust	.720	256.742	10	.000
Materialism	.838	555.897	28	.000
Benevolence	.769	262.306	10	.000
Universalism	.799	505.492	21	.000
Achievement	.736	250.988	6	.000
Power	.686	31.315	10	.000

Source: This thesis

5.5.3.1.2. Principal Component Analysis

After analysing and confirming the suitability of data for factor analysis, a principal component analysis is carried for the sake of extracting factors from the correlation matrix. This is mainly done so as to identify the minimum number of factors that can best describe the interrelations among variables (Pallant, 2007). The current manuscript opted for eigenvalue rule of 1.0 or higher (Kaiser's principle) to identify the number of factors to retain. Table 5.5 present the findings from principal component analysis.

Table 5.5 : Total Variance Explained For Variables With Single Factor Loading

Variable	Component's with e>1	Extraction Sums of Squared Loadings	
		Total	% of variance
Perception Towards Social Return	1	1.714	85.680
Perception Towards Financial Return	1	1.634	81.716
Pro-Social Attitude	1	2.666	53.313
Perceived Consumer Effectiveness (PCE)	1	1.949	48.737
Trust	1	2.255	45.092
Materialism	1	3.246	40.581
Benevolence	1	2.366	47.330
Universalism	1	3.036	43.375
Achievement	1	2.235	55.867
Power	1	2.149	53.736

Source: This thesis

Table 5.5 presents the results for all the variables. From table 5.5 it can be seen that all the variables recorded only one component with eigenvalue above 1. Therefore, the solution was not rotated for any variable because only one factor was extracted for each. From the table it could be seen that the percentage of variance that was explained by each component varied from 43% to 85% (for universalism and perception towards social returns respectively). Hence there was no need to carry out factor rotation.

The final stage of the chapter deals with data preparation and screening in order to ensure that all the requisites for multivariate analysis are met. This comprises of missing data evaluation, outliers identification, testing normality, checking reliability and finally checking measures' validity. For the analysis of multivariate outliers Mahalanobis D^2 is utilized. To assess normality skewness and kurtosis is elected.

5.6. Data Preparation and Screening:

Data screening and preparation comprises of evaluating the missing data and its impact, identifying the outliers, while testing the assumptions underlying most multivariate techniques. This is an extremely important phase of any multivariate analysis (Hair et all., 2010). Therefore the following section deals with missing data, outliers' analysis and finally with the assessment of normality.

5.6.1. Missing Data:

Missing data is one of the most troublesome impediments in data analysis. Hair et al., (2010) indicate two key effects of missing data, .i.e. firstly causing loss of statistical power and secondly in certain situations if not recognized and accommodated for properly during the analysis, it could cause serious biases in the results. Tabachnick and Fidell (2001) reported that the significance of missing data mainly depends on the pattern of missing values, frequency of occurrence, and reason behind the missing value. They further narrate that if the missing data display a non-ignorable systematic pattern (not missing at random; NMAR), even a small remedy to resolute this problem could simulate bias in the results. However if the data is missing in a random

manner (missing completely at random; MCAR) with no precise pattern, any tactic employed to impute this missing data is expected to yield acceptable results. As regards to how many missing values can be tolerated, literature lacks definite guidelines. Cohen and Cohen (1983) propose that on a particular variable 5% or even 10% missing data is not large. Furthermore, it has been suggested that if a large dataset displays a relatively small occurrence of missing observations, it can be considered as a less serious problem and any treatment may result in similar conclusions (Hair et al. 1998; Kline 2005).

Being a major concern to be dealt with, the issue of missing data was kept in mind from the very beginning. Qualtrics, online data collection software, was used to formulate and operationalize the survey. During the preparation of the online survey it was made sure that no respondent could proceed to the next section unless and until they had fully filled the previous one, and the responses to the questionnaire were only saved once all the questions were answered fully. In this way, through application of special commands it was made sure that any sort of missing data is avoided. As a result 298 fully filled questionnaires were collected during the 8 week data collection period.

5.6.2. Checking for Outliers:

"Extreme" values that differ greatly from the remaining dataset are termed as an outlier (Tabachnick and Fidell, 2011). Though no firm definition can be provided for the term extreme, a generally accepted praxis is to consider any value(s) with greater than three deviations from the mean as an outlier(s) (Kline, 2005). In addition to this any observation exhibiting a

standardised variables value beyond ± 2.5 when dealing with a small sample (80 or less observations), or ±3.0 score for a bigger sample, is also considered as an outlier (Hair et al., 2010). Depending on the number of variables considered, an outlier can be acknowledged from a univariate, bivariate, or multivariate point of view. For this manuscript univariate outliers were not identified, the reason being that the majority of the items were measured using a five-point Likert scale, as a result an option appearing as an outlier could merely be a response representing an extreme point on the scale.

This manuscript was mainly interested in spotting and handling multivariate outliers. Mahalanobis D^2 distance, a well-established statistical measure used to ascertain multivariate outliers, is chosen for this purpose. Mahalanobis D^2 identifies the distance in standard deviation among the sample means for all variables and scores for a particular case (Hair et al., 2010). A large Mahalanobis distance value indicates the presence of an individual/respondent with intense value on one or more of the independent variables. For this manuscript Mahalanobis distance value, for each respondent, was calculated through regression via SPSS, which was then compared with a critical value X comprising of degree of freedom equivalent to the number of independent variables and the probability of $p < 0.001$. Though, results revealed the presence of few outliers (see Appendix five), it was decided to keep all the cases as there was a lack of any sufficient proof classifying these outliers as not a part of the population. It is possible that some respondents might genuinely have contrasting opinions about SRI motivations as compared to the majority of the sample, yet they certainly belong to the target population. In addition to this, the occurrence of a few

outliers within a large sample has been indicated to be of minor concern (Kline, 2005). Finally, this decision is backed with Hair et al.'s (1998) suggestion that the omission of outliers might enhance the multivariate analysis but at cost of jeopardizing and limiting generalizability.

5.6.3. Assessing Normality:

The presumption about the extent to which the dataset's distribution resembles that of a normal distribution is termed as normality. Supposedly a normal distribution is one in which a symmetrical theoretical distribution occurs, with horizontal axis displaying all potential values of the variable, with the likelihood of those values to occur being displayed on the vertical axis (Hair et al., 2010). Normality of continuous variables has been identified as the most important assumption in multivariate analysis (Tabachnick and Fidell, 2001). Lack of attention towards normality assumptions may disrupt the estimation process as well as the interpretation of results. For instance, non-normality can result in the underestimation of fit indices along with the standard errors of parameter estimates (Hair et al. 1998). The normality of variables can be ascertained through the use of either statistical methods and/or graphical methods. In graphical method such as normal probability plot and histogram the actual cumulative data scores are compared against a normal cumulative distribution. Given a normal distribution of data, the line portraying the actual data will roughly follow the diagonal lines (Hair et al. 1998). In case of statistical methods, normality can be determined by skewness, which depicts the symmetry of distribution, and kurtosis, that refers to the distributions' 'peakedness' or 'flatness' in comparison with the normal distribution. With a relatively few large values, a positively skewed

distribution tails off to the right. A negatively skewed distribution on the other hand tails off to the left because of the presence of a relatively few small values. According to Hair et al. (1998) a substantially skewed distribution exists if the Skewness values fall outside the range of ±1. However, Kline (2005) suggests the presence of a considerably skewed distribution if the absolute skewness value falls outside the range of 3.0. In case of kurtosis any value higher than 10.0 proposes a problem (Kline, 2005). A variable can exhibit significant kurtosis, a notable skewness, or even both at times (Tabachnick and Fidell, 2001, pp.71).

For the purpose of normality assessment this manuscript opts for the statistical method. It is suggested that absolute skewness value falling outside the range of 3.0 specifies a considerably skewed distribution, while for kurtosis a value greater than 10.0 suggests a problem (Kline, 2005). According to Hair et al., (2010), however, a value falling outside the range of -1 to 1 in case of skewness indicates substantially skewed distribution. Table 5.6 shows the normality test results for continuous variables used in the study. It can be seen that the mean range from 1.45 (item MAT6) to 6.58 (item V14), for skewness the values range from -2.274 (item Cluster-1R) to 1.356 (item MAT6), and scores for kurtosis range from -.940 (item V25) to 8.589 (item Cluster-1R). Although some items seem slightly skewed when using criteria mentioned by Hair et al., (2010), nevertheless these results validate that skewness and kurtosis statistics for all constructs are surely within the acceptance level specified by Kline (2005). As items seem to be normally distributed in the study, there is no requirement for transformation of non-

normal distributed variables as that would present additional problems by altering the meanings of the actual responses (Kline 2005)

Table 5.6: Normality Assessment For Variables Used In The Study

Construct		Means	Skewness	Kurtosis
Attitude Toward Social And Financial Return	Cluster-1F	3.57	-.908	1.236
	Cluster-2F	3.61	-1.114	2.026
	Cluster-1R	4.74	-2.274	8.589
	Cluster-2R	4.69	-1.927	4.983
Pro-social Attitude	Pro-Soc Att1	4.13	-.910	1.243
	Pro-Soc Att2	4.68	-1.757	3.424
	Pro-Soc Att3	4.55	-1.221	1.286
	Pro-Soc Att4	4.65	-1.930	4.120
	Pro-Soc Att5	4.76	-1.419	.630
Perceived Consumer Effectiveness (PCE)	PCE1	4.34	-.481	.452
	PCE2	4.24	-1.586	4.587
	PCE3	4.55	-2.115	6.940
	PCE4	4.29	-1.527	2.625
Trust	TRUST1	4.60	-1.382	1.957
	TRUST 2	4.55	-.757	.238
	TRUST3	4.35	-.562	.331
	TRUST4	4.07	-1.461	2.699
	TRUST5	4.36	-.476	-.147
Materialism	MAT1	2.21	.589	-.280
	MAT 2	2.10	.441	-.501
	MAT 3	1.91	.933	.421
	MAT4	2.50	-.051	-.581
	MAT5	2.38	.450	-.156
	MAT6	1.45	1.356	.990
	MAT7	1.51	1.333	1.172
	MAT8	1.77	.884	-.126
	MAT9	1.90	1.034	.325

Construct				Means	Skewness	Kurtosis
Value-Orientation	Self-Transcendence	Benevolence	V11	6.06	-1.018	1.360
			V17	6.54	-1.744	4.631
			V19	5.84	-.333	-.431
			V21	6.13	-.635	.587
			V22	5.74	-1.018	1.416
		Universalism	V1	6.15	-.496	-.183
			V5	6.44	-2.034	6.772
			V6	6.38	-1.259	1.328
			V7	6.22	-1.111	1.544
			V9	5.91	-.835	.613
			V10	6.45	-1.309	.991
			V13	6.05	-.719	.101
			V14	6.58	-1.336	.891
	Self-Enhancement	Achievement	V12	4.36	-.356	-.046
			V15	4.56	-.611	.235
			V16	5.67	-.528	1.432
			V23	4.85	-.789	1.086
		Power	V2	2.72	.903	.1oo
			V4	3.64	-.488	-.765
			V8	2.99	.219	-.732
			V18	3.54	-.157	-.664
			V25	3.oo	.092	-.940

Source: This thesis

5.7. Summary

This chapter presents the descriptive analysis of the survey. It summarises the basic statistics to identify the demographic profile of the respondents and to analyse the constructs examined in the current peace of research. The response rate along with non-response bias was also examined in this chapter. In addition to this, a variety of analysis to describe data, and to analyse data's psychometric properties (reliability and dimensionality), along with issues of preparing data for hypothesis testing (checking outliers, missing data and data normality) were also dealt with in this chapter. Next chapter (6), via variety of different analysis, attempts to test the 8 hypotheses proposed in chapter 2 and 3.

CHAPTER SIX

Chapter 6 - Hypothesis Testing

6.1 Introduction

This chapter presents the results of hypotheses testing. Hypotheses testing refer to the statistical procedure that is used to reject or accept the hypotheses based on sample information (Burns and Bush, 2006). This chapter is organized into seven sections.

Section 6.2 discusses the findings for hypothesis 1 related to the SR-investors heterogeneity based on the importance given by them to financial return and social return. This section is further subdivided into two sub-sections with sub-section 6.2.1 examining the typology that emerged and sub-section 6.2.2 further elaborating the findings regarding the clusters. Two-step cluster analysis is opted for the purpose of classification.

The third section 6.3 focuses on validating the cluster solutions obtained in section 6.2. Four psychographic and four demographic variables are used to explore each cluster's unique profile so as to validate the clusters. One-way ANOVA, post-hoc and discriminant function analysis is used for matrix psychographic variables, while for non-matrix demographic variables Chi square analysis is used. This section looks at hypothesis H2 to H8.

The next section, section 6.4, while adopting value-attitude hierarchy, explores if same values act as antecedents of SRI-attitude of each cluster, or do different values motivate SRI-attitude of different clusters. Through multiple regression motives for SRI-attitude of each segment are identified. The aim is to further highlight the uniqueness and heterogeneity among SR-investors' clusters that are identified in section 6.2.

Next, the chapter proceeds to analysing the second dataset of 100 regular investors, so as to see if regular investors are different from or similar to the SR-investors. That is to say, section 6.5 aims to explore if similar clusters would appear when regular investors are classified on the basis of the importance they place on financial and social return aspect of SRI (if they were to make an SR investment). Two-step cluster analysis is carried out for this purpose. Once clusters of regular investors are obtained and discussed in section 6.5, the next section, section 6.6 uses one-way ANOVA and post-hoc test to explore and highlight the differences between the clusters of both SR and regular investors. The aim is to identify uniqueness of SRI. Finally section 6.7 gives the summary of this chapter and a brief overview of next chapter.

6.2. Classification/Segmentation of SR-investors:

The first aim of the thesis was to explore if SR-investors can be segmented into heterogeneous groups. While the majority of times SR investors have been considered a homogeneous group, the researchers are starting to accept that there is heterogeneity among SR investors, based on their investment preferences, i.e. importance of social return and importance of financial return (Cheah et al., 2011; Nilsson, 2009; Sandberg and Nilsson 2015). As discussed earlier in chapter 1, section 1.2.5 and in chapter 2, section 2.9, SRI is considered as an investment with duality at its core. Nilsson (2009) argues that there is an integration of financial and SEE considerations in SRI. Where on one end of spectrum, SR investors with wealth maximization as the prime focus can behave primarily like non-SR investors, whereas on the other end an SR investor with social return as prime motive may behave very

differently (Cheah et al., 2011). This section, through the use of Two-step cluster analysis, will attempt to explore if SR-investors who have chosen EBS as a platform for their SRI should be seen as a single homogeneous group or as more than one heterogeneous groups on the basis of the importance the investors place on financial return and social return aspect of SRI. The hypothesis this section looks at is H1with the aim to classify SR investors.

According to Platts (1980) classification is the arrangement or assembling of objects/subject into sets/groups based on their similarities or relationships. Simply stating, classification can be identified as a method of grouping individuals based on their similarities or relationship in order to simplify a complex structure, while preserving and maintaining meaningful and important information about the data. Cluster analysis is the most commonly used and widely accepted method for segmenting and typology development (Ketchen and Shook 1996; Lockshin et al., 1997; Michaelidou, 2012; Nilsson, 2009; Orth et al., 2004; Roddy et al., 1996).

Cluster analysis being an exploratory tool classifies the data cases into groups based on their distinctive characteristics (Rapkin and Luke, 1993; Lorr, 1983). The term cluster analysis was used for the first time by Tryon (1939). Since then cluster analysis has been utilized by various fields like archaeology, biology, agriculture, zoology, political sciences, psychology, medicine, genetics, geology, economics, education, marketing, marketing research, data mining and pattern recognition (Everitt et al. 2001). Cluster analysis through determination of K clusters differentiates cases into groups that are dissimilar to other groups, whereas the cases are similar within each group (Bacher 2002). Cluster analysis according to Mirkin (1996) is a

mathematical technique used for identifying classification structure within the data collected in real world phenomenon. Further adding to this Gordon (1999) advocated that clustering aims to reveal and highlight the classification structure of data. Cluster analysis has been identified as a popular technique being used in over 1000 publications annually (Seber 2004) in different areas with varied purposes, such as to perform objective data reduction from big samples into smaller meaningful subgroups, to examine developed hypothesis or to develop new hypothesis (Hair et al., 1995). In addition to this cluster analysis can be opted for model fitting, discovering true typology, group-based predictions and data explorations (Everitt 1974).

Similar to any other multivariate data analysis technique, there are some caveats regarding cluster analysis. These caveats according to Aldenderfer and Blashfield (1984) are:

1) Because of being relatively simple procedures, most of the cluster analysis methods are not backed by or supported via statistical reasoning.
2) Cluster analysis is affected from the preferences of several disciplines as it evolved from these disciplines.
3) As clustering methods evolved from various sources having diverse rules for grouping and clustering, hence distinctive solutions via different clustering methods can be produced for the same data set.
4) Having a structure imposing procedure, the policy of cluster analysis is still structure pursuing.

Hair et al., (1998) further specified that the cluster solutions are determined on the basis of the variables used for similarity measure. Hence any change in these variables causes massive alteration in the results of cluster analysis, and because of the lack of any tests to determine the outcomes' accuracy, the investigators' judgement is the only way to verify the results of analysis. Despite all these cons, cluster analysis is identified as the best method for examining configurations (Ketchen and Shook, 1996), having a number of ways to validate the results (Hair et al., 2010; Malhotra et al., 2012). Section 6.2.1.2 discusses the validation techniques opted for by this manuscript.

As the only requirement of cluster analysis is the specification of used variables and cases, hence the cluster techniques could be used for both confirmatory and exploratory purposes. Under exploratory approach the outputs of analysis determine the number of clusters. Although cluster analysis as confirmatory approach could be very advantageous, however, it is rarely chosen for confirmatory purposes. As this manuscript aims to explore the proposed SR investor clusters that might appear in the SR investors, cluster analysis is used purely for exploratory purposes in the current manuscript. Table 6.1 highlights the dissimilarities between cluster analysis when carried out for confirmatory and exploratory purposes.

Table 6.1: Difference Between Exploratory Cluster Analysis And Confirmatory Cluster Analysis.	
Exploratory Cluster Analysis.	**Confirmatory Cluster Analysis.**
1 - Cluster number is unknown before the analysis is carried out. 2 – Clusters are required to be interpreted, however, finding a substantive interpretation for them can be difficult. 3 - The fit to data is maximized	1 –Cluster number is known prior to the analysis. 2 - A substantive interpretation of the clusters already exist. 3 - The fit to data may be poor.

Source: Bacher, 2002.

There are three methods of cluster analysis that are accepted widely, namely:

1 – Hierarchical Clustering.

2 - Iterative Partitioning Clustering.

3 - Two-Step Clustering.

Hierarchical clustering groups cases into a tree of clusters via algorithms function. Hierarchical clustering can further be divided into two approaches:

1) Divisive hierarchical techniques

2) Agglomerative hierarchical techniques

In hierarchical clustering techniques all the cases are placed in one cluster initially, and then the most dissimilar cases are divided into smaller clusters at each subsequent step. This goes on until a stopping criterion is achieved. On the other hand agglomerative hierarchical techniques starts by allocating each case its own cluster which is then combined, at every subsequent step, with other sets of clusters based on the similarities between the clusters so as to create a new cluster. This goes on until either one cluster having all the cases is formed or a certain stopping criterion is reached. The hierarchical cluster methods in general are considered simpler and

conceptually easier to understand (Groth, 1998). Hierarchical cluster methods' algorithm is the simplest in comparison to other clustering methods' algorithm. The clustering techniques involved in hierarchical cluster method generate non-overlapping clusters, hence the final clusters obtained via these techniques are nested. With dendrogram (tree diagram) being the most commonly used and accepted representation method, various other graphical formats can be opted for to present the results of agglomerative and divisive cluster methods. A similarity or distance matrix should be established between all pairs of objects, this could produce an enormous matrix (Norusis, 2004). On the contrary, no calculation of the possible distances is required in a non-hierarchical cluster analysis.

In a non-hierarchical clustering method initially the data is divided into specified number of clusters, whose centroids are then computed. Each data point is assigned to the cluster having the nearest centroid. For the formed cluster a new centroid is calculated and once the algorithm has analysed the whole data, new clusters are updated. This goes on till no data point affects the clusters any further (Aldenderfer and Blashfield, 1984). In non-hierarchical clustering, a method developed by Forgy in the 70's called the K-mean clustering is the most widely known and commonly used non-hierarchical clustering technique (Bacher, 2002; Malhotra et al., 2012). In K-mean clustering technique the data set is separated into pre-defined number of clusters and for each cluster the centroid is calculated. Once divided, each case is calculated to see its similarity with the K clusters and these cases are then assigned to the most similar cluster. The centroids of new clusters are recalculated after a full pass through the data is completed. This produces the

initial K clusters. Next the cases are reassigned to closest clusters based on distance between clusters' recalculated centroids. This assigning of cases to closest clusters and centroid recalculation goes on till a convergence of cluster centre is attained. Though K-mean clustering technique can deal well with large data set, and with compact hyper-spherical clusters, it has its cons and drawbacks. Because of its iterative process K-mean algorithm suffers from initial partitioning. Additionally, as the findings may depend on the order of observation in the data thus making the cluster formation dependent on how the centres are chosen. Nevertheless, non-hierarchical clustering technique is argued to be better in handling large dataset and is comparatively faster than the hierarchical methods. As the data points are allowed to change the cluster membership, thus making non-hierarchical methods less affected by outlier. However, the biggest drawback of non-hierarchal clustering technique is its requirement to know the number of clusters before the analysis is carried out (Malathora et al., 2012). In contrast to this, two-step cluster analysis automatically identifies the best number of clusters by comparing and analysing the values of model-choice criteria via different clustering solutions (Malhotra et al., 2012).

Two-step cluster analysis was initially developed by Chiu et al., (2001) with a focus on dealing with large datasets comprising of continuous and/or categorical variables. A two-step clustering approach, identical to BIRCH, is used by two-step clustering method (Zhang et al., 1996). In two-step cluster large records of dataset are summarised via building a cluster features (CF) tree. Though better than both the hierarchical clustering techniques and the K-mean clustering techniques, two-step clustering techniques has been used

scarcely in social science research. (Bacher et al., 2004). The automatic identification of the ideal cluster number is the biggest advantage the two-step cluster analysis has over the other clustering techniques, while lack of the same being the biggest drawback of other two clustering techniques (Bacher et al., 2004). Two-step cluster analysis comprises of two steps (Chiu et al., 2001, SPSS, 2004), namely:

1) Pre-clustering
2) Clustering

Pre-clustering is carried out to minimise the size of distance matrix for all the possible groups of objects in order to compute new data matrix resulting in lesser cases to be used in the next step (Bacher et al., 2004). Pre-clusters are identical to the clusters of the original objects that are utilized in hierarchical clustering in place of the raw data (Norusis 2004). This step starts by scanning the cases one by one so as to merge it into existing clusters or form a new cluster. The process is applied by creating a revised CF tree. The CF tree contains levels of nodes, while each node covers a number of entries. A leaf entry characterizes an ultimate sub-cluster. New accounts are positioned into the right leaf nodes consistent with the non-leaf nodes and their entries. CF symbolizes each entry according to the entry's mean, number of records and totals of each category of each categorical variable and variance of each continuous variable. An initial threshold value is used to start this procedure, which then leads to identification of appropriate leaf for each case through choosing the nearest child node conversing to a close distance matrix while descending the CF-tree. Each object upon getting a leaf node is engrossed into the leaf entry. The CF of that leaf entry is then revised according to the

threshold distance of the nearest leaf entry. However, the object starts its own leaf entry if it is not within the threshold distance. When there is no space in the leaf node to make a new leaf entry, it divides into two for generating more space for new objects. In case the CF tree out grows the maximum allowed size, it is reconstructed based on the current CF-tree by raising the threshold distance criterion. This procedure lasts until a thorough data pass is done. BIRCH by Zhang et al. (1996) provides detailed information about the two-step algorithm. Once the pre-cluster process is completed, all records falling in the same category are represented by the entry's CF. Now instead of the number of cases it is the number of pre-clusters that determines the size of the distance matrix. If, at this point a new record is added, the new CF is calculated from the old CF without knowledge of the single records in the entry.

The sub-clusters from the previous step are taken as input for the second step and a model based hierarchical technique is applied as the pre-clusters are merged stepwise until one cluster is obtained with all clusters in it (Bacher et al., 2004). While doing so, the analysis automatically determines the ideal number of the clusters on the basis of the Akaike Information Criterion (AIC) or the Bayesian Information Criterion (BIC). Fraley and Raftery (1998) proposed BIC, according to which EM (expectation maximization) algorithm is used as the basis for determining appropriate number of clusters. For each potential number of clusters the clustering criterion is computed. Lesser values of AIC and BIC signify better models, with the smallest BIC and AIC for the best cluster solution. The number of clusters increase the BIC, and AIC continue to decrease, however, this in turn also increases the complexity of the

cluster model. When this happens, the changes in distance measure and change in BIC are assessed to decide the best cluster solution. A reasonably large "Ratio of Distance Measures" and a large "Ratio of BIC Changes" represents the best cluster solution (Chiu et al. 2001).

Two-step cluster analysis could use both Euclidean and log-likelihood distances. The log-likelihood distance measure can handle both categorical and continuous variables. While computing log-likelihood. Multinomial distributions for categorical variables and normal distributions for continuous variables are assumed. Furthermore it is supposed that the variables are independent of each other. If all the variables are continuous only then the Euclidean distance can be applied. In such a case, the distance between two clusters is defined in terms of Euclidean distance between the centres of the clusters.

Even though past research has identified three clusters (for example Nilsoon, 2009) when examining SR-investors of a mutual funds, this thesis instead of enforcing a particular cluster number, lets two-step cluster analysis, with its ability to automatically determine ideal number of clusters, determine the clusters that may exist within the SR-investors of EBS. The cluster solution obtained through two-step clustering technique would then be validated by hierarchical clustering along with split sampling technique as recommended by Hair et al., (2010) and Malhotra et al., (2012).

Factors that can affect cluster analysis are scale difference in variables used, missing data and multi-collinearity between variables. Therefore, the data should be checked for these factors at the commencement of the analysis, so as to obtain optimum solutions. Accordingly the data was checked for scale

difference in the variables used and missing data before conducting the analysis. Chapter 5, section 5.5 and 5.6 discussed these factors in detail for the present study.

The next check that needs to be performed before conducting cluster analysis is to assess multicollinearity. Multicollinearity represents the presence of high correlations among independent variables. The common way to check for multicollinearity is by reviewing a correlation matrix between independent variables. Table 6.2 presents the correlation matrix for all the variables studied. Findings from Tables 6.2 show that all the variables show some relationship. However, none of the variables show a too high ($r<0.7$) correlation with any other variable.

Table 6.2: Examination Of Multi-collinearity Through Pearson Correlation Matrix For All The Variable (N=298, Two-Tail In All Cases)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-FRet	t	1	-.072	-.107	-.033	-.133*	.235**	-.107	-.051	.086	.179**	.228**	.074	-.167**	-.033	.106
	Sig.		.216	.066	.575	.021	.000	.066	.381	.138	.002	.000	.204	.004	.576	.067
2-SRet	t		1	.513**	.361**	.397**	-.315**	.206**	.342**	.027	.001	-.192**	.196**	-.036	.103	-.129*
	Sig.			.000	.000	.000	.000	.000	.000	.638	.982	.001	.001	.536	.077	.026
3-ProSocAtt	t			1	.275**	.451**	-.243**	.328**	.554**	-.009	.039	-.280**	.193**	.094	.083	-.186**
	Sig.				.000	.000	.000	.000	.000	.877	.507	.000	.001	.107	.152	.001
4-PCE	t				1	.442**	-.210**	.307**	.347**	-.019	.146*	-.121*	-.038	.058	-.050	-.077
	Sig.					.000	.000	.000	.000	.741	.012	.038	.512	.315	.392	.184
5-Trust	t					1	-.289**	.391**	.465**	-.019	.070	-.220**	.048	.158**	-.073	-.194**
	Sig.						.000	.000	.000	.742	.230	.000	.408	.006	.206	.001
6-Mat	t						1	-.228**	-.218**	.284**	.212**	.525**	-.123*	-.278**	-.017	.238**
	Sig.							.000	.000	.000	.000	.000	.033	.000	.764	.000
7-Benevolence	t							1	.598**	.098	.238**	-.119*	.010	.117*	-.094	-.077
	Sig.								.000	.091	.000	.041	.863	.043	.106	.182
8-Universalism	t								1	.087	.192**	-.252**	.173**	.076	-.077	-.186**
	Sig.									.135	.001	.000	.003	.192	.187	.001
9-Hedonism	t									1	.257**	.368**	.034	-.155**	.006	.032
	Sig.										.000	.000	.564	.007	.914	.581
10-Achievement	t										1	.452**	-.046	-.274**	.084	.076
	Sig.											.000	.434	.000	.148	.189
11-Power	t											1	-.118*	-.200**	-.019	.213**
	Sig.												.041	.001	.741	.000
12-Gender	t												1	.003	.046	-.110
	Sig.													.958	.424	.058
13-Age	t													1	-.135*	-.222**
	Sig.														.020	.000
14-Education	t														1	.263**
	Sig.															.000
15-Income	t															1
	Sig.															

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

After completing the pre clustering requirements, the study proceeded with cluster analysis and the following two steps were undertaken

1) The first step was to use two-step cluster analysis to determine the ideal number of clusters.
2) The second step used hierarchical procedure and split sampling technique to "fine-tune" and validate the final cluster solution. The two-step and hierarchical procedure from SPSS version 20 were used in this analysis.

6.2.1. Step 1: Two-Step Cluster Analysis to Determine Ideal Number of Clusters among SR-investors

As mentioned above the first step was to apply two-step cluster analysis. The clustering variables – importance of financial return and importance of social return - were used in the two-step method with Bayesian Information Criterion (BIC) and log-likelihood distances. From the analysis a three-cluster solution emerged. The popular Evaluation criteria used in two-step cluster analysis is silhouette Coefficient (Tan et al., 2006). This method combines both separation and cohesion (Norušis, 2011). Calculation of Silhouette coefficient is a three-step process:

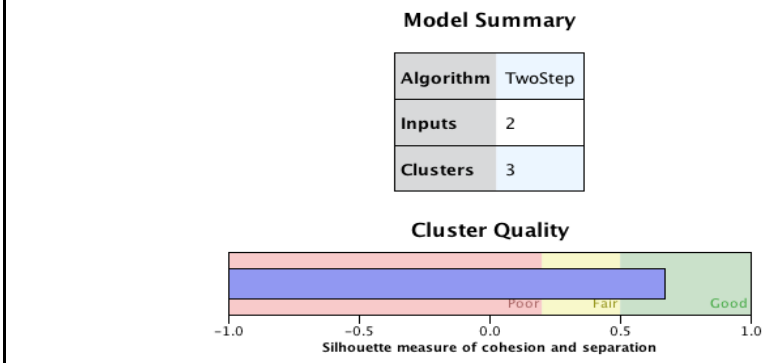
1) The average distance from all other objects in the cluster is calculated for the i-th object. It is given the name a^i
2) The case's average distance to all the cases in the given cluster for the i-th case and any cluster not containing the case is calculated. Smallest of such value regarding all clusters is found and is called b^i
3) Finally for the i-th object the Silhouette Coefficient is calculated as $s^i = (b^i - a^i)/\max(a^i.b^i)$

Silhouette Coefficient can have values between 1 and -1. A negative value represents the case where a^i is greater than b^i, thus making it undesirable. An average Silhouette coefficient is used as an overall measure of the goodness of clustering (Tan et al., 2006). Table 6.3 presents the evaluation of Silhouette coefficient values.

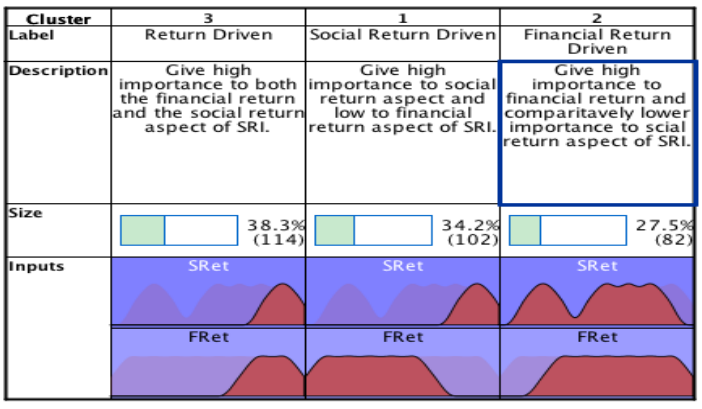
Table 6.3. Goodness of cluster on the basis of Silhouette coefficient	
0.51-1.00	A strong structure is found.
0.26-0.50	A reasonable structure is found.
< 0.25	No substantial structure or a weak and artificial structure is found.

It is worth mentioning that SPSS has improved the output for two-step cluster method significantly compared to hierarchical and k-mean clustering methods (Bacher et al., 2004). Figure 6.1 shows the graphical model obtained through two-step cluster method. As could be seen in figure 6.1, a good result, with three-cluster solution was obtained through the two-step cluster method.

Figure 6.1 : Results Of Two-Step Cluster Analysis



6.1a: Model summary of two-step cluster analysis showing existance of three clusters

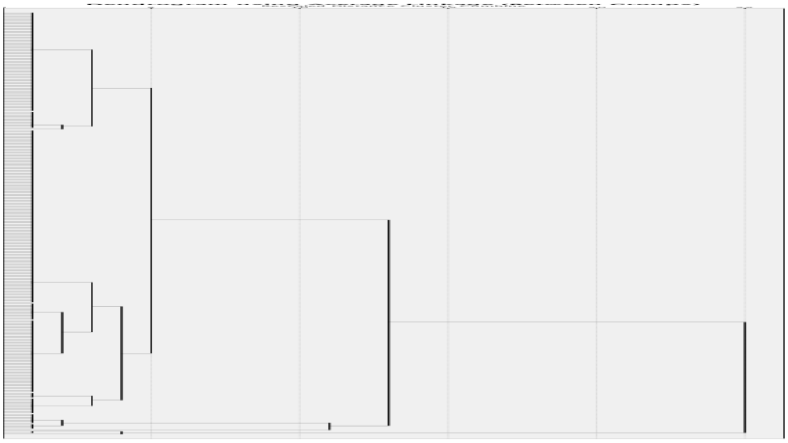


6.1b: Description of the three clusters along with the difference in importance of social return and importance of financial return.

6.2.2. Step 2: Validating the Cluster Solution Thorough Hierarchical Procedure and Split Sampling Technique

The second step was to validate the cluster solution obtained through two-step method in the first step. In order to validate the results one of the ways recommended is to use other clustering method for the same data (Hair et al., 2010; Malhotra et. all, 2012). Hierarchical cluster analysis with Ward's method (Dibb, 1998; Lockshin et al., 1997; Rohm and Swaminathan, 2004; Singh, 1990) was used to validate the results obtained from the two-step clustering method. The optimal number of clusters in hierarchal method was determined by observing the dendrogram. Figure 6.2 gives the dendrogram obtained through hierarchal clustering method. From the dendrogram it could be seen that a three-cluster solution is suitable.

Figure 6.2: Dendrogram Obtained From Hierarchal Cluster Analysis



To further validate the results of the cluster analysis split sampling technique was employed (Malhotra et al., 2012). The sample was selected through random selection in SPSS version 20, and was run for two-step cluster analysis. The results provided validity to the cluster solution obtained using the whole sample as it generated three clusters and the cluster membership was the same that had appeared in the main analysis. Memberships from the two-step cluster analysis were then

compared with memberships of the hierarchical cluster analysis. The degree of agreement between the hierarchical cluster membership assignment and the results of the two-step cluster analysis indicated the stability of the solution (Punj & Steward, 1983). The three-cluster solution was selected as the most suitable solution in terms of reproducibility and stability. The final three-cluster solution, and their difference in terms of the two selection criteria (importance of financial return [FRet] and importance of Social return [SRet]) are presented in table 6.4 and are discussed next.

Table 6.4: Three Clusters With Different Combination Of Financial Return And Social Return

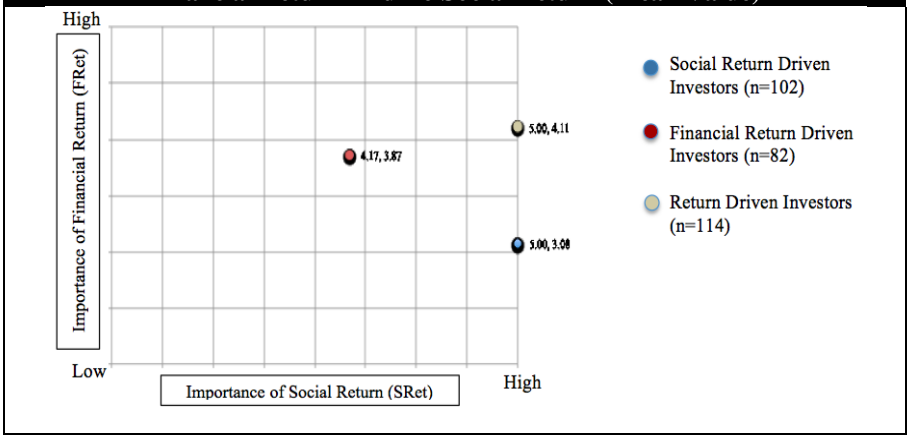
	Clusters				
	1	**2**	**3**	**ANOVA[F]**	**P**
FRet	2.66	3.69	4.00	209.028	.000
SRet	4.91	4.01	5.00	346.361	.000
%	24.8	31.5	43.6		

Cluster descriptors are based on overall scores. Scores range from 1 to 5 (low-high level).

6.2.3. Clusters of SR-investors

Figure 6.3 gives mean values of the clusters inspected and plotted in a separate matrix. The level of importance of financial return and importance of social return are used to describe and name the clusters below.

Figure 6.3: Three SR Investor Clusters Based On The Importance Given To Financial Return And To Social Return (Mean Value)

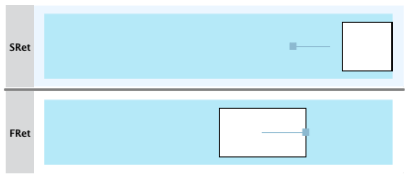


6.2.3.1. Social Return Driven Investors [SR Driven] (Cluster 1)

The first cluster is made up of 34.2% of sample (N = 102). This cluster, compared to the other two clusters, gave the least importance to financial return (mean = 2.88, SD = .523) and the most to social return (mean = 4.97, SD = .127) when investing. This cluster was named Social Return Driven (SR Driven) Investors as they reflected high affinity for the social values and low for the financial. This is in line with the past research (Nilsson, 2009; Nilsson et al., 2014). These investors are more tolerant towards social penalty (Cheah et al., 2011; Nilsson, 2009; Polychronidoua et al., 2015) in general as well as in comparison to the other two clusters. These individuals are unique as they invest without giving much importance to financial return hence going against the traditional financial theories (Nilsson, 2009). Figure 6.4a display the balance between the importance of social return and the importance of financial return for this cluster.

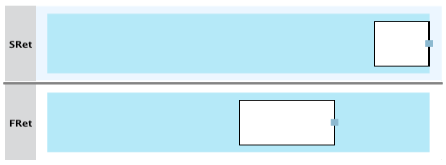
Figure 6.4: Description Of The Three Clusters Based On Differing Combination Of Importance Of Financial Return And Importance Of Social Return

6.4a: Social Return Driven Investors:
Mean of Social Return: 4.97
Mean of Financial Return: 2.88



6.4b: Financial Return Driven Investors:
Mean of Social Return: 4.03
Mean of Financial Return: 3.77

6.4c: Return Driven Investors:
Mean of Social Return: 4.99
Mean of Financial Return: 4.09



Importance of financial return and importance of social return are determined as value ranging from 1-5 (low to high).

6.2.3.2. Financial Return Driven Investors [FR Driven] (Cluster 2)

Cluster 2 makes up 27.5% of the sample (n = 82). This cluster scored lowest on importance of social return (mean = 4.03, SD = .505) whereas they gave relatively high importance to the financial return (mean= 3.77, SD = .528). This cluster is named the financial return driven investors as it displays the lowest value for social return (in comparison to the other two clusters). This group believes that SRI can give good financial returns (Nilsson, 2009) and they are less tolerant to the social penalty (Cheah et al., 2011). Even though the past research advocate that this cluster resembles with, to some extent, the conventional investors (Cheah et al., 2011; Nilsson, 2009; Nilsson et al., 2014), it is worth noticing that this cluster still scores high on the social return (mean = 4.03, SD = .505). Figure 6.4b displays the balance between importance of social return and importance of financial return for this cluster.

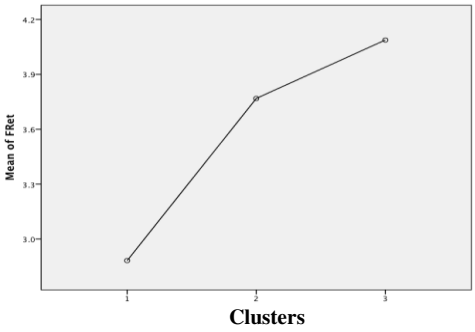
6.2.3.3. Dual Return Driven Investors [DR-driven investors] (Cluster 3)

The third cluster that holds the highest number of participants formulates 38.3% of the data (N = 114). As expected, this cluster holds high importance for both social return (mean = 4.99, SD = .066) and financial return (mean = 4.09, SD = .260) when investing in SRI (Nilsson, 2009; Nilsson et al., 2014). Represented in figure 6.4c, this cluster reflects a class of individuals who value both financial return and social return as they care for both the financial and social aspect of SRI (Nilsson, 2009; 2015; Cheah et al., 2011).

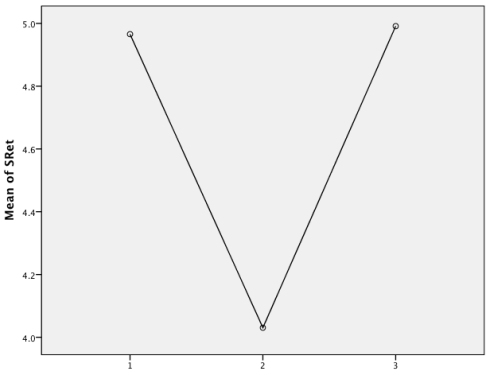
In summary, as proposed in chapter two, section 2.9, the analysis of this section shows the existence of three unique clusters of SR investors – SR Driven, FR Driven and Dual Return Driven - on the basis of different level of importance given to

social return and to financial return aspects of SRI. Figure 6.5 represents the importance given to financial return and social return aspect of SRI by each cluster.

Figure 6.5: position of the three SR-investor clusters in terms of the Importance Of Financial Return And Social Return aspect of SRI



6.5a: Clusters mean for Financial Return of SRI



6.5b: Clusters mean for social return of SRI

Importance of financial return and importance of social return are determined as values ranging from 1-5 (low to high).

As could be seen from figure 6.5, among these three clusters, one cluster represents investors who mainly care about the social return aspect (cluster 1) while another cluster represents investors who care much more about the financial return aspect and comparatively less for social return aspect of SRI (cluster 2), and finally there is another cluster of investors who value both financial and social return aspect of SRI (cluster 3). Thus, hypothesis 1 is supported. These findings are in line with the past research (Cheah et al., 2011; Nilsson, 2009; Nilsson et al., 2014). These

three clusters and differences between them in terms of financial return and social return aspect of SRI is further discussed in detail in section 6.6. Now that the clusters are generated, the next section attempts to validate this segmentation of SR-investors.

6.3. Heterogeneity among the segments/clusters of SR-investors

This section deals with establishing external validity of the segments of SR-investors obtained through cluster analysis in the previous section (6.2). The hypotheses that are involved in testing differences in the three clusters in terms of Four demographic (age, gender, income and education) and four psychographic variables (pro-social attitude, PCE, trust and values – materialism, self-enhancement – hedonism, power and achievement – and self-transcendence - universalism and benevolence-) are H2- H8.

This section is divided into three sub-sections. The first sub-section, 6.3.1, explores demographic differences between the three clusters and thus involves hypothesis 2. The second and third sub-section explores the psychographic differences between the three clusters and thus involves hypothesis 4 to hypothesis 8. Section 6.3.2 discusses the results of one-way ANOVA, while the third sub-section, section 6.3.3, presents the results of discriminant function analysis.

6.3.1. Demographic Profiling Of clusters of SR-investor

As discussed in detail in chapter 3, section 3.2.1, this thesis uses age, education, income and gender to profile the three segments of SR-investors, i.e. SR driven investors, FR driven investors and dual return driven investors. To do so, this thesis used chi^2 statistic. This section hence deals with hypothesis H2, with sub-hypotheses H2a to H2d. As displayed in Table 6.5, only gender showed significant

differences ($p<0.01$) between the segments as the majority of FR driven investors (72%) are male, while most of the DR driven investors (53%) are female and most of the SR driven investors (53%) are also male. This result supports the notion that males are more concerned about the financial return as compared to females (Nilsson, 2009). It can also be said that females are more concerned about the social issues as only 28% of FR driven investors comprise of females, hence supporting the past findings (Beal et al., 2005; Junkus and Berry, 2010; Lewellen et al., 1977; Schueth, 2003). Thus, H2a is supported, however the segments of SR-investors do not differ significantly in terms of age, income and education level. Thus H2b to H2d are not supported. The majority (more than 50%) of investors in each segment comprised of investors aged 56 and above. This reflects that not only young investors, as identified by past research, are inclined towards SRI but also SRI attracts elderly investors. Although the segments of SR-investors identified in this thesis do not differ in terms of education, it is worth mentioning that majority (more than 70%) of the investors held a university degree, this is in line with the past research (Cheah et al., 2011; Dorfleitner and Sebastian, 2014; Junkus and Berry, 2010; McLachlan and Gardner, 2004; Nilsson, 2009; Nilsson et al., 2014; Rosen et al., 1991; Schueth, 2003). Lastly, though the past research indicate that SRI attract high income groups (Nilsson, 2009; Tippet, 2001; Vinning and Ebreo, 1990), this thesis shows that lower income groups are attracted towards SRI as majority (more than 50%) of each segment of SR-investor earned less than 30,000£. from the above discussion it is thus clear that hypothesis H8 is only partly supported.

Table 6.5: Chi^2 Analysis of Demographic Variables						
	SR Driven Investors	FR Driven Investors	Dual-Return Driven Investors	P value	Chi2	Df
Gender						
Male	53%	72%	47%	.001	13.009	2
Female	47%	28%	53%			
Age						
Younger	6%	7%	7%			
Middle aged	36%	37%	33%	.977	.461	4
Elder	58%	56%	60%			
Income						
£0- £30,000	50%	54%	50%			
£30,001- £60,000	37%	30%	38%	.829	1.488	4
Above £ 60,001	13%	16%	12%			
Education						
Not University graduate	24%	27%	18%	.362	2.032	2
University graduates	76%	73%	82%			

The next section attempts to explore psychographic profile of each cluster in terms of pro-social attitude, PCE, values and trust. As aforementioned, the next sub-section, section 6.3.2, uses ANOVA and post-hock analysis to explore differences among the three clusters of SR-investors, which is then followed by discriminant function analysis in section 6.3.3. The hypothesis that are involved in the next two sections are H3 to H8.

6.3.2: Analysis Of Variance between the three clusters of SR-investors

This section presents the results of one-way ANOVA and post-hoc test to assess the difference in psychographic variables (pro-social attitude, PCE, trust and values – materialism, self-transcendence [universalism and benevolence] and self-enhancement [hedonism, power and achievement]) among the clusters of SR-investors. The hypotheses this section attempts to answer are:

H3: Cluster(s) placing more importance on the Social return aspect of SRI would hold higher level of pro-social attitude as

compared to the cluster(s) placing higher importance on the financial return aspect of SRI.

H4: Cluster(s) placing higher importance on the social return aspect of SRI would hold higher level of PCE as compared to the cluster(s) valuing the financial return aspect of SRI.

H5: Segment(s) of investors giving high importance to the social return aspect of SRI would hold a higher level of self-transcendence values as compared to the cluster(s) with high importance placed on financial return

H6: The cluster(s) placing more importance on financial return aspect of SRI would hold higher level of self-enhancement values compared to the cluster(s) that value social return aspect of SRI.

H7: The cluster(s) placing high importance on the financial return aspect of SRI would hold a high level of materialistic values as compared to the cluster(s) preferring social return aspect of SRI.

H8: Cluster(s) valuing social return aspect of SRI would hold high level of trust in their SRI as compared to cluster(s) focused on financial return aspect of SRI.

Following previous researchers (for example Ketchen & Shook 1996; Lockshin et al., 1997; Michaelidou 2012; Orth et al., 2004; Roddy et al., 1996) this thesis used

one-way Analysis of Variance (ANOVA) on non-clustering variables to not only profile, but also to validate the clusters. In a particular study, non-clustering variables are the variables that are not used in cluster analysis for the generation of clusters. As discussed in detail in chapter 3, Pro-social attitude, PCE, trust and six values namely; materialism, universalism, benevolence, power and achievement, are the non-clustering psychographic variables used in this study. Tukey's HSD is also utilized to further analyse the differences among the clusters in terms of these four non-clustering psychographic variables being examined.

The one-way analysis of variance (ANOVA) is a statistical technique used to test if there are any significant differences between three or more unrelated and/or independent groups through the comparison of means between the groups (Iversen and Norpoth, 1976). This thesis utilized ANOVA instead of t-tests, as t-test can only compare two groups while ANOVA can compare more than two groups (Hair et al., 2010). In addition, ANOVA as compared to t-tests protects against a Type 1 and Type 2 error (Field, 2000). A Type 1 error occurs when a true null hypothesis is rejected (Pallant, 2007), while a Type 2 error occurs when a false null hypotheses is retained. One-way ANOVA tests the null hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \cdots = \mu_k$$

μ = Group mean
k = number of groups.

If the results of one-way ANOVA are significant then the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Where the alternative hypothesis (Ha) states that there exists a statistically significant difference between at least 2 group means. An F ratio is computed by dividing the variance between the

groups by the variance within the groups. A large F ratio is an indication of more variability between the groups than within groups. A significant F test implies that the null-hypotheses can be rejected.

However, ANOVA only indicates overall difference between the groups it does not provide specific information about which specific group differs from which other specific group (Hair et al., 1998, Field, 2000). The post hoc tests were designed to find the pair of groups that significantly differ from each other and the direction of the difference with respect to the different variables. This also helps protect against a Type 1 error. The chief post hoc tests are Tukey's Honestly Significant Difference (HSD), Bonferroni, and the Games-Howell procedure. The Bonferroni is only appropriate to use if there are merely a few comparisons. Whereas the Games-Howell procedure is only suitable when variance differs (Burns and Burns, 2008). Tukey's HSD is more effective when there are numerous comparisons with groups that are not much different in size. Additionally "if there are eight or more means to compare, this test (HSD) is the best procedure for controlling error rate" (Howell, 1987, cited in Yani-de-Soriano, 2000, p. 127).

Therefore, this study utilizes Tukey's HSD so as to determine the differences in means amongst the clusters in the typology for each of the psychographic variable as well as to examine the pattern of these variables. In order to do this the table of multiple comparisons is used. This table identifies which clusters are significantly higher than the others. The asterisks (*) beside a value listed specifies that the two clusters being compared are significantly different from each other.

To determine the effect size of the post hoc results the Eta Squared is used. Though, SPSS does not automatically calculate Eta Squared, it can be calculated by

dividing the sum of squares between groups by the total sum of squares. Table 6.6 represents interpretation of different Eta values with their effect size.

Table 6.6: Interpretation of Eta Squared

Eta value	Effect Size
0.01	Small effect
0.06	Medium effect
0.14	Large effect

Source: Cohen, 1998.

As mentioned earlier in this chapter, this section aim to understand the differences between the three clusters of SR-investors in term of psychographic variables (pro-social attitude, PCE, values [materialism, universalism, benevolence, hedonism, power and achievement] and trust). Chapter three, section 3.2.2, discusses the expected difference between the proposed clusters on the basis of these psychographic variables. It was proposed that the cluster focusing more on social return aspect (in this study the SR-driven investor cluster) would display a higher pro-social attitude than others. It was also proposed that this cluster will believe in the individuals' ability to bring about a positive change hence displaying higher PCE than other clusters. Moreover, it was proposed that this cluster will hold the lowest materialistic and self-enhancement values while simultaneously holding the highest self-transcendence values in comparison to other clusters and will have the highest level of trust in the SR organization they invest with (EBS). In case of FR driven investors it was proposed that they will display the lowest level of pro-social attitude and the lowest level of PCE. With the lowest level of trust in the SR organization they invest in, these investors will hold the highest materialistic and self-enhancement values while simultaneously holding the lowest self-transcendence values.

To examine these relations a one-way ANOVA for the psychographic variables was conducted. Table 6.7 shows the results for one-way ANOVA for the psychographic variables. Findings indicate that the clusters differ significantly on the

basis of all variables, i.e. Pro-social attitude (ProSocAtt) [F (2,295) = 33.62, p = 0.000], PCE [F (2,295) = 13.88, p = 0.000], trust [F (2,295) = 19.38, p = 0.000], materialism (Mat) [F (2,295) = 21.21, p = 0.000], Universalism [F (3,284)= 37.103, p=0.000], Benevolence [F (3,284)= 9.122, p=0.000], Achievement [F (3,284)=3.448, p< .05] and Power [(F (3,284)= 42.396, p=0.000].

Table 6.7: Analysis Of Variance Of Four Psychographic Variables For The Three Clusters.

Variables	F value	Sig.
ProSocAtt	33.62**	.000
PCE	13.88**	.000
Mat	21.21**	.000
Universalism	8.286**	.000
Benevolence	5.883*	.003
Power	7.939**	.000
Achievement	4.043*	.019
Trust	19.38**	.000

**Significant at the 0.001 level
*Significant at the 0.05 level

Multiple comparisons were also calculated to understand the group differences. Table 6.8 shows the significant pairwise differences identified between clusters in terms of their psychographic profiles.

Table 6.8: Multiple Comparison for Psychographic Variables			
Clusters	**Mean**	**Standard Error**	**Sig.**
Pro-Social Attitude (Pro-Soc Att)			
Social Return Driven > Financial Return Driven	.428**	.059	.000
Dual Return Driven > Financial Return Driven	.418**	.058	.000
Perceived Consumer Effectiveness (PCE)			
Social Return Driven > Financial Return Driven	.293**	.072	.000
Dual Return Driven > Financial Return Driven	.355**	.070	.000
Materialism			
Financial Return Driven > Social Return Driven	.514**	.079	.000
Financial Return Driven > DR-Driven	.252*	.077	.004
DR-Driven > Social Return Driven	.262*	.073	.001
Universalism			
Social Return Driven > Financial Return Driven	.163**	.041	.000
Dual return Driven > Financial Return Driven	.122*	.040	.008
Benevolence			
Social Return Driven > Financial Return Driven	.199*	.061	.003
Dual return Driven > Financial Return Driven	.159*	.059	.021
Power			
Financial Return Driven > Social Return Driven	.529**	.133	.000
Achievement			
Dual Return Driven > Social Return Driven	.329*	.116	.013
Trust			
Social Return Driven > Financial Return Driven	.341**	.058	.000
Dual Return Driven > Financial Return Driven	.291**	.057	.000

**Significant at the 0.001 level

*Significant at the 0.05 level

Each variable is explained one by one in the following sub-sections.

6.3.2.1. Difference in Pro-Social Attitude among the clusters of SR-investor

As hypothesized, table 6.8 shows that a significant difference exists between the social return driven (SR Driven) investors (mean = 4.68, SD = .339) and the financial return driven (FR Driven) investors (mean = 4.25, SD = .512) in terms of pro-social attitude, with the SR driven investors having higher pro-social attitude as compared to the FR driven investors. Also, a significant difference existed between the DR driven investors (mean = 4.67, SD = .349) and the FR driven investors in terms of pro-social attitude, with the DR driven investors a having higher pro-social attitude as compared to the FR driven investors. However, no significant difference exists between the SR driven investors (mean = 4.68, SD = .339) and the DR driven investors (mean = 4.67, SD = .349). Overall, the difference in the mean scores of the three clusters for pro-social attitude was quite high. This was evident from the large effect size obtained (eta squared=0.18). Thus H3 was supported.

6.3.2.2. Differing levels of Perceived Consumer Effectiveness (PCE) between clusters of SR-investor

As predicted, a significant difference existed between the social return driven (SR Driven) investors (mean = 4.41, SD = .524) and the financial return driven (FR Driven) investors (mean = 4.12, SD = .519) in terms of PCE, with the SR driven investors displaying higher level of PCE as compared to the FR driven investors. In addition to this, as shown in table 6.8, a significant difference also existed between the DR driven investors (mean = 4.47, SD = .417) and the FR driven investors in terms of PCE held by the investors, with the dual-return driven investors believing more in ones' ability to bring positive change and thus depicting higher PCE as compared to the FR driven investors. However, no significant difference exists

between the SR driven investors and the DR driven investors. Overall, the difference in mean scores of the three clusters PCE was moderate. This was evident from the medium effect size obtained (eta squared=0.08). Thus hypothesis 4 is supported**.**

6.3.2.3. Value differences between clusters of SR-investor

According to hypothesis 5, 6 and 7 the three clusters of SR-investors with different combination of financial and social return aspect of SRI would vary in terms of their value orientations. In chapter 3, section 3.2.2.3.5 and 3.2.2.4.1, it was proposed that the investors in the SR-driven cluster would give more importance to self-transcendence (universalism and benevolence) as compared to the investors in FR-driven cluster, whereas the investors in FR-driven cluster would place more importance on self-enhancement (power and achievement) and materialistic value as compared to investors in SR-driven cluster.

Table 6.7 and 6.8 presents results for the one-way ANOVA for the five values, along with the remaining psychographic variables studied in this thesis. As could be seen from table 6.7, clusters differ significantly with respect to all the five values (universalism, benevolence, power, achievement and materialism). Table 6.8 shows the significant pairwise differences identified between the three clusters of SR-investors in terms of their value orientations. These values that significantly differentiate clusters from one another are discussed next.

6.3.2.3.1. Universalism

As proposed, the FR driven investors (mean = 4.82, SD = .420) held the lowest level of universalism value as compared to both the SR driven investors (mean = 4.98, SD = .139) and the DR driven investors (mean = 4.94, SD = .241). Hence proving that investors falling in the FR driven cluster had lowest level of

universalism. However, the DR driven investors did not differ from the SR driven investors. The difference in universalism's mean scores of the three clusters was somewhat moderate. This was evident from the medium effect size obtained (eta squared = 0.05).

6.3.2.3.2. Benevolence

As proposed, the FR driven investors (mean = 4.68, SD = .518) displayed the lowest level of benevolence as compared to both the SR driven investors (mean = 4.88, SD = .353) and the DR driven investors (mean = 4.84, SD = .366). However, the SR driven investors did not differ significantly from the DR driven investors. Overall, the difference in benevolence's mean scores of the three clusters was low. This was evident from the small effect size obtained (eta squared=0.03).

With both universalism and benevolence differentiating between the three clusters as predicted, hypothesis 5 was supported.

6.3.2.3.3. Power

With regards to power, as proposed, the FR driven investors (mean = 2.50, SD = .820) held higher level of power value in comparison to the SR driven investors (mean = 1.97, SD = .917). However the DR driven investors (mean = 2.22, SD = .929) did not differ significantly with regards to power from either the SR-driven investors or the FR-driven investors. Overall, the difference in mean scores of the three clusters for power was somewhat moderate. This was evident from the medium effect size obtained (eta squared = 0.05).

6.3.2.3.4. Achievement

For achievement the only difference that appeared was between the DR driven investors (mean = 4.12, SD = .853) and the SR driven investors (mean = 3.79 SD = .905), where the DR driven investors displayed more importance for achievement values in comparison to the SR driven investors. However the FR driven investor (mean = 3.95, SD = .768) did not have a significant difference in terms of achievement compared to the other two SR investor clusters. Overall, the difference in the mean scores of the three clusters for achievement was low. This was evident from the small effect size obtained (eta squared = 0.02).

Hypothesis 6 argued that the three clusters would differ in terms of self-enhancement (power and achievement). It was also proposed that the FR-driven investors would value both power and achievement more than SR-driven investors. From the above discussion it is clear that though the three clusters differ in terms of both power and achievement, yet only the SR-driven cluster differed from FR-driven cluster in terms of power only and did not differ in terms of achievement. Thus hypothesis 6 is partially supported.

6.3.2.3.5. Materialism

With regards to materialism, as predicted, results display a significant difference between the social return driven (SR Driven) investors (mean = 1.73, SD = .493) and the financial return driven (FR Driven) investors (mean = 2.24, SD = .546) in terms of the materialistic values held by investors in each cluster. With the FR driven investors displaying higher level of materialistic values as compared to the SR driven investors. In addition to this a significant difference also existed between the DR driven investors (mean = 1.99, SD = .558) and the FR driven investors in

terms of materialism, with the FR driven investors holding higher materialistic values as compared to the dual return driven investors. Also, a significant difference existed between the SR driven investors and the DR driven investors with DR driven investors holding higher materialistic values as compared to the SR driven investor group. Hence as hypothesized the FR driven investors displayed the highest level of materialistic value followed by DR driven investors, with SR driven investors displaying the lowest level of materialism, thereby supporting hypothesis 7. Overall, the difference in mean scores of the three clusters for materialistic values tended to incline towards the higher end. This was evident from the large effect size obtained (eta squared=0.12).

6.3.2.4. Differing levels of Trust between the clusters of SR-investors

Support was obtained for hypothesis 8, as a significant difference existed between the social return driven (SR Driven) investors (mean = 4.50, SD = .374) and the financial return driven (FR Driven) investors (mean = 4.16, SD = .426) in terms of trust towards EBS. With the SR driven investors displaying higher level of trust as compared to the FR driven investors. In addition to this a significant difference also existed between the DR driven investors (mean = 4.45, SD = .388) and the FR driven investors in terms of trust towards EBS, with the DR driven investors holding more trust as compared to the FR driven investors. However, no significant difference exists between the SR driven investors and the DR driven investors. Overall, the difference in mean scores of the three clusters for trust was more inclined towards the higher end. This was evident from the large effect size obtained (eta squared=0.11).

In conclusion, the three clusters of SR-investors identified through this research differ in terms of their demographic and psychographic profiles. As

predicted, FR driven cluster, which comprised of investors who highly valued financial return aspect of SRI and placed lowest importance on social return aspect of SRI as compared to the other two clusters, displayed lowest level of pro-social attitude, PCE and trust in EBS. They also held high level of self-enhancement value and materialism value while scored lowest for self-transcendence value.

In contrast to this cluster the SR-driven cluster, which comprised of investors who valued social return aspect of SRI the most and valued financial return the least, held high pro-social attitude, PCE and trust in EBS. Additionally they held highest level of self-transcendence value while scoring low for both self-enhancement and materialist value.

The third cluster named dual return (DR) driven, with the investors in this cluster valuing both the financial and social return aspect of SRI equally, had moderate results with respect to the psychographic profile. In summary, the three clusters – SR-driven, FR-driven and DR-driven – have different profiles with respect to pro-social attitude, PCE, value orientations and trust, thus providing support for H3 to H8. The next section uses Discriminant Function Analysis to test the hypotheses further.

6.3.3. The Discriminant Power Of the psychographic Variables

This section aims to test whether the three clusters – SR driven investors, FR driven investors and DR-driven investors - firstly, differ significantly in terms of the psychographic variables – pro-social attitude, PCE, value orientation [materialism, self-enhancement (power and achievement) and self-transcendence (universalism and benevolence)] and trust- and secondly, which variables are the strongest

discriminators between each cluster when compared to every other cluster. Based on the dual aims, this section is further divided into two sub-sections.

The sub-sections 6.3.3.1 tests all the psychographic variables to see if the three clusters differentiate in terms of these variables. This is done to validate the cluster solution obtained earlier in this chapter. Discriminant function analysis is used to "evaluate the accuracy of classification" (Malhotra et al., 2012, pp. 739) and thus is suitable for this sub-sections.

The second sub-section, 6.3.3.2, examines the discriminating power of variables between pairwise clusters. That is to say, the sub-section will look at the discriminating power of the psychographic variables - pro-social attitude, PCE, value orientation [materialism, self-enhancement (power and achievement) and self-transcendence (universalism and benevolence)] and trust - between 1 SR driven investors and FR driven investors, 2 SR driven investors and DR driven investors and 3 FR driven investors and DR driven investors. Discriminant analysis not only allows the investigator to examine which attributes contribute most to the group separation (Coakes and Steed, 1999, Kinnear and Gray, 1999) and to validate cluster solution (Malhotra et al., 2012; Hire et al., 2010), but could also be used to investigate the differences between two or more clusters with respect to several variables simultaneously (Klecka, 1980). Thus making Discriminant Function Analysis suitable for sub-section 6.3.3.2, which tests the discriminative power of the psychographic variables (pro-social attitude, PCE, trust, materialism, universalism, benevolence, power and achievement), and identifies the strongest discriminating variables for each pair of clusters.

The basic assumption associated with discriminant analysis is that the observations are a random sample (Klecka, 1980). These assumptions, for the data set used in this thesis, are discussed in chapter 5, section 5.6.

Discriminant analysis (DA) is used when the dependent variable is categorical in nature whereas the independent variables are interval in nature. The analysis is called two-group discriminant analysis if there are two groups and multiple discriminant analysis (MDA) if there are more than two groups.

MDA and multiple regression analysis or logistic regressions are similar to each other. However, MDA is the better choice as it has greater statistical power than logistic regression and thus greater capability of avoiding the Type 2 errors (Garson, 2008). Additionally regression is suitable when the dependent variable is metric in nature, while DA is appropriate when the dependent variable is categorical in nature (Hair et al., 2008). MDA is also allied to the analytical technique of MANOVA, yet the two are used for different purposes. While MANOVA highlights differences between groups on the basis of membership related to mean differences, MDA allows investigators to understand what predictor variables discriminates between two or more groups (Coakes and Steed, 1999, Kinnear and Gray, 1999). Additionally MDA and MANOVA could be seen as opposite to each other in the sense that the dependent variable in MANOVA is metric and the independent variable is categorical, while the opposite is true in MDA (Hair et al., 1998).

The current study used MDA as a multivariate technique, which is applicable when examining differences between the clusters with respect to the psychographic variables and examining which attribute contributes most to group separation.

Conducting MDA is a five-step process (Malhotra et al., 2012). The first step is determining predictor variables. The data at this point is divided into two parts; the analysis sample and the holdout sample. Discriminant analysis on the analysis sample is validated through running the DA on holdout sample. However, as the aim of using DA in this thesis is to validate results of cluster analysis obtained in section 6.2, through identifying overall differences and then identifying which of the variable discriminates most between groups of SR-investors, the step of dividing the data into two sets is not required and thus is not done. The second step is estimation. This step involves building a linear combination of the discriminant function (predictors) with the aim of differentiating between the groups as much as possible on these predictor variables. Checking the statistical significance is the third step of the process, which involves testing the null hypothesis, i.e. the means of all discriminant functions for all the groups in the population are equal. The results are meaningful only if the null hypothesis is rejected. Step four is the interpretation of discriminant coefficients and weights. An examination of the absolute magnitude of the standardised discriminant function coefficients along with an examination of discriminant loadings or structural correlations helps obtain an idea of discriminating power of the variables between groups. The simple correlation between every predictor and discriminant function reflects the variance that the predictor shares with the discriminant function. Lastly, step five consists of determining the percentage of the correctly classified cases (Malhotra et al., 2012).

Finally while interpreting, in order to check if the function reliably discriminates among the groups or not, Wilk's lambda is used. When the value of Wilk's lambda is very close to 1 it indicates that the differences are not significant (Brace et al., 2006). With a very complex sampling distribution of lambda it is more

convenient to determine its significance from a chi-square value (Kinnear and Gray, 2000). If $p<0.05$, chi-square is considered statistically significant. Discriminant loadings are utilized to determine the linear correlation between every variable. The discriminating power of the variables is interpreted through the discriminant function, with a substantive cut off point of 0.3 and above (Hair et al., 1998). The Uni-variate F Ratio demonstrates whether there is substantial influence for every category of each of the predictor variables. Greater F values signify larger discriminatory power (Brace et al., 2006). Examining the eigenvalue is also advised as it determines how well the discriminant function discriminates between the categories, i.e. the bigger the value, the better the discrimination. Next are discussed the results of DA conducted for the four psychographic variables.

6.3.2.1. Overall Differences Between the Three Clusters of SR-investors

Through DA on the psychographic variables - pro-social attitude, PCE, value orientation [materialism, self-enhancement (power and achievement) and self-transcendence (universalism and benevolence)] and trust - for the three clusters – SR driven investors, FR driven investors and DR-driven investors - this section aims to generate external validity of the cluster solution obtained in the start of this chapter, by showing that the clusters differ in terms of the non-clustering variables (Malhotra et al., 2012), thus testing H3 to H8.

The prior probabilities for SR driven investors, FR driven investors and DR-driven investors were .342, .275, and .383, respectively, echoing the random probability of classing participants rightly. For the discriminant analysis to be significant, the canonical discriminant functions must accurately classify participants better than the chance probabilities.

As there are three groups, the number of discriminant functions obtained is two (N-1, where N is the number of groups). Both the discriminant functions obtained were statistically significant at $p < .05$. The first function accounted for 85% of the intergroup variability and had a canonical correlation of .523, Wilks's $\lambda = .680$, X2 (18, N = 298) = 112.077, $p < .000$. The second function accounted for 15% of the variance and had a canonical correlation of .252, Wilks's $\lambda = .936$, X2 (8, N = 298) = 19.170, $p < .05$. Thus, in combination, the two functions accounted for 100% of the inter-groups variability.

The linear correlation between each of the variables and the discriminant function is determined by the discriminant loadings. These discriminant loadings are used to interpret the discriminant power of variables. The variables exhibiting a loading of 0.30 or higher are considered substantive. During interpretation all of the variables with loading higher than 0.30 should be considered, even if some of them are excluded in the step-wise solution. Reason being that not being included in the stepwise solution does not imply that they do not have a substantial effect (Hair et al., 1998, p. 294). Table 6.9 displays the discriminant loadings of the variables on the two functions.

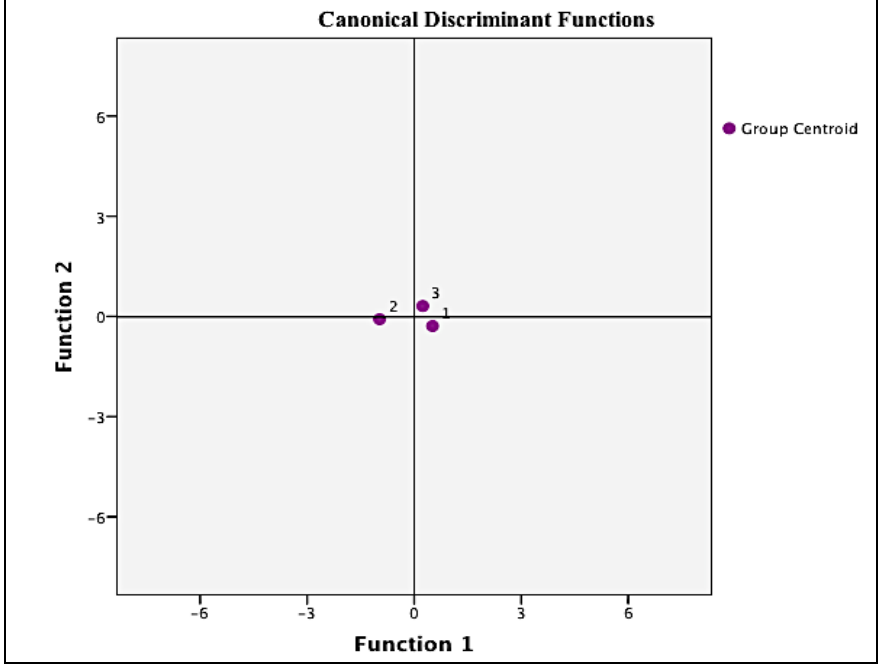
Table 6.9: Results for Discriminant Function Analysis for the Three Clusters

	Function	
	1	2
Pro-Social Attitude	**.767**	**.314**
PCE	**.466**	**.429**
Trust	**.590**	.058
Materialism	**-.572**	**.554**
Universalism	**.385**	-.073
Benevolence	**.326**	-.013
Achievement	-.038	**.628**
Power	**-.356**	**.300**
Wilk's Lambda	.680	.936
Chi Square	112.077	19.170

The positive loadings of pro-social attitude, PCE, trust, universalism and benevolence, as well as the negative loading of materialism and power defined the first function. Figure 6.6 indicates that the first function separates the SR driven investors (cluster 1) from the FR driven investors (cluster 2). It also separates the FR driven investors (cluster 2) from the DR-driven investors (cluster 3).

Figure 6.6: Group Centroids From Discriminant Function Analysis

1. SR Driven Investors
2. FR Driven Investors
3. DR Driven Investors



The positive loadings of pro-social attitude, PCE, materialism, power and achievement defines the second function. As can be seen from figure 6.6, the second function separates the DR driven investors (cluster 3) from the remaining two groups. Taken together, the two functions correctly classified 52.9% of the SR driven investors, 59.8% of the FR driven investors and 59.6% of the DR- driven investors.

The overall correct classification rate was 57.4%. The two discriminant functions classified individuals better than expected based on the prior probabilities. Thus validating the cluster solution and supporting the understanding that SR investors can be classified into three unique clusters on the basis of the specific combination of importance of financial returns and importance of social returns held by them. The classification results are shown in Table 6.10.

Table 6.10: Classification Table For SR Investor Typology

Actual group membership	Predicted Group Membership					
	SR Driven Investors		FR Driven Investors		DR Driven Investors	
	%	N	%	n	%	n
SR Driven Investors	**52.9**	54	8.8	9	38.2	39
FR Driven Investors	18.3	15	**59.8**	49	22.0	18
DR Driven Investors	29.8	34	10.5	12	**59.6**	68
57.4% of original grouped cases correctly classified.						

6.3.2.2. Pairwise differences

This section aims to investigate which of the variables contribute most to group separation, thus relating to hypotheses 3 to 8. To test discriminating power of the psychographic variables - pro-social attitude, PCE, value orientation [materialism, self-enhancement (power and achievement) and self-transcendence (universalism and benevolence)] and trust - between pairwise clusters the section will discuss results of DA between:

1. SR Driven Investors and FR Driven Investors
2. FR Driven investors and DR-Driven Investors
3. DR Driven Investors and SR Driven Investors

6.3.2.2.1. SR Driven Investors and FR Driven Investors

Table 6.11 shows the results of discriminant analysis when comparing SR driven cluster and FR driven cluster.

Table 6.11: Factors Discriminating Between SR Driven Investors and FR Driven Investors

Wilk's lambda: .658**		Chi square: 74.424**
Variable	**Discriminant Loadings**	**Univariate F Ratio**
Pro-Social Attitude	.697	46.069**
PCE	.389	14.339**
Trust	.594	33.448**
Materialism	-.687	44.796**
Universalism	.379	13.607**
Benevolence	.318	9.580*
Achievement	-.128	1.565
Power	-.419	16.632**

**Significant at the 0.001 level
*Significant at the 0.05 level

Among the values, universalism and benevolence were positive, while power and materialism were significant negative discriminators between the two clusters. Additionally pro-social attitude, PCE and trust were also significant positive discriminators between SR driven cluster and FR driven cluster. Pro-social attitude was the highest discriminator, followed by materialism as the highest negative discriminator. The eigenvalue for this pair of clusters was 0.521.

6.3.2.2.2. FR Driven Investors and DR Driven Investors

Table 6.12 shows the results of discriminant analysis when assessing the discriminating power of the psychographic variables between FR-driven cluster and DR driven cluster.

Table 6.12: Factors Discriminating Between FR Driven Investors And DR Driven Investors		
Wilk's lambda: .730**		Chi square: 59.760**
Variable	**Discriminant Loadings**	**Univariate F Ratio**
Pro-Social Attitude	.801	6.561**
PCE	.625	28.098**
Trust	.585	24.643**
Materialism	-.371	9.897**
Universalism	.302	6.561**
Benevolence	.301	6.351**
Achievement	.171	2.094
Power	-.308	4.796*

**Significant at the 0.001 level
*Significant at the 0.05 level

Pro-social attitude, PCE, trust, universalism and benevolence are the positive significant discriminators between FR driven investors and DR driven investors, with pro-social attitude being the highest positive discriminator. While, materialism and power are the negative discriminators between the two clusters. The eigenvalue for this comparison was 0.371.

6.3.2.2.3. DR Driven Investors and SR Driven Investors

Table 6.13 presents the results of discriminant analysis when looking at DR driven investors and SR driven investors.

Table 6.13: Factors Discriminating Between DR Driven Investors and SR Driven Investors		
Wilk's lambda: .894**		Chi square: 23.363
Variable	**Discriminant Loadings**	**Univariate F Ratio**
Pro-Social Attitude	-.042	.044
PCE	.192	.932
Trust	-.195	.957
Materialism	**.723**	13.197**
Universalism	-.306	2.359
Benevolence	-.163	.673
Achievement	**.547**	7.545**
Power	**.393**	3.906*

**Significant at the 0.01 level
*Significant at the 0.05 level

Materialism, achievement and power are the positive significant discriminators between DR driven investors and SR driven investors. Materialism is

the strongest positive discriminator, followed by achievement as discriminator between the two clusters. Universalism is a negative significant discriminator between the two clusters. The eigenvalue for this analysis was 0.118.

In conclusion, the results show that the three clusters differ from each other in terms of the four psychographic variables- pro-social attitude, PCE, values [materialism, self-enhancement (power and achievement) and self-transcendence (universalism and benevolence)] and trust. Thus providing support for H2 to H8.

So far this chapter attempts to produce and validate a typology of SR-investors. The chapter provides support to the understanding that SR-investors can not only be segmented into three unique clusters with respect to the importance these investors place on financial return and social return aspect of SRI, but also investors in these three clusters hold distinct psychographic and demographic profiles. Thus, while section 6.2 explored if SR-investors could be segmented into heterogeneous clusters, section 6.3 provided external validity to these clusters. This understanding is vital as it highlights the complexity and uniqueness of SRI.

Furthermore, as discussed in chapter 3, section 3.2.2.3, values could be useful in identifying differences between the clusters of SR-investors. Additionally, values drive attitudes, which then drive behaviours (Homer and Kahle, 1988). Studies exploring environmental attitudes and behaviour have supported this relation (Nordlund &Garvill, 2002; Schultz, 2001; Schultz & Zelezny, 1999; Poortinga et al., 2004; Schultz et al., 2005; Stern et. al., 1995). Therefore the same can be expected for socially responsible investment. However, given that the SR-investors could be classified into three heterogeneous clusters, each with unique demographic and psychographic profile, the question arises if the same values would motivate the SRI-

attitude for each segment or would the segments vary in terms of the values that would motivate their SRI-attitude. Next section, section 6.4, focuses on exploring the differences among the three SR-investor clusters – SR-driven, FR-driven and DR-driven cluster- in terms of the values that would direct SRI-attitude of investors in each segment. The focus is on not only identifying the values that direct SRI-attitude of each segment, but also to further highlight the differences among these clusters.

6.4. Values as antecedents of SRI-attitude for each SR-investor cluster

This section aims to first of all determine how well the five values (independent variables), being examined, collectively explain the variance in SRI-attitude (dependent variables) for each group of SR-investor and secondly, to determine the relative importance of each of these values in the prediction of SRI-attitudes for each segment. The aim is to explore which values act as antecedents of SRI-attitude for each cluster, thus showing their heterogeneous nature. One model was built for each of the cluster's dependent variable (SRI-attitudes) to assess the relationship of the independent variables (values) with the attitude. To achieve this goal, split file technique in SPSS version 20 was utilized, where cluster membership was used as a basis for splitting. This resulted in generating three models, one for each cluster with SRI-attitude as the dependent and the values as the independent variable. Multiple regression analysis was used to explore the relationship between SRI-attitude and predictors (values) for each cluster.

Multiple regression is employed in this study because it not only determines the ability of a set of variables to predict a particular outcome, but also indicates which variable from amongst the set of variables is the best predictor of that outcome (Pallant, 2007).

There are three types of multiple regression analysis that could be employed in any study. First is standard multiple regression, in which all the independent variables are entered into the regression equation concurrently. Second is the hierarchical multiple regression analysis. In this type of regression analysis the researcher specifies the importance of each variable, based on theoretical grounds, which order is then used to enter all the independent variables into the equation. Finally, the third type of multiple regression analysis is the stepwise multiple regression. In this type of regression analysis the investigator gives SPSS a list of independent variables. The program then, based on a set of statistical criteria, selects not only which variables to enter but also determines the order in which they go into the equation.

From amongst the three types, standard multiple regression analysis is said to be the most commonly used multiple regression analysis (Pallant, 2007). This thesis also opted to use standard multiple regression analysis to compute the multiple regression equation. The main drawback of hierarchical method is that the independent variables (predictors) are entered into the regression model in the order specified by the investigator, therefore it should not be used if the researcher does not have a solid reason to assign different level of importance to each variable (Brace et al., 2006). Stepwise multiple regression has its basis well established within the statistical literature (Whittingham et al., 2006). Its shortcomings include the inconsistent result among model selection algorithms (backward elimination, forwards selection or stepwise) making it difficult to infer the superiority of the selected model. Although, the method relies on one best model, other models that are ignored may have an equally good fit (Whittingham et al., 2006). Thus stepwise method puts inappropriate focus on one model. Another problem faced in stepwise regression is the bias in

parameter approximation that is carried out on the same data set, which can cause biases in parameters, incorrect significance tests and over fitting.

Before proceeding to performing multiple regressions it is important to check if the sample size is appropriate for carrying out the regression. Also multicollinearity needs to be checked before conducting regression. Different guidelines regarding the size of data for multiple regression are available. Stevens suggested that "For social science research, about 15 subjects per predictor are needed for a reliable equation" (Stevens, 1996, cited in Pallant, 2007, p. 148). Tabachnick and Fidell (2007) had given a formula to calculate sample size whereby "N>50+8m, with m being the number of independent variables" (Tabachnick and Fidell, 2007, cited in Pallant, 2007, p. 148). The current research has five values as the independent variables; therefore, following Stevens suggestion N should be more than 75 (5*15=75), while according to the formula given by Tabachnick and Fidell (2007) N should be more than 90 cases (50+ 8(5)=90). Given that the current sample size (298) meets both of the suggested minimum numbers, it can be safely concluded that the sample size requirements for multiple regression analysis are not violated.

The next check that needs to be made before conducting regression analysis is to assess multicollinearity. Multicollinearity represents the presence of high correlations among independent variables. The common way to check for multicollinearity is by reviewing a correlation matrix between independent variables. Multicollinearity through correlational matrix for the dataset used in this thesis is discussed in section 6.2. Additionally, to check for collinearity that may not be evident in the correlation matrix SPSS was used to perform "collinearity diagnostic". The findings from table 6.14, 6.15 and 6.16 indicate that in all the three regression models no tolerance value

falls below 0.1 and no VIF (Variance Inflation Factor) exceeds 10. Thus, the three regression models have not violated the multicollinearity assumption. Each model is discussed in detail next.

6.4.1. Values that motivate SRI-attitude of SR-driven investors

The first regression model determined the ability of the five values – universalism, benevolence, power, achievement and materialism - in determining SRI-attitude for the first cluster of SR-investors, namely the socially responsible driven (SR-driven) investors. This cluster, as discussed in detail in section 6.2.3.1, gave high importance to social return aspect of SRI while placing very low importance on the financial return aspect of SRI. In the regression model, all the independent variables were executed using the standard multiple regression analysis. The standard regression coefficient also known as beta coefficient (β) shows how strongly each predictor variable influences the dependent variable. Adjusted R^2 indicates the percentage of the variance of the dependent (attitude) variables that is explained by the independent (values) variables and is calculated by taking into account the number of independent (predictor) variables in the model and the number of observations that the model is based on (Brace et al., 2006).

Tables 6.14 shows the results of standard multiple regression analyses for the first cluster.

Table 6.14: Results of Multiple Regression Analysis for SRI-Attitude of SR-driven investor cluster

Model	$F_{5,293}$	Sig.	Adjusted R^2	β	Sig.	T	VIF
	85.35	.000	.35				
Universalism				**.251**	.031	.637	1.520
Benevolence				**.229**	.022	.652	1.522
Power				.063	.592	.627	1.594
Achievement				.028	.425	.711	1.406
Materialism				.037	.724	.759	1.318

The five values collectively explain 35% of the variance in SRI-attitude of investors making up the SR-driven investor cluster. These percentages are significant ($p<0.05$). Overall, universalism has the largest and strongest β value, followed by benevolence, when explaining SRI-attitude of the SR-driven cluster. Although, power, achievement and materialism were in the positive direction, they did not make a significantly unique contribution to the prediction of SRI-attitude ($p>0.05$) for this cluster. It could therefore be argued that the investors making up the SR-driven cluster care about the welfare of not only the close others but also care about the welfare of nature and of all the people. This argument is based on the fact that both universalism and benevolence drive their SRI-attitude.

6.4.2. Values that motivate SRI-attitude of FR-driven investors

The second cluster of SR-investors was the FR-driven cluster. As discussed in detail in section 6.2.3.2, the investors in this cluster valued financial return aspect of SRI the most. Table 6.15 presents the results of regression model that establish the ability of the five values – universalism, benevolence, power, achievement and materialism - in determining SRI-attitude for this cluster of SR-investors.

Table 6.15: Results Of Multiple Regression Analysis For SRI-Attitude of FR-driven investor cluster

Model	$F_{5,293}$	Sig.	Adjusted R^2	β	Sig.	T	VIF
	87.43	.001	.48				
Universalism				.018	.898	.513	1.950
Benevolence				**.425**	.002	.572	1.748
Power				-.116	.390	.561	1.783
Achievement				**-.221**	.037	.675	1.482
Materialism				-.050	.672	.728	1.374

As could be seen from table 6.15, the five values collectively explain 48% of the variance in SRI-attitude of investors making up the FR-driven investor cluster. These percentages are significant ($p<0.05$). Overall, benevolence has the largest and

strongest β value, followed by achievement that has the largest negative β value, when explaining SRI-attitude of the FR-driven cluster. Although, universalism is in the same direction as that when exploring SRI-attitude of SR-driven cluster, it did not make a significant contribution to the prediction of SRI-attitude of FR-driven cluster ($p>.05$). Interestingly, power and materialism, although they did not make a unique contribution to the prediction of SRI-attitude ($p>0.05$) for this cluster, were in the negative direction. It could therefore be argued that the investors making up the FR-driven cluster care about only the individuals who are close to them, or with whom they are in frequent contact, as they value benevolence but not universalism. Furthermore, achievement being a negative predictor of SRI-attitude of this cluster echo's the thought that the investors in this cluster use investment to reflect their achievement value, and the more important achievement becomes the lower their attitude to invest socially responsibly gets. This also explains why this cluster values financial return aspect of SRI more than SR-driven cluster.

6.4.3. Values that motivate SRI-attitude of DR-driven investors

The last cluster that emerged among SR-investors was the Dual Return driven cluster (DR-driven). The investors making up this cluster value both financial return and social return aspect of SRI, as discussed in detail in section 6.2.3.3. Table 6.16 presents the results of regression model that establishes the ability of the five values – universalism, benevolence, power, achievement and materialism - in determining SRI-attitude for this cluster of SR-investors.

Table 6.16: Results Of Multiple Regression Analysis For SRI-Attitude of Dual Return-driven investor cluster							
Model	$F_{5,293}$	Sig.	Adjusted R^2	β	Sig.	T	VIF
	87.43	.001	.38				
Universalism				.052	.644	.670	1.494
Benevolence				**.282**	.033	.677	1.478
Power				-.122	.428	.537	1.864
Achievement				.029	.677	.638	1.567
Materialism				**-.276**	.039	.695	1.440

As could be seen from table 6.16, the five values collectively explain 38% of the variance in SRI-attitude of investors making up the DR-driven investor cluster. These percentages are significant ($p<0.05$). Overall, benevolence has the largest and strongest β value, followed by materialism that has the largest negative β value, when explaining SRI-attitude of the return-driven cluster. Although, universalism is in the same direction as that when exploring SRI-attitude of the other two cluster - SR-driven and FR-driven clusters -, it does not make a significant contribution to the prediction of SRI-attitude of DR-driven cluster ($p>.05$). Additionally, achievement was in the positive direction while, power was in the negative direction when seen as predictors of SRI-attitude of DR-driven cluster. However, these two values- power and achievement- did not make significant contribution in predicting SRI-attitude of the DR-driven cluster ($p>0.05$). By looking at the results for this cluster, it is reasonable to argue that the investors in this cluster choose to invest socially responsibly so as to have a positive affect through their investment on the people they know (as benevolence is the strongest positive predictor of SRI-attitude of this cluster). Nonetheless, the investment decision of these investors is influenced by their materialistic value (as materialism is a negative predictor of SRI-attitude for this cluster), therefore the more materialistic they become the less their urge to invest socially responsibly gets.

In summary, the SRI-attitude of the three clusters of SR-investors is motivated by different value sets, reflecting the heterogeneity of the three clusters. The SRI-attitude of investors in SR-driven cluster is motivated by self-transcendence (universalism and benevolence) values. The care for the universe and everything in it, along with the close others is what motivates these investors to choose SRI. While the SRI-attitude of FR-driven cluster is motivated by preservation of welfare of close others only, as benevolence is the strongest predictor of SRI-attitude for this cluster. This cluster also believes that investment can help reflect their personal success (achievement), and the more they are inclined towards depicting their personal success the less inclined they are towards SRI. The SRI-attitude of the third and final cluster – DR-driven cluster – is also backed by the thoughts of protecting the welfare of close others only, as benevolence is the strongest positive predictor of SRI-attitude of this cluster. Additionally, this cluster relates materialistic values and investment attitude, thus the more materialistic these investors become the lower their attitude towards investing socially responsibly.

From the results so far it is supported that SR-investors could be classified into three heterogeneous clusters which not only have unique demographic and psychographic profiles but also each cluster's attitude to choose SRI is motivated by different set of values. Thus providing support for hypothesis 1.

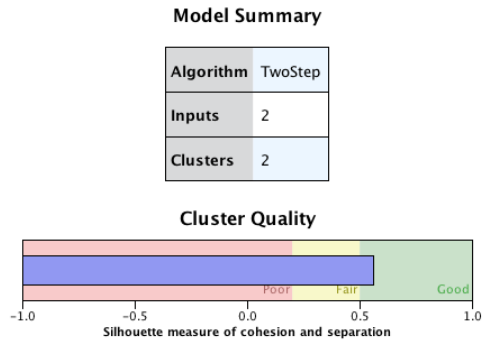
However, it is important to explore if this segmentation/cluster of SR-investors is related to SR-investment only or if regular investors, if classified in terms of the expected importance placed on financial and social return of SRI, would generate the same segmentation/clusters. This exploration will not only help provide further validity to the clusters/segments of SR-investors, but will also highlight the

significance of the dataset of SR-investors used in this thesis. Therefore, the next section, section 6.5, discusses segmentation of regular investors in terms of the importance they may place on social and financial return aspect of SRI. While section 6.6, discusses results of one-way ANOVA for all the clusters (three clusters of SR-investors and the clusters of regular investors that would be obtained in section 6.5), so as to understand the differences between them. The aim is to highlight the significance of studying SR-investors.

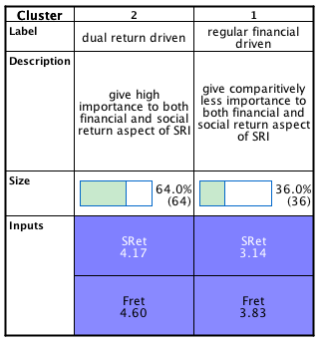
6.5. Clusters of regular investors – the Second Dataset

As discussed in chapter 4, section 4.4 and section 4.6, two datasets were collected for this research, with the second dataset comprised of regular investors (N=100). Similar as in the case of SR-investors (first dataset), clusters/segments were explored in the regular investors by applying two-step cluster analysis. The clustering variables – financial return aspect and social return aspect of SRI - were used in the two-step method with Bayesian Information Criterion (BIC) and log-likelihood distances. The cluster solution obtained for regular investors through this analysis is presented in figure 6.7. As could be seen in figure 6.7a good results with two cluster solutions was obtained.

Figure 6.7 : Results Of Two-Step Cluster Analysis



6.7a: Model summary of two-step cluster analysis showing existance of two clusters



6.7b: Description of the two clusters along with the difference in importance of social return and importance of financial return.

From table 6.17 it could be seen that the two clusters obtained for regular investors in terms of the importance they may give to financial and social return aspect of SRI if they were to opt for SRI, are significantly different from each other in terms of both the financial return aspect [F (1,98) = 254.08, p=0.017] and the social return aspect [(F (1,98) = 30.66, p=0.000] of SRI. These two clusters are discussed next.

Table 6.17: Analysis of variance of financial return and social return aspect of SRI for the two Clusters of regular investors

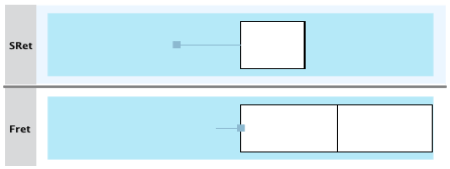
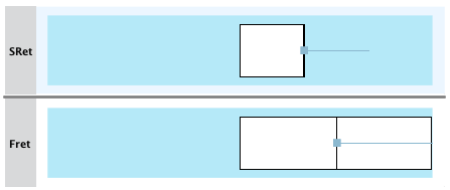
Variables	**F value**	**Sig.**
Financial return aspect	254.08*	.000
Social return aspect	30.66*	.000

*Significant at the 0.001

6.5.1. Regular FR-driven (Cluster 1r)

The first cluster that appeared was made up of 36% of sample (N = 36). This cluster gave more importance to financial return (mean = 3.83, SD = .359) as compared to social return (mean = 3.14, SD = .529) when investing. This cluster is similar to the Financial Return Driven (FR Driven) Investors identified when exploring SR-investor in section 6.2. Figure 6.8a gives the balance of financial return and social return aspect this cluster acquire.

Figure 6.8: Description of the two clusters based on differing combination of importance of financial return aspect and social return aspect for each cluster: the return aspect are determined on value ranging from 1-5 (low to high)

	
6.8a: Regular **FR-Driven investors:** Mean of Financial return aspect: 3.83 Mean of Social return aspect: 3.14	**6.8b:** Regular DR-**Driven investors:** Mean of Financial return aspect: 4.60 Mean of Social return aspect: 4.17

6.4.2. Regular DR-Driven Investors (Cluster 2r)

The second cluster that appeared when regular investors were segmented in terms of the importance they may give to financial return and social return aspect of SRI, if they were to make a socially responsible investment, was named regular DR-driven and represented 64% (N=64) of the regular investor. If this cluster was to invest in SRI, they would value both social return (mean = 4.17, SD = .473) and financial return (mean = 4.60, SD = .41) aspect of SRI. Represented in figure 6.8b, this cluster reflects a class of individuals who value both financial return and social return, and are similar to dual return driven cluster of SR-investors (for detailed discussion see section 6.2).

The fact that two instead of three clusters appeared when regular investors are classified with respect to the importance they place on financial and social return aspect of SRI, if they are to invest in SRI, highlights the difference between SR-investors and regular investors. Among these two clusters of regular investors, one cluster represents investors who valued financial return as the main deciding factor when investing (cluster 1r) and can been seen as similar to the FR-driven cluster (cluster 2) of SR-investors, while the second cluster represents investors who seem to care about both the financial return and the social return aspect of SRI (cluster 2r) and is similar to DR-driven cluster (cluster 3) of SR-investors. However, any cluster similar to the third cluster of SR-investors, namely SR-driven investors, who give high importance to social return and low importance to financial return did not appear in the second dataset. This could be because general populations' investment decisions still place financial return at the heart of investment (Nilsson, 2009). Hence, strengthening the argument that general population cannot be a good representative of SR investors at this point in time as SRI is still a niche investment. This understanding also highlights the uniqueness of the main dataset used in this thesis (SR-investors of EBS) and strengthens the argument that SR investors are different from regular investors. Additionally it could be argued that through analysing actual SR-investors this thesis has somewhat minimised the social desirability bias (SDB).

Additionally, an understanding of the difference between cluster of SR-investors and the clusters of regular investors, even if classified on the same ground, can highlight the importance of studying SR-investors as a unique class of investors. Thus, the next section discusses results of one-way ANOVA and post-hoc test for social return aspect and financial return aspect among the five clusters (three clusters of SR-investors and two clusters of regular investors).

6.6. Variance among the five clusters:

This section discusses the results for one-way Analysis of Variance (ANOVA) for the financial return and social return aspect of SRI, among the five clusters – SR-driven investors, FR-driven investors and DR-driven investors, regular FR-driven investors and regular DR-driven investors. Table 6.18 shows the results for one-way ANOVA for the two selection motivations, i.e. financial return and social return. Findings indicate that the clusters differ significantly with respect to both the financial [F (4,393) = 183.664, p = 0.000] and the social return [F (4,393) = 297.059, p = 0.000] aspect of SR investment.

Table 6.18: Analysis Of Variance Of Two Clustering Variables For The Three Clusters.

Variables	F value	Sig.
FRet	183.664**	.000
SRet	297.05**	.000

**Significant at the 0.001 level

Table 6.19 shows the significant pairwise differences identified between clusters in terms of their motivation to invest in SRI, i.e. the importance given to the financial return and to the social return aspect of SRI.

Table 6.19: Multiple Comparison for Clustering Variables			
Clusters	**Mean**	**Standard Error**	**Sig.**
Importance of Financial Return			
Financial Return Driven > Social Return Driven	.886**	.066	.000
Dual Return Driven > Social Return Driven	1.205**	.060	.000
Dual Return Driven > Financial Return Driven	.319**	.064	.000
Dual Return Driven > Regular FR-Driven	.254*	.082	.018
Regular FR-Driven > Social Return Driven	.951**	.083	.000
Regular Dual return Driven > Financial Return Driven	.1.719**	.069	.000
Regular Dual return Driven > Social Return Driven	.833**	.072	.000
Regular Dual return Driven > Dual Return Driven	.514**	.067	.000
Regular Dual return Driven > Regular FR-Driven	.768**	.090	.000
Importance of Social Return			
Social Return Driven > Financial Return Driven	.935**	.051	.000
Dual Return Driven > Financial Return Driven	.961**	.066	.000
Social Return Driven > Regular FR-Driven	1.827**	.067	.000
Social Return Driven > Regular Dual return Driven	.794**	.055	.000
Dual Return Driven > Regular FR-Driven	1.852**	.041	.000
Dual Return Driven > Regular Dual return Driven	.819**	.054	.000
Financial Return Driven > Regular FR-Driven	.892**	.069	.000
Regular Dual return Driven > Regular FR-Driven	1.033**	.072	.000

**Significant at the 0.001 level
*significant at the 0.05 level

6.6.1. Variation among the clusters in terms of importance of financial return

From table 6.19 it can be seen that among the SR-investor groups, the FR-driven cluster (mean=3.77, SE=.528) gave more importance to the financial return aspect of SRI as compared to the SR-driven cluster (mean= 2.88, SD=.523). Whereas the DR-driven cluster (mean= 4.09, SD=.260) valued the financial return aspect of SRI more than both the SR-driven and the FR-driven clusters.

Furthermore, among the SR-investor and regular investor clusters, the DR-driven cluster valued financial return aspect of SRI more than the regular FR-driven cluster (mean=3.83, SD=.359). Also, the regular FR-driven cluster valued financial return aspect more than the SR-driven cluster. Whereas for the regular dual return driven cluster (mean= 4.60, SD=.410) the financial return aspect of SRI was more

important than either of the three of the SR-investors clusters – FR-driven, SR-driven and DR-driven investors. This finding reflects that though the regular investors claim to value social return aspect of SRI if they are to become SR-investors, yet they value the financial return aspect of their investment most. It could be argued that this cluster of regular investors is actually reflecting effect of SDB as the individuals in this segment show that they value social return aspect of SRI, yet the high significance of financial return aspect speaks otherwise. These regular dual return driven investors value financial return even more than the regular FR-driven investors, thus echoing the high significance of financial gain these individuals desire from their investment.

6.6.2. Differences among the clusters in terms of importance of social return

As displayed in table 6.19, among the SR-investor clusters, both the SR-driven (mean= 4.97, SD=.127) and the DR-driven clusters (mean=4.99, SD=.066) valued the social return aspect of SRI more than the investors making up FR-driven cluster (mean=4.03, SD=.505).

Additionally, both the SR-driven cluster and the DR-driven cluster valued social return aspect of SRI more than both the regular FR-driven cluster (mean=4.17, SD=.473) and the regular DR-driven cluster (mean=4.17, SD=.473). While, for the FR-driven cluster, social return aspect of SRI was more important as compared to how important it was for the regular FR-driven cluster. This difference is important as although the financial driven cluster of regular investors looked similar to FR-driven cluster of SR-investors, these two are significantly different from each other. Lastly, the regular DR-driven investor cluster valued the social return aspect of SRI more than the regular FR-driven cluster.

Thus, on the basis of the above discussion, it could be stated that the five clusters are significantly different from each other in terms of the social return and the financial return aspect of SRI. Thus, highlighting the significance of studying actual SR investors.

6.7. Summary

This chapter presented the results of testing the eight hypotheses proposed in chapter 2 and chapter 3. A variety of analyses were conducted to test these hypotheses. The results provided full support for all the hypotheses except one (H2) hypothesis regarding demographic profile of SR-investor clusters, which is partly supported. More importantly, this chapter attempts to produce and validate a typology/classification of SR-investors with respect to the balance that they exhibit between the importance given to financial return and importance given to social return, when choosing SRI.

This chapter first explores if all the SR investor could be seen as a homogeneous group or are there heterogeneous clusters within the SR-investors, based on the importance they give to the financial return and the social return aspects of their investment. Through two-step cluster analysis three-cluster solution was obtained, which solution was then validated through the use of Hierarchical clustering and split sampling technique. External validity of the produced clusters was then obtained by examining the difference between the clusters in terms of their demographic – age, income, gender and education – and psychographic profile - pro-social attitude, PCE, values (materialism, universalism, benevolence, power and achievement) and trust. One-way ANOVA, post-hoc and discriminant function

analysis were used for this purpose. In this way three distinct and unique clusters were obtained and validated.

Additionally, the chapter explored if the same values motivated SRI-attitude of each SR-investor cluster or if the clusters had different values motivating their SRI-attitudes. Simple multiple regression was used to achieve this goal. Results indicated that different values act as antecedents of SRI-attitude for the three cluster, thus highlighting the differing nature of the three SR-investor clusters. Putting it all together, the thesis provides support to the understanding that all SR-investors could not be seen as one, rather there are three unique groups which may exist among SR-investors.

Lastly, two-step cluster analysis was also carried out on a second dataset comprising of regular investors to strengthen the argument that SRI being a niche cannot be represented by studying the general public (Nilsson, 2009). These regular investors were asked to indicate the importance they would place on the financial return and the social return aspect of SRI if they were to invest socially responsibly. Clustering for the second dataset was done using the same clustering valuables - importance of financial return and importance of social return aspect of SRI. The aim was to explore if similar clusters, as those of SR-investors, appear when examining regular investors. Results showed that the cluster solutions for regular investors differed from the cluster solution obtained for actual SR-investors, as only two clusters appeared when examining the regular investors. One-way ANOVA and post-hoc was also done to understand and highlight the differences between the five clusters (three clusters of SR-investors and two clusters of regular investors).

A summary of the main findings and contributions, along with research limitation and direction for future studies will be discussed in the last chapter of the thesis.

CHAPTER SEVEN

Chapter 7 - Discussion, Implications and Conclusions

"How ironic that Homo economicus, who was only ever supposed to be interested in maximizing his own self-interest, has turned out to be so interested in investing in the common good" (Hertz 2003)

7.1 Introduction

In many ways, socially responsible investment (SRI) is a unique investment approach that incorporates social, ethical and environmental (SEE) criteria (non-financial aspects) into an otherwise financially driven process. The unique nature of SRI, along with its mounting acceptance and growth worldwide, is what makes understanding SR investors so important. By the incorporation of social return aspects into investment, the traditional notion of the investor being an "economic man" is challenged by SRI. But, if investors selecting SRI are not self-centred economic men, what are they?

This thesis began with the aim of understanding SR investors so as to investigate how they combine traditional financial criteria, linked with investing money, with "additional" social criteria (SEE considerations). Hence the thesis aims to explore how the interplay between these selection criteria can or cannot differentiate SR investors into unique heterogeneous clusters. The thesis then seeks to validate the identified SR investor clusters on the basis of non-clustering variables, mainly demographic and psychographic variables. Moving a step further, the thesis then identifies the main values driving each cluster's SRI-attitude.

The findings produced are broad and can shed light on this unique investment phenomenon that incorporates non-financial and financial criteria into investing. In

order to attain this understanding, an SRI provider building society, namely the Ecology Building Society (EBS), was contacted and data was collected from its investors. The aim of getting data from a pure SRI provider was to reduce the effect of social desirability bias (SDB) by exploring actual SR-investors. SDB is a common bias in self-reporting research as people often tend to inaccurately and intentionally or subconsciously over/under state on sensitive matters such as SR-behaviour, so as to enhance their self-image and/or to protect themselves from being identified as a "wrong doer" (Fisher, 1993; Nancarrow et al., 2001; Nederhof, 1985). Hence the selection of actual SR investors (who are currently undertaking SRI) could help to minimise SDB. This is because, unlike a majority of past research which involved self-reporting as to whether one is involved in SRI or not, this study does not rely on people self-reporting their identity as a member of the target group. Instead the participants of this survey are those who are currently definitely involved in SRI via EBS, thus lowering the risk of results being skewed by SDB.

As, *"at the individual investor level the formulation of a comprehensive profile of SR investors has not yet been well developed in the literature, although several attempts have been made."* (*Pérez-Gladish et al., 2015),* the main aims of the current study are to explore empirically the notion that all SR investors are not similar, and thus to develop a classification of SR investors in terms of the balance they acquire between the importance given to the financial return and the social return aspects of SRI, and to further explore the uniqueness of these expected sub-groups. To achieve these aims the following research questions were formulated:

> Q1. Can a typology/ segmentation of SR investors based on the different combinations of importance they place on financial return and social return be developed?

Q2. And if there are unique segments within the SR investors, can these be validated in terms of different demographic – age, gender, education and income level- and psychographic – pro-social attitude, PCE, trust and value orientations - profiles?

Q3. Do these segments differ in their SRI attitude, and which values act as antecedents of SRI attitude for each segment?

In order to answer these questions, first a systematic literature review was conducted. Chapter one, discussed the history of ethical investment, along with the introduction of SRI outside religious groups in the 1960s (Heimann, 2014). It also highlights the two motives for investing in SRI; namely financial return and social return, and how the interplay between these two returns can differ for different SR investors. It is then proposed that SR investors could be segmented/classified into heterogeneous groups in terms of the importance they place on the social and financial return aspects of SRI. Chapter one went on to discuss the existing literature on SRI to further explain the fast spreading phenomenon of SRI. It then discussed the types of SRI and the focus of past research on a particular sector of SRI, namely mutual funds, thus ignoring another important and fast growing SRI sector, namely building societies, under the umbrella of community investing.

Chapter two sheds light upon the uniqueness of building societies. It starts by highlighting the difference between a building society and a mutual fund. It then moves on to elaborate the history of building societies, moving on to the development and importance of building society in UK at present. The chapter concludes by identifying the importance of studying building society's investors for the current manuscript.

Chapter three discussed the literature further so as to identify the demographic and psychographic variables, from socially responsible behaviour domain, that were then used to gain external validity of the clusters of SR-investors generated on the basis of different combinations of significance of social and financial return aspects of SRI. In this regard the literature on pro-social attitude, perceived consumer effectiveness (PCE), trust and value orientations (materialism, self-transience and self-enhancement) was given special attention. This was done with an aim to explore if the expected clusters of SR-investors would also vary in terms of their demographic and psychographic profiles. This understanding was used as a means for validating the clusters. From there eight hypotheses were developed and tested.

Chapter 4 positioned the current study within the critical realism paradigm and presented the methodology of this thesis. In chapter 5 the demographic profile of the sample and a descriptive analysis of the survey responses were discussed.

Finally, in chapter 6 the hypotheses were tested through two-step cluster analysis, one-way ANOVA, post-hoc test, discriminant function analysis and regression analysis. Also, Chi^2 analysis was undertaken to profile the clusters in terms of demographics. Out of the 8 hypotheses that were proposed in chapter 2 and 3, seven hypotheses were fully supported while one hypothesis regarding demographic differences among clusters was partially supported

The present and last chapter, chapter 7, discusses the findings from Chapter 6 and points out their implications for theory, practice and policymaking. In addition to this, a meaningful guidance for future research along with the limitations of the research are looked at before the chapter ends with the study's conclusion.

7.2. Contributions of the Thesis

In addressing the research questions, the study makes several contributions to the SRI literature. The thesis overall has at least four major contributions.

7.2.1, SR-investors of building society: a missing link

The present thesis' first contribution to the understanding of SRI is that it focuses on understanding SR investors of a building society. The majority of the past research, especially at the individual level, had been focused on exploring the behaviour of mutual fund investors (for example see Adam and Shauki, 2014; Nilsson, 2008, Nilsson, 2009, Pérez-Gladish et al., 2012). Though mutual funds are the fastest growing form of SRI, there are other forms, such as community investing, which have seen a massive growth in the past decade (USSIF, 2014). Within the UK the fastest growing segment within community investing is that of building societies. In a financial service context, Building societies are identified as "the best place to influence the environmental activities of individuals" (Richardson, 2003, pp.126). Furthermore building societies are argued to be playing a major role in shaping the future of the UK financial sector (BSA, 2016; HM treasurer, 2012). Despite the significant position of building societies in UK financial sector, academicians within SRI domain have largely overlooked exploration of SR-investors of the building society sector, as the majority of research focuses on mutual funds (as highlighted in chapter one, table 1.2). This study being the first of its kind, explores the SRI behaviour of investors of a SRI provider building society. Against this background, this thesis contributes both theoretically and empirically to the existing SRI literature, by exploring heterogeneity among SR-investors of an ethical building society.

7.2.2. Lowered effect of SDB

The second contribution of this study is the minimization of social desirability bias (SDB). Majority of the previous research presents the possibility for SDB to be

displayed (Nilsson, 2009). That is to say the majority of past research on SR investors chose self-reporting techniques, as the investors had to identify if they had invested in SRI and how much they invested. Although the past work had interesting results, there was a need to develop research for which the results were less affected by SDB. With participants of current study being investors who are already engaged in SRI, the chances of the occurrence of SDB were minimized. To collect the data an online survey link was created using Qualtrics, which was then emailed to the database of EBS customers by the EBS management. This ensured two things,

a) Only those who are actually performing SRI through EBS took part in the survey.
b) The data can represent the wider SR investor population, as because of the online survey, the data collection was not bound by geographic limitations.

By opting for the above data collection method this study contributes to the existing body of SRI literature, as the survey-based evidence on private investors till now are rather geographically bound, permitting only very regionally selective conclusions (Wins and Zwergel, 2015). This study, however, has gathered data from Ecology Building Society (EBS), UK's top SRI providing building society (Move Your Money UK, 2016), via an online survey thereby reducing the geographic limitations faced by past research. The findings of the current study can thus be generalised to a greater population, under the umbrella of SRI.

7.2.3. A typology of socially responsible building society's investors

The third contribution of the study is to establish the existence of heterogeneous clusters of SR investors of an ethical building society, on the basis of the importance given to the financial return and social return aspects of SRI. Though it is widely acknowledged by academics and practitioners that SRI is an investment

with dual motives, except for a few studies (e.g. Barreda-Tarrazona et al, 2011; Khan and Khan, 2015; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014; Sandberg and Nilsson, 2015) the majority of the past research has treated SR investors as a homogeneous group of investors. This overlooks the possible existence of heterogeneity among SR investors based on the varying level of interplay between the two SRI motivations; social and financial. The few studies that have attempted to explore this interplay display mixed findings (Sandberg and Nilsson, 2015), hence leaving a knowledge gap that this thesis could contribute to filling. The current research is the first of its kind to explore the existence of heterogeneous clusters within the SR investors of a building society. This research adds further value to the existing body of SRI literature by distinguishing these heterogeneous SR investor clusters on the basis of psychographic variables; pro-social attitude, trust, PCE and value orientation, and demographic variables: age, gender, income level and education. This research is worthwhile and has contributed in generating knowledge regarding understanding SR investors' motivations at the individual level. This knowledge is vital for not only a deeper understanding of the SR investors but also for approaching and catering to the investor clusters properly.

As the main aim of this thesis was to explore if socially responsible investors of an ethical building society can be classified on the basis of the balance they acquire between the importance of financial and social return aspect of SRI. The findings showed that these SR investors could be classified into three distinct clusters.

One cluster represents SR-driven investors characterised by those investors who give a high importance to the social return aspects and a low importance to financial return aspect of SRI. A second cluster is that of the FR-driven investors, who give a high importance to financial return aspect and comparatively less importance to

the social return aspects of SRI. The third cluster consists of investors who highly value both the financial as well as the social return aspects of SRI and thus are named the dual return driven investors (DR-driven investors).

As proposed, these three clusters are significantly different form each other in terms of the specific combination of importance they place on the financial return and the social return aspects of SRI. This finding supports the proposition that investors select SRI because of different motives, and that the balance between the motives these investors exhibit can be used to classify them into three clusters. The typology/segmentation developed in this study not only helps to systematically classify SR-investors of building societies, but also highlights the complexity of consumer behaviour.

The FR-driven investors who make up the smallest cluster (27%) hold the lowest level of pro-social attitude compared to both the SR-driven and the DR-driven investors. These FR-driven investors also believe that individual investments cannot make much difference towards solving SEE issues. Investors in this cluster hold the lowest level of self-transcendence values as compared to the other two clusters, while valuing power more than the SR-driven cluster. They are more materialistic than the other two clusters. This cluster represents investors who chose socially responsible investment to reflect benevolence and thus believe that their SR-investment is good for welfare of individuals they know. However, these investors also believe investment to be a tool to reflect their achievements. As a result, the higher these investors value achievement, the lower their attitude towards SRI gets. These individuals are more cynical towards SRI as they hold a low degree of trust in SR organizations, thus explaining the small size of the cluster. Demographically, this group is characterised by well-educated older males.

In contrast to the FR-driven segment is the cluster of SR-driven investors, which was the second smallest in size (34%). Investors in this cluster hold a high level of pro-social attitude and strongly believe that individuals can make a positive change through their investment, thus reflecting high levels of PCE. This cluster also trusts the organization they invest in, to be "walking the talk". Additionally, the investors in this cluster value universalism and benevolence more than the other two SR-clusters and are the least materialistic. Unsurprisingly, it is their care for not only the close others but also the entire universe and everyone in it, that motivates these individuals to invest in a socially responsible way. These individuals believe that a SR-organization they are investing in will work towards solving SEE issues and that individuals together can make a worthwhile change. It is values like care for others and universalism that directs the SRI attitudes of these investors. Also they are more mature and educated than the FR-driven investor cluster and both males and females seem to make up equal portions of this segment.

The third cluster named the dual return driven (DR-driven) cluster represents investors who can be seen as balanced in nature. This cluster was the largest (38%) among all the clusters of SR-investors. The investors in this segment value both the social return and financial return aspects of SRI equally, thus justifying their name. This cluster represents investors who are less materialistic than the FR-driven cluster but more materialistic than the SR-driven cluster. They value self-transcendence more than the FR-driven cluster while valuing achievement more than the SR-driven cluster, thus echoing a moderate stance. These investors do believe that individuals can contribute towards solving SEE issues through their investment decisions, and also exhibit a higher level of trust compared to the FR-driven investors. However, it is the care for others that drives the SRI-attitude of these investors. Additionally, these

investors see investment as a source of reflecting materialistic values. The more materialist they get, the lower they are inclined towards SRI. Most of these investors are well-educated older females earning less than 30,000.

This knowledge is vital as it brings new understanding to existing consumer behaviour theory. For instance, an examination of the SR-investors typology reveals that though all of the SR-investors in the current era value both financial return and social return aspect of SRI, they all cannot be considered the same. For example both the SR-driven and DR-driven investors in the segmentation highly value the social return aspect of SRI (mean= 4.97 and 4.99 respectively) yet the two are significantly different as the SR-driven investors give a low importance to the financial return aspect of SRI while this is not the case for the DR-driven investors (mean=2.88 and 4.09 respectively). Researchers ignoring the financial return aspect of SRI would generate results with these two clusters as one. However, this thesis shows that the DR-driven investors value achievement more than SR-driven investors and are more materialistic than the SR-driven investors. Also, while benevolence and materialism directs SRI-attitude of DR-driven investors, it is universalism and benevolence that direct SRI-attitude of SR-driven investors. It could, therefore, be argued that though a DR-driven investor's SRI-attitude would decrease with an increase in their materialism, the same is not true for SR-driven investors as the SR-driven investors choose SRI for the welfare of the universe.

Similarly, a researcher only looking at an investor's preference towards the financial return aspect of SRI would consider the investors of FR-driven cluster and DR-driven cluster the same, as both of them give a high level of importance to the financial return aspect of SRI (mean=3.7 and 4.0 respectively). However, through this research it is shown that the two are significantly different from each other as the FR-

driven investors value social return aspect of SRI less (mean=4.03), while the DR-driven investors place greater importance on the social return aspect of SRI (mean= 4.99). The DR-driven investors hold a higher level of pro-social attitude than the FR-driven investors and also believe in individuals' power in making a positive change towards solving SEE issues, with more trust in the organization than the FR-driven investors. Given that DR-driven investors are less materialist than the FR-driven investors and value benevolence and universalism more than FR-driven investors while at the same time valuing power less than the FR-driven investors, it could be argued that the DR-driven investors would be more tolerant of an ethical penalty than the FR-driven investors. However, this understanding cannot be achieved if one examines SR-investors as a homogeneous group. Therefore, a novel contribution of this thesis is the examination of the heterogeneity among different groups of SR-investors, as it provides a more comprehensive view of the SRI phenomenon.

Moreover, the differences in size of the three clusters also gives an important insight into SR-investors. Given that the cluster of DR-driven investors was the largest in size (38%), it can be argued that most of the DR-investors chose SRI due to a dual motive, as they not only want to make positive changes towards solving SEE issues, but at the same time understand financial return as a vital element of investment. Also, the cluster of the FR-driven investors being smallest in size (27%) reflects that the majority of investors, excluding these FR-driven investors, are starting to realize the importance of social return aspect and are moving towards sustainable investment. The presence of a cluster of DR-driven investors as the largest segment (38%) shows that many individuals have found the balanced approach as the most suitable one. This understanding presents an opportunity for policy makers, who

are striving to achieve sustainability, to reinforce the inclination of these investors more towards values that support SRI.

7.2.4. Varying values acting as antecedents of SRI-attitude of different clusters

Last but not the least of the contributions of this thesis towards SRI literature, is the identification of the values underpinning the SRI attitude of each cluster. This research is the first to highlight the values that motivate SRI-attitude of each SR investor cluster. By doing so, the research adds value to the existing body of literature, and highlights the heterogeneity among the identified clusters on the basis of the varying values driving each clusters' SRI attitude. This can help to understand the SR investor clusters more deeply, which is then helpful to cater to these clusters accordingly. In addition to this, the identification of values driving each clusters' SRI attitude can help marketers to develop strategies targeted at them more effectively.

Following clustering (e.g. Dorfleitner and Utz, 2014; Khan and Khan, 2015; Mackenzie and Lewis, 1999; Nilsson, 2009; Sandberg and Nilsson, 2011; Lewis and Mackenzie, 2000; Wins and Zwergel, 2015) and profiling, the thesis looked into value-attitude-behaviour theory (Homer and Kahle, 1988) and for the first time analysed which value(s) motivate the SRI attitude of each cluster individually. This is a new breakthrough as it shows that these clusters have different value orientations and hence not only are they different in term of the importance given to financial return and social return, in addition to other psychographic and demographic variables, but they also have unique value orientations.

The thesis adds value to the existing body of literature by exploring the SR investors of an ethical building society and addressing the heterogeneity of these SR investors. In addition to the above mentioned contribution, this thesis also has theoretical contributions, discussed next.

7.2.5. Theoretical Contributions:

Though past research has used different means to contribute understanding to the SRI literature, this thesis contributes by providing a more holistic understanding of the issues by viewing SRI through a combination of theoretical lenses not commonly used in combination in other SRI studies.

Theoretically there are two main contribution of this thesis. First of all it adds *human value theory* (Schwartz, 1992) to see which values can be used to further profile the identified SR investor segments. Secondly, moving a step further via *value-attitude-behaviour theory* (Homer and Kahle, 1988) it looks at which values back up the SRI attitude of each cluster. Apart from these two theories, the thesis uses the *theory of warm glow* (Andreoni, 1990) and the *value similarity model* (Earle and Cvetkovich, 1995; 1999) to shed new light upon the existing literature and understand the SRI phenomenon in greater depth. The next subsection 7.2.5.1 provides a detailed discussion on the theories used, followed by subsection 7.2.5.2 that highlights how this thesis, drawing from these theories, contributes to the theoretical understanding of SRI and how the SR investors can be identified now. Finally subsection 7.2.5.3 sheds further light on the importance of the SR investor typology identified in this thesis.

7.2.5.1. Use of Value theories in SRI domain:

Human value theory (Schwartz, 1992) has been used extensively to understand socially responsible behaviour (Pepper et al., 2009), and environmental attitudes and behaviour (Nordlund and Garvill, 2002; Schultz and Zelezny, 1999; Steg et al., 2005; Stern et al., 1999; Stern et al., 1995), however, it has hardly been used in the SRI domain. This thesis incorporates value theory (Schwartz, 1992;94) and value-attitude-behaviour theory (Homer and Kahle, 1988) so as to bring more understanding to the SRI literature. This study shows that values are important differentiators between different clusters of SR investors, and also, following value-attitude-behaviour theory

(Homer and Kahle, 1988), shows that different values act as antecedents of the SRI attitude for each cluster. In addition to the above mentioned theories, this thesis also uses the value similarity model (Earle and Cvetkovich, 1995; 1999) to explain SRI behaviour.

SRI research reflects that many SR-investors are inclined toward SRI due to the social returns offered by SRI, with some of them even willing to sacrifice some financial return for the sake of a social return. However, the understanding of why this is the case needed clarity. The *theory of warm glow* (Andreoni, 1990) and the *value similarity model* (Earle and Cvetkovich, 1995; 1999) have been used in justifying pro-environmental behaviours, however, they have hardly been used in SRI domain. This thesis, uses the theory of warm glow, to explain why some investors are willing to let go of some financial return for social returns. It also attempts to propose that under the value similarity model (Earle and Cvetkovich, 1995; 1999) each SR-investor segment will have unique values driving their SRI selection, this then leads to the introduction of human value theory (Schwartz, 1992;94) and value-attitude-behaviour theory (Homer and Kahle, 1988) in the thesis.

Given that investment is more strongly related to financial benefits, as compared to consumption (as consumption of goods/products offer some symbolic/utility benefit, while, investment is mostly seen as providing a financial return as the benefit), under traditional investment theories SRI was considered as an investment carried out by a "lunatic fringe" only (Sampson, 2000). However, as SRI has gained in popularity, it is argued in this thesis that the investors who are willing to let go of some financial return for social return gain a non-financial benefit (warm glow), which gives them satisfaction. This motivates them to choose SRI for its social

returns in addition to financial returns. This argument brings more understanding to SRI literature and adds to the theory of warm glow.

Moving further, the thesis then argues that, in accordance with the literature, SR investors can be clustered into sub-groups based on the level of importance they place on the financial return and social return aspects of SRI. Under the value similarity model (Earle and Cvetkovich, 1995; 1999) each SR-investor segment will display a unique set of values driving their SRI selection. This discussion then leads to the introduction and selection of human value theory (Schwartz, 1992;94), to propose that the key values (self-transient/self-enhancement) will be useful in profiling the identified SR investors' segments. In addition to this, the thesis also proposes that according to value-attitude-behaviour theory (Homer and Kahle, 1988) these values can then be evaluated as antecedents for the SRI-attitude of each cluster.

This knowledge adds to the above-mentioned theories, and adds to SRI literature. For example, the results reveal that the three cluster's SRI attitudes are motivated by different set of values. This strengthens the argument that all those who invest in SRI are not same, and that different investors opt for SRI due to different motives (Nilsson, 2009). Also, these findings highlight that values are a good predictor of attitudes, as differences in the SRI-attitude of the clusters was backed by different set of values as antecedents. The next subsection highlights how these findings reshape our understanding of the SRI phenomenon and provide new insight regarding SR investors.

7.2.5.2. Contribution To The Theoretical Understanding Of SR Investors:

The first aim of this thesis was to explore if the SR-investors of EBS can be classified on the basis of the balance they acquire between their preference for

financial and non-financial returns associated with SRI. The findings showed that these investors could be classified into three distinct clusters.

Among these clusters one represents SR-driven investors, characterised by those individuals who give a high degree of importance to the social return aspect of SRI and a low degree of importance to the financial return aspect. The second cluster of FR-driven investors, give a high degree of importance to the financial return aspect of SRI and a low degree of importance to the social return aspects. The third cluster consists of investors who give importance to both financial and social return aspects of SRI and thus are named dual-return driven.

As proposed, and in line with past research (Nilsson, 2009), these three clusters are significantly different from each other in terms of their specific combination of the perceived importance of financial and social returns. This finding supports the understanding that investors who chose SRI are not homogeneous, and that different investors invest in SRI for different motives (financial motives or/and social motive); and that the balance between these motives can be used to classify them into three clusters. The typology developed in this study validates past findings (for example typology of mutual funds investors by Nilsson, 2009), and also highlights the significance of the values that motivate these different sets of investors, thus, highlighting the complexity of consumer behaviour. A summary of each cluster, according to the current research's results, is as follows:

1. Social Return Driven Investors [SR-driven investors]:
Cluster 1: 34% of sample (second smallest cluster)
Individuals in this cluster give the highest importance to social return and the lowest to financial return aspects of SRI.

- Demographically, this group is characterised by older individuals who are highly educated. The group seem to be dominated by males who usually earn up to £30,000 per year.
- Value profile: This cluster holds a higher level of self-transcendence values compared to the FR-driven investor cluster. Thus investors in this cluster represent individuals for whom values like universalism and benevolence are important, as compared to FR-driven investors. This gives a new view of SR-investors, as it shows that investors who value self-transcendence chose SRI due to the social return aspect of SRI.

  They had lower level of power as compared to FR-driven investors and had lower levels of achievement compared to DR-driven investors.

  Lastly the individuals in this cluster had the lowest level of materialism compared to the other two clusters.
- Level of Pro-social attitude: These SR-driven investors also hold a higher level of pro-social attitude as compared to FR-driven investors. Thus echoing the fact that SR-driven investors are very different to FR-driven investors.
- Perceived Consumer Effectiveness: The individuals in this cluster held a higher level of perceived consumer effectiveness as compared to FR-driven investors. Thus, reinforcing that SR-driven investors believe that their investment can make a difference towards the betterment of social issues.
- Trust in SRI: SR-driven investors held a higher level of trust towards EBS compared to FR-driven investors.
- Values driving SRI attitude: universalism and benevolence are the significant antecedents of the SRI-attitude of SR-driven investors. Thus, these investors

chose SRI to make social improvements as they care about the welfare of close others, and also care about the welfare of nature and of all other people.

2. Financial Return Driven Investors [FR-driven investors]:
Cluster 2: 28% of sample (smallest cluster)
Individuals in this cluster give the highest importance to financial return and lowest to social return aspect of SRI.

- Demographically, this segment consists mainly of males who are mature. Though slightly less educated than SR-driven investors, these individuals too are well educated. This segment usually earns up to £30,000 per year.
- Value profile: This cluster has the lowest level of self-transcendence as compared to the other two clusters. This shows that investors forming this cluster are not as strongly concerned about society or the world as they hold the lowest self-transcendence values, thus, clarifying why these investors chose SRI mainly due to its expected financial return.

  FR-driven investors valued power more than SR-driven investors.

  Additionally, the individuals in this cluster were most materialist as compared to the remaining two clusters, as they valued materialism more than the other two. This gives an understating of why investors with this values set chose SRI due to its financial returns.
- Level of Pro-social attitude: This cluster has lowest level of pro-social attitude as compared to the remaining two.
- Perceived consumer effectiveness: FR-driven investors hold the lowest level of perceived consumer effectiveness as compared to the other two clusters. This result too can be used to understand why these investors have more of a focus on the financial return of SRI, that is to say, these investors don't believe

that their investment can make any difference towards betterment of society and thus they don't look at the social good their SRI claims to be doing.

- Trust in SRI: FR-driven investors have lowest trust in their SR-institute as compared to the other two clusters. These investors don't trust the SR claims of their SRI and thus justifying their focus on financial return offered by SRI.
- Values driving SRI attitude: benevolence is a positive predictor while achievement is a negative predictor of SRI-attitude of FR-driven investors. This shows that these investors care about only the individuals who are close to them, or with whom they are in frequent contact, as they value benevolence but not universalism. Also, achievement being a negative predictor of the SRI-attitude for this cluster echo's the thought the investors in this cluster use investment to reflect their achievement value, and the more important achievement becomes the lower their attitude towards SRI gets.

3. Dual Return Driven Investors [DR-driven investors]
Cluster 3: 38% of the sample (largest cluster)
Individuals in this cluster give high importance to financial returns and to the social return aspects of SRI.

- Demographically, this segment consists of older individuals who are predominantly female. Interestingly these individuals were the most educated as compared to the other two SR-investor clusters. This segment usually earns up to £30,000 per year.
- Value profile: This cluster values both universalism and benevolence more than FR-driven investors. Thus, showing their concern towards betterment of society as compared to FR-driven investors. At the same time these investors hold a higher achievement value as compared to SR-driven investors. This

echoes the thought that these investors use their investment to show their achievement, thus justifying their focus on the financial return aspect of SRI. Lastly, these investors are less materialist than the FR-driven investors, but are more materialist than the SR-driven investors. This reflects their neutral position, and thus justifies their preference towards both financial and social return aspects of SRI.

- Level of pro-social attitude: DR-driven investors hold a higher pro-social attitude than the FR-driven investors. However, there is no significant difference between pro-social attitude of DR-driven and SR-driven investors.
- Perceived consumer effectiveness: the investors making up DR-driven investor segment held a higher level of PCE than the FR-driven investors. Thus, these investors, when compared with FR-driven investors, believe that their investment can make some positive difference towards the betterment of society.
- Trust in SRI: in terms of trust towards SRI, the investors in DR-driven segment hold a higher level of trust in the claims of their SRI-institution, as compared to the trust FR-driven investors place in the same institution.
- Values driving SRI attitude: results show that benevolence is a positive predictor while materialism is a negative predictor of SRI-attitude for this segment. This shows that the investors in this cluster choose to invest socially responsibly so as to have a positive impact on the people they know (as benevolence is the strongest positive predictor of SRI-attitude for this cluster). However, materialistic value is also an important negative predictor of SRI-attitude of these investors, therefore the more materialistic they become the less their urge to invest socially responsibly gets.

7.2.5.3. Significance of the Typology:

The typology discussed above is vital as it brings new understanding to existing SRI segmentation studies. For instance, an examination of the typology reveals that though many investors chose SRI, they cannot all be considered the same. It also highlights that along with the difference between the focus on the financial and social return aspects of SRI, these investors differ significantly in terms of values, pro-social attitude, PCE, trust and the values that drive their SRI-attitude. The findings from this research provides a new lens through which to examine SR-investor clusters, which is more explicit and elaborative than the ones used in past. That is to say, past research has focused on only the financial and social return aspects when attempting to highlight heterogeneity among SR-investors. This thesis shows that the SR-investors segments are unique and different form each other in several other important respects. For example both SR-driven and DR-driven investors in the typology place a high level of significance on the social return aspect of SRI (mean= 4.97 and 4.99 respectively) yet DR-driven investors are more materialist, and value achievement more than SR-driven investors. Also, the two have different sets of values acting as antecedents of their SRI-attitudes. Thus, while SR-driven investors choose SRI to reflect their care for the people around them, and also for the world (as self-transcendence is positive predictor of the SRI-attitude of this cluster), the DR-driven investors only care about the individuals close to them (only benevolence is a positive predictor of their SRI-attitude), while the more materialist they get, the less they care about making a difference through their SRI (as materialism is a negative predictor of SRI-attitude of DR-driven investors). This finding not only shows that SR-investors are heterogeneous, but also gives an understanding into why they are different, as the SRI-attitude of each cluster is backed by different set of values.

Similarly, both FR-driven and DR-driven investors value the financial return aspect of SRI (mean=3.77 and 4.09 respectively). However, through this research it is shown that the two are significantly different from each other as benevolence and (negative) achievement are antecedents of SRI-attitude of FR-driven investors, while benevolence and (negative) materialism are what drive the SRI-attitude of DR-driven investors. Also, pro-social attitude, PCE, trust, universalism and benevolence are the positive significant discriminators between FR-driven investors and DR-driven investors, with pro-social attitude being the highest positive discriminator, while, materialism and power are the negative discriminators between the two clusters. Given that DR-driven investors hold a higher pro-social attitude, have higher level of PCE, place more importance on universalism and benevolence, hold more trust in SRI claims, and are less materialist than FR-driven investors, it is reasonable to argue that these investors would evaluate SRI choices in a more multidimensional way, so as to make a well informed decision, whereas FR-driven investors would only evaluate SRI and conventional investment choices on their financial return aspects. This knowledge is important for SRI providers, as they need to make suitable offers for each cluster. Additionally, when looking at SR-driven investors and FR-driven investors one can see that they both chose SRI, yet they are very different from each other. Amongst the values involved, universalism and benevolence, power and materialism are significant discriminators between the two clusters. Additionally pro-social attitude, PCE and trust are also significant discriminators between the SR-driven cluster and the FR-driven cluster. SR-driven investors exhibit higher universalism and benevolence, lower power, and lower materialism than the FR-driven investors, which shows that investors who choose SRI due to its social aspect are willing to make some financial sacrifices, while the same cannot be expected form FR-driven investors. Similarly

given that SR-driven investors hold a higher pro-social attitude, higher PCE and higher trust than the FR-driven investors, it is reasonable to argue that SR-driven investors try to make positive changes through their investment, as they believe that they can make a change, while it is not the same for FR-driven investors.

In this way, along with the identification of differences among SR-investors in the building society in terms of the social return and financial return aspects of SRI, this thesis highlights the differences among the clusters of SR-investors in terms of pro-social attitude, PCE, trust, and values. Most importantly, a novel contribution of this thesis is the examination of values that act as antecedents of SRI-attitude of each cluster, as it provides a more comprehensive view of SRI-attitudes.

The set of different values acting as antecedents of each cluster's SRI-attitude gives an important insight into why different investors chose SRI. Also, as along with value differences, different level of PCE and trust in the SRI exists between clusters, this reflects that different investors, not only are driven by their values, but also their belief in how much difference their investment choice (PCE) can make and how true the claims of SRI-institutions are, determine their investment decision. The findings from this thesis also suggest that investors belonging to different segment would have different levels of motivation towards sustainable investment behaviour, as they hold different levels of pro-social attitudes. Thus, though two segments might believe that their investment can make positive changes towards social issues, for example SR-driven and DR-driven, yet the level of financial return they expect is different from each other. This is because these two segments carry different level of materialism and achievement values, and thus their behaviour will be affected by the combination of these values.

Furthermore, the differences in size of the clusters also give an important insight into contemporary investors' behaviour. Given that the cluster of DR-driven investors was the largest in size (38%), it can be argued that most of the contemporary investors have adopted this approach rather than an extreme one (as in the case of FR-driven or SR-driven investors). Also, the cluster of FR-driven investors being smallest in size (27%) reflects that the majority of individuals, excluding these investors, are starting to realize the importance of sustainability and social responsibility and are moving towards SRI due to social aspects. The presence of a cluster of SR-driven investors as the second largest segment (34%), and the difference between SR-driven segment and FR-driven segment size shows that many individuals are starting to give social responsibility the importance it deserves not only in consumption but also in investment decisions. It also shows that the majority of investors who chose SRI (DR-driven and SR-driven) want to reflect their societal care and concerns for sustainability through SRI, thus, presenting an opportunity for policy makers who are striving to achieve sustainability, to incline these consumers more towards SRI so as to make them more sustainability oriented.

In conclusion, this thesis, attempts to answer the call for research to re-examine the heterogeneity among SR-investors of different financial institutions (Nilsson, 2008). It also attempts to answer the call to explore values and attitudes within SRI domain (Sandberg and Nilsson, 2015). This thesis shows that SR-investors who choose other forms of investment other than mutual funds are also heterogeneous groups, thus providing support for Nilssons' (2009) work. Additionally, this thesis shows that investors not only differ in terms of the importance they place on financial and social return aspect of SRI, but they also differ in terms of the values that

motivate their SRI-attitude. Along with this, these clusters also vary in terms of value orientations, PCE, pro-social attitude and trust.

A final contribution of the thesis is that the sample is from EBS. Most of SRI studies are based on investors of mutual funds (as discussed in chapter 1, table 1.2.), thus this study expands the context in which SR-investor segmentation has been mainly studied.

In this way, the implementation of new theories enables this thesis to bring forward a clearer understanding of the SRI phenomenon and SR investors' value-orientations, and while doing so, provides a clearer picture of different SR-investor segments.

7.3. Implications

On a practical level, the findings of this research provide several implications for different actors in society. The results of this research affect SRI practitioners within the industry, and public policy makers interested in promoting SRI.

7.3.1. Implications for Practitioners within the Industry

Located in the subject area of marketing, this thesis' ability to contribute to how building societies and other SRI providing organizations could market SRI is an important aspect of this research. As the SRI industry in general, and SR building societies in particular, is not mature yet and still developing, the results of this research highlight several important aspects that could be used by both current providers of, and those planning to provide, SRI. The results of this thesis provides guidelines for SRI providers to understand their investors and cater to their needs accordingly.

The first implication for SRI marketers revolve around the notion that different SR investors give different level of importance to financial return and social

return aspects of SRI. Though both the aspects are important to the investors, the current research shows that even the SR investors within the *FR driven* investor cluster give a high degree of importance to the social return aspect of SRI. Though the financial return aspect is given a high degree of importance by the majority of the SR investors, it is interesting to note that investors falling under the *SR-driven* investor cluster give quite a low level of importance to the financial aspect of SRI.

Quite a large number of studies have focused on examining if SRI out-performs or under-performs in terms of financial return as compared to conventional investment (Bauer et al., 2005; Bauer et al. 2007; Dorfleitner and Sebastian, 2014; Friede et al., 2015; Hong and Kacperczyk, 2009; Kreander et al. 2005; Renneboog et al., 2008; Statman 2000), however mixed results have been produced. Though financial return is an important aspect to SR investors, this research emphasises the need to communicate more on the social aspect of SRI so as to gain higher customer satisfaction.

Against this background, one way to attract more investors, as well as increase customer satisfaction, is to bring more transparency towards the investment policies and project selection. That is to say, in the case of building societies, they should communicate more openly regarding the projects they invest in. The data should be easily accessible and available. By doing so the building societies can make sure that its investors know where their money is going to and coming from. This transparency could lead to the feeling of attaining higher social return, thus causing higher customer satisfaction.

A second important implication for SRI providers is to highlight how social responsibility is addressed by the building society. Here, the study has highlighted the importance SR investors place on the perception of the influence of their investment

(PCE) on SEE issues. Thus if the SR investor believes he/she has the access to and ability to influence the organization's decisions, moulding them towards staying socially responsible, they are more likely to have higher satisfaction as well as to invest more. In this regards, an SRI provider should highlight ease of communication with management, and the perception that they, as an investor, can influence the SEE issues dealt with by the SRI provider.

This discussion indicates that it is up to the SRI provider to prove to the SR investor that their investment will actually create a difference. Hence, the second implication for the SRI providers to make SRI more attractive and gain higher customer satisfaction, is to communicate more regarding the change ones' investment can bring about, and address this issue when promoting SRI so as to gain more investors' attention.

Another implication for managers revolves around the notion that SR investors can be divided into three unique and heterogeneous clusters. As each cluster varies with regards to the level of importance given to the social return and financial return aspects of SRI, as well as on the basis of psychographic and demographic variables. As each investor's SRI attitude is backed by different sets of values, the marketers of SRI should not only formulate investment opportunities for each cluster, but also should communicate them accordingly, so that the right investor is attracted to the right investment opportunity. Most importantly the SRI providers should not approach or treat all SR investors in a similar way, rather they should facilitate the investors by keeping the heterogeneous SR investor clusters in mind.

These results offer major practical implications for generating efficient marketing strategies. On the basis of the above discussion it is proposed that SRI providers should abide by their slogan of "making a profit while making a

difference". The reason being that although all SR investors value both social and financial return, the varying level of importance given to the two factors by different investors highlights that to satisfy all three segments the SRI providers need to fulfil expectations of all segments by properly addressing both issues. For instance if the SRI provider is too focused on highlighting and fulfilling the social return aspect then there is a chance of losing customers within the financial return driven segment, as such customers value financial return over social return. On the other hand if the SRI provider is too focused on highlighting and fulfilling the financial return aspect of investment, this might restrain it from achieving the leverage of offering higher social gains at the cost of slightly lower financial return (social penalty). In addition to this, the SR investors belonging to the segment of social return driven investors might get attracted to other SRI options that offer a more thorough social initiative. Hence to keep and expand the customer pool, SRI providers need to fulfil both social as well as financial contributions. Nevertheless, the segmentation identified in the current manuscript highlights the possibility of offering differentiated and specialised investment products focused on specific segments, so as to cater to each unique cluster individually. For instance since the SR-Driven segment puts social return before financial return hence an investment plan focused more thoroughly on social return would appeal more to such investors. However, as the cluster solution is formulated on the basis of attitudinal differences, rather than demographic or more obvious differences, it could be challenging for the SRI provider to identify segments in order to cater to them accordingly.

The solution to this confusion lies in the second major contribution of the thesis. That being the identification of values motivating the SRI attitude of each segment. Since it is questionable how the SRI providers can identify and cater to each

unique segment individually, it is proposed that SRI providers create different SRI opportunities focused on each segment – as discussed above - and then advertise them using the individual value(s) to promote each offering. For example, as benevolence and universalism act as antecedents of SRI attitude for SR-Driven investor segment, it is proposed that SRI providers highlight these values when promoting the SRI opportunity focused on this segment in particular. This will gain the attention of those SR investors who opt for SRI for the sake of social return only, and since the specific offer will be more focused on this segment, it will actually attract and satisfy that SR investor segment in particular. Similarly special offers focused on each cluster could then be promoted to the right audience by using the appropriate values in the advertisement and promotion of each SRI offering. In addition to this, more materialistic aspects and values like power can be used by SRI providers to promote specific SRI offerings to those who value financial returns over social returns. Therefore, SRI providers can attract the right segment to the right SRI offering through tailored communication focused on the values motivating the SRI attitude of the respective group.

7.3.2. Implications for Public Policy

Although the majority of the implications identified through this thesis are directed towards the SRI practitioners, there are some implications that are relevant to public policy makers. The first is tied to the worldwide financial crisis that has affected the financial industry since 2008. The financial crisis caused a high level of distrust in the financial industry. Campaigns and services such as "Move Your Money" and Ethex, to name a few, have gained momentum in the past decade because of the financial crisis. Such campaigns and services offer information regarding and benefits associated with SRI. Because of the increasing awareness and demand of

SRI, these services are becoming vital for SR investors' peace of mind, as they educate and guide potential investors towards SRI. Where, on one hand, these activities provide information and guidance to the investors regarding SRI, on the other they help in building a sustainable and better society.

With this in mind, public policy makers should analyse the cost and benefits associated with promoting such information, campaigns and/or services at a national level. As this will enable a faster growth of SRI, which can then lead to a more sustainable and stable society.

Another aspect of this study that may be of relevance to policy makers concerns how they should promote SRI in this context. Research identified building societies as an important building block of the financial services industry (HM treasurer, 2015), along with identifying SRI as the fastest growing sector within the financial services industry. Against this background, public policy makers should address the question of whether government initiatives should encourage this type of investing. Measures actively encouraging individuals to choose sustainable behaviour exist in many other industries. For instance in Sweden consumers are given a premium when they purchase a car that is profiled as environmentally superior (e.g. Jansson, 2010). Nevertheless no such considerations and initiatives have ever been taken in the investment industry. If SRI is considered as an investment orientated towards increasing overall sustainability, then policy makers could focus on making it more attractive for investors to invest in these SR organizations.

7.4. Limitations

Within academic research, various choices are made so as to deliver knowledge that is both valid and reliable. However, no matter what these choices are, they always entail some limitations. The present study is no exception.

One of these limitations is the use of only one SRI provider. This means there are limitations to the study concerning the representativeness of the sample. As investors in different banks, mutual funds, building societies, to name a few, may differ in term of psychographic and demographic profiles. Although randomly generated, the sample drawn for current research may not be representative of the overall SR-investment population. However, as discussed in chapter four, the data collected may not represent the regular investors, however it does, to some extent, represent the SR investors. Thus the benefit of this form of data collection outweigh the limitation in this regard. In addition to this as Nilsson (2009) identified clusters of SR investors of mutual funds and highlighted that " future research could benefit from confirming the results with regard to customers of different SR-providers, in different countries and regions" (page, 9), hence the current manuscript is a step towards analysing Nilsson's (2009) mutual fund clustering results in investors of a building society.

Another potential limitation that future research could deal with is the presence of socially desirability bias (SDB). Nancarrow and colleagues (2001) identified the possibility of high SDB in self-reporting of socially responsible and sustainable matters, this manuscript is no exception. According to Auger and Devinney (2007) when willingness to pay is measured, rather than looking at actual payment made, there is a fair chance of getting overstatements regarding the intention to carry out SEE behaviour. Thus a minor impact, if not a major one, of SDB on responses of this manuscript cannot be excluded. The survey link was sent out to only the customers of EBS and the responses were kept anonymous, these two factors are considered to reduce SDB as the survey participants were already actually performing SRI behaviour; hence behaviour rather than behavioural intentions were measured by

the current thesis, thereby reducing the impact of SDB. However, since no questions were added in the survey to measure SDB, it is reasonable to consider SDB as a potential form of bias. Therefore future research could move a step further and measure SDB in order to minimise and eliminate its impact on the responses.

Another limitation that could merit attention in future is the inclusion of risk, which has been identified as an important element affecting investment decisions (Nilsson, 2008, 2009). This thesis did not account for how perceived risk could vary amongst the three SR investor clusters, hence future research should aim to capture and analyse the impact of perceived risk on the unique SR investor clusters identified in the current thesis.

Another limitation that deserves mentioning is the use of the "SEE" concept throughout the thesis. Though in several ways the use of the SEE concept represents both the socially responsible dimension incorporated by the SRI provider and the type of knowledge, preference and internal involvement held by the customer, it is important to acknowledge heterogeneity within the SEE concept. SEE being an acronym for "social, environmental and ethical" holds three different concepts that could be argued to represent widely different content and meaning. It could thus be opposed by other researchers when these three different concepts are combined and dealt with simultaneously. For this manuscript, however, several reasons as to why the SEE concept is used in a uniform way exist. Firstly in literature there are two major concepts used to present the overall socially responsible dimension in investment, these being; SEE (e.g. McCann et al. 2003; Nilsson, 2008; Nilsson, 2009; Sandberg and Nilsson, 2015; Solomon et al. 2004), and ESG – Environmental, Social, and Governance – (e.g. Sandberg et al. 2009). Both these acronyms mainly depict the need to acknowledge the presence of some "other" factor in addition to the traditional

financial criteria associated with investment. Hence the use of ESG and SEE is somewhat consistent in the SRI literature, with SEE slightly prevailing over the other. As this thesis aims to display the integration of non-financial and financial criteria involved in SRI hence the established criteria of dealing with the terminology is followed.

Similarly, the reason this thesis did not discriminate between the letters of SEE acronym revolves around the stance that the research this manuscript presents is in the initial stages of linking and understanding SRI and consumers. Therefore, the research deals with the overall notion of "financial" aspect and "the other" (SEE) aspect of investment, rather than singling out and considering individual aspect of SEE "other" in addition to "the financial" aspect. It is proposed that future research takes the opportunity to distinguish between different contents of "the other" (SEE) aspect and take the work of this thesis and similar relevant works a step further. Nevertheless, such a focus could take away the focus of this thesis from answering the fundamental research questions of the study. Hence these questions need to be answered before a focus is placed on discriminating the different SEE aspects.

Finally the term SEE was used as single component so as to keep the questions at a minimal difficulty level and to avoid confusion among participants. As separation of the acronym would have caused impediment towards keeping the concept simple and easy to grasp, thus, based on all the above reasons it was decided to opt for the SEE acronym, in alignment with the previous SRI research.

7.5. Suggestions for Future Research

This study focuses on understanding SR investors. SRI is unique as compared to other investment products as it actively incorporates the social return aspect with the financial return aspect of SRI. It somewhat challenges the traditional investment

theories that identify the investor as an "economic man". Hence the fundamental question that is posed is if SR investors do not act like an economic man, who do they act like?

The thesis has somewhat answered this question. However, much more needs to be done in order to fully understand the phenomenon. Quantitative research, being the fundamental approach of this study, has several advantages, such as the potential for the generalization of results, providing confidence in the robustness of the findings through tests for statistical significance and maintaining the anonymity of data. However, as with any approach, these strengths are accompanied by some weaknesses as well. It is suggested that future studies could select qualitative techniques so as to get a more in-depth understanding of the SR investors and the motivations driving their investment behaviour.

Another aspect that could be addressed by future research is to split and explore the individual parts of the SEE acronym. This research has considered SEE largely as one construct, describing it as the social return aspect of SRI. However the fact is that these SEE issues could very well impact each investor differently. Thus an environmentally motivated investor with strong concerns about animal welfare may not display the same behaviour and investment preferences as those shown by an ethically motivated investor with strong concerns about poverty in developing countries. Future research could thus focus on separating the SEE concept into different parts. This would most probably provide a greater understanding of the SR investors.

Along these lines, another aspect that future research can focus on is analysing the SR investor clusters on several categories of variables that have not been included in this research, such as the personal abilities of investors. Though this research has

tested several psychographic and demographic variables, there might be variables related to attitudinal structure and intentions that could be worth testing. Several variables in value-belief-norm theory (e.g. Stern 2000) that have been studied as differentiating variables among SR investor clusters in the current research, could add even more value to the understanding of SR investors when seen under the lens of a behavioural theory.

Moreover research could include more variables to investigate the heterogeneity among the SR investor clusters. Validating the heterogeneity of the SR investor clusters on the basis of, for example, risk and return perception could bring more insight into the existing body of SRI literature. Also further research could follow this study in considering SRI in arenas beyond mutual funds. This could help to expand the current literature by providing a bigger picture of SRI that goes beyond considering mutual fund investment as the only form of SRI that individual investors undertake.

Finally future research could opt for SDB measures to empirically analyse and reduce the impact of SDB on knowledge concerning SR behaviour in general and SRI in particular. As this thesis made an effort to reduce SDB by eliminating the element of "self-reporting of one being a SR investor", however no measures were opted for to actually collect data and analyse this construct. Thus future research could use this opportunity to empirically measure the affect SDB may have on SRI behaviour and thereby further suggesting ways to minimise/eliminate its impact from future research.

7.6. Conclusions

7.6.1. Exploration at Individual Level

SRI has seen a rapid growth and acceptance worldwide (Cheah et al., 2011). According to USSIF (2014) one out of every six dollar invested in the United States is invested in accordance with SRI principles, hence showing the importance of understanding this growing phenomenon. SRI challenges traditional investment theories that identify financial return as the sole criteria to analyse and make investment decisions, as SRI incorporates social criteria into the investment decision making. SRI has attracted considerable attention from both institutional investors - such as non-profit organizations, religious institutions and universities to name a few - and individual investors including high net worth family business investors to average retail investors (Hoepner and Mcmillan, 2009; de Marcillac, 2008; USSIF, 2014). However, at the individual level the majority of the research carried out to-date is largely focused on investors in SRI mutual funds (for example see Adam and Shauki, 2014; Nilsson, 2008, Nilsson, 2009, Pérez-Gladish et al., 2012), hence neglecting other sectors of SRI such as community investing. SRI through community investing has grown strongly over the past decade, making it the second most flourishing SRI segment (USSIF, 2014). Within community investing, building societies have been identified as an important player, especially within the United Kingdom (HM Treasury, 2012). With this in mind, this research explores SRI at an individual level by studying the SR investors of an SRI providing building society, namely the Ecology Building Society (EBS). The current research gathered data from SR investors of EBS so as to explore other than mutual fund SR investors.

7.6.2. Identification of Heterogeneity among SR Investors

Socially responsible investment (SRI) is identified as an investment with duality at its core (Nilsson, 2009). It is now widely acknowledged by academics and

practitioners that SRI integrates non-financial SEE considerations with the financial aspects of investment (Heimann et al., 2013, USSIF, 2014), hence making it an investment with dual motivations, i.e. financial return and social return. Despite this acceptance of a dual motivation towards SRI selection, the majority of past research, except a few (like Barreda-Tarrazona et al, 2011; Cheah et al., 2011; Khan and Khan, 2015; Mackenzie and Lewis, 1999; Nilsson, 2009; Nilsson et al, 2014; Sandberg and Nilsson, 2015), treats SR investors as a single unit, mostly neglecting the financial return aspect of their investment. Additionally the studies that have attempted to analyse the interplay between the two return aspects of SRI have had mixed results, thus calling for further exploration of the SR investors' heterogeneity (Sandberg and Nilsson, 2015).

The current research's first aim was to respond to this call in the SRI literature and examine the presence of homogeneity or heterogeneity among SR investors. To address this gap the current research looks at the importance SR investors place on the social return and the financial return aspects of SRI. Through cluster analysis the SR investors were analysed to see if heterogeneous clusters exist within the SR investors.

Three clusters as identified in the beginning of the chapter emerged when SR investors of EBS were analysed on the basis of the importance given to the social return and the financial return aspects associated with SRI. These three clusters - namely social return driven (SR Driven) investors, financial return driven (FR Driven) investors and dual return driven (DR Driven) investors - differ from one another on the basis of the importance each gives to the financial return and social return aspects of SRI. Hence it is reasonable to say that not all SR investors are truly socially responsible and are not involved in SRI for only social gain. Rather there are investors who select SRI with the aim of gaining a higher financial return. Thus they should not

be treated as a single unit, rather they should be viewed as separate heterogeneous groups.

This knowledge is important as it identifies the existence of heterogeneity among SR investors. It empirically proves that not all SR investors are truly socially responsible and SRI can also attract more regular, financial return focused investors to be a part of SRI. Hence, filling the gap in literature regarding the homogeneity/heterogeneity of SR investors.

Appendices

APPENDIX ONE

Appendix I - Items Used In Current Study With Source		
Items To Measure	**Source**	**Amended/Used Scale(s)**
"Clustering variables" Attitude towards Social return and financial return aspects of SRI	**Nilsson, 2009**	**1. When you made your investment in SRI profiled mutual funds, how important was it for you that:** **a.** The mutual fund had good financial prospects **b.** The mutual fund had a good socially responsible initiative. **2. Imagine that mutual funds can generate two different forms of return; financial and socially responsible. With this as a condition, how important is it for you that:** **a.** Your SRI mutual fund generates good financial return. **b.** Your SRI mutual fund generates good socially responsible return (by following socially responsible guidelines and thereby has a positive effect on social and environmental issues)
Pro-social attitude	**Nilsson, 2008**	**When you make investment decisions, how important is it for your that the companies you bank invest in:** **1.** Respect workplace rights (i.e. possibility to freely join trade unions). **2.** Work actively with environmental issues (i.e. by reducing environmental effect of products and production). **3.** Respect human rights (work against discrimination based on race, gender, or religion). **4.** Do not produce goods that could harm people (i.e. weapons). **5.** Do not use unethical business practices (i.e. bribery and corruption) .
PCE	**Nilsson, 2008; 2009 (Berger and Corbin, 1992)**	**1.** By investing in SRI every investor can have a positive effect on the environment. **2.** Every person has power to influence social problems by investing in responsible companies. **3.** It does not matter if I invest my money in SRI ethical bank since one person acting alone cannot make a difference. **4.** It is useless for the individual investor to do anything about pollution.

Appendix I - Items Used In Current Study With Source		
Items To Measure	**Source**	**Amended/Used Scale(s)**
Trust (in SRI)	**Nilsson, 2008; 2009**	**1.** I trust that my bank follow the socially responsible guidelines used in their marketing. **2.** The SRI options offered by my bank is an honest attempt to improve social issues such as pollution **3.** I trust my bank to do their best in trying to get companies to act in a way that reduces social problems such as pollution and third world poverty **4.** I trust that my bank do not invest their capital in companies that manufacture weapons and tobacco **5.** Providers of socially responsible and ethical banking have no genuine interest in improving the environment since they, like every other bank, primarily wants to make a profit.
Materialism	**Moschis and Churchill, 1978**	1. I admire people who own expensive homes, cars, and clothes. 2. The things I own say a lot about how well I am doing in life. 3. I like to own things that impress people. 4. I try to keep my life simple, as far as possessions are concerned. 5. Buying things gives me a lot of pleasure. 6. I like a lot of luxury in my life. 7. My life would be better if I owned certain things I don't have. 8. I would be happier if I could afford to buy more things. 9. It sometimes bothers me quite a bit that I can't afford to buy all the things I would like.
Risk and Return	**Nilsson, 2008**	**Many people undertake both ethical/socially responsible and conventional investment. We would like to hear your views about how these two different types of unit compare. Please select the appropriate option for each question.** 1. Risk: In your view, compared to ordinary investment, are SRIs: 2. Return: In the long term, compared to ordinary investment, do you think SRIs offer:

Appendix I - Items Used In Current Study With Source		
Items To Measure	**Source**	**Amended/Used Scale(s)**
Values (Self-enhancement and Self-transcendence)	**Schwartz, 1992; 1994**	1 – EQUALITY (equal opportunity for all) 2 - SOCIAL POWER (control over others, dominance) 3 – PLEASURE (gratification of desires) 4 – WEALTH (material possessions, money) 5 - A WORLD AT PEACE (free of war and conflict) 6 - UNITY WITH NATURE (fitting into nature) 7 – WISDOM (a mature understanding of life) 8 – AUTHORITY (the right to lead or command) 9 - A WORLD OF BEAUTY (beauty of nature and the arts) 10 - SOCIAL JUSTICE (correcting injustice, care for the weak) 11 – LOYAL (faithful to my friends, group) 12 – AMBITIOUS (hard working, aspiring) 13 – BROADMINDED (tolerant of different ideas and beliefs) 14 - PROTECTING THE ENVIRONMENT (preserving nature) 15 – INFLUENTIAL (having an impact on people and events) 16 – CAPABLE (competent, effective, efficient) 17 – HONEST (genuine, sincere) 18 - PRESERVING MY PUBLIC IMAGE (protecting my "face") 19 – HELPFUL (working for the welfare of others) 20 - ENJOYING LIFE (enjoying food, sex, leisure, etc.) 21 – RESPONSIBLE (dependable, reliable) 22 – FORGIVING (willing to pardon others) 23 – SUCCESSFUL (achieving goals) 24 - SELF-INDULGENT (doing pleasant things) 25 - OBSERVING SOCIAL NORMS (to maintain face)

APPENDIX TWO

Appendix II – Questionnaire

Exploring Heterogeneity among Socially Responsible Investors: The Case of Building Society's Investors in the UK

The survey consists of different questions each having a set of statements or options. For each statement, please select the option that best describes you, your feelings or opinions. Please answer all the information truthfully and as fully as possible. There are no right or wrong answers. All we are interested in is the option that best shows your views and behavior. For each question, please make a separate and independent judgment.

Important Term:

Socially Responsible Investment (SRI) – incorporation of social, ethical, and/or environmental (SEE) issues while selecting investment objects. SRI, also known as sustainable, socially conscious, "green" or ethical investing, is any investment strategy which seeks to consider both financial return and social good. In general, socially responsible investors encourage corporate practices that promote environmental stewardship, consumer protection, human rights, and diversity. Some avoid businesses involved in alcohol, tobacco, gambling, pornography, weapons, and/or the military. The areas of concern recognized by the SRI industry can be summarized as environment, social justice, and corporate governance—as in environmental social governance (ESG) issues or social, environmental and ethical (SEE) issues. In addition to investment either directly or through mutual funds, other key aspects of SRI include shareholder advocacy and community.

The following statements assess your attitude towards investment choices. Please read each statement carefully and select the option that best describes your opinion for each statement.

Q1

When you decided to open an account with EBS, how important was it for you that:

	Not at All Important	Very Unimportant	Neither Important nor Unimportant	Very Important	Extremely Important
a. The investment had good financial prospects.	○	○	○	○	○
b. The investment had a good socially responsible initiative.	○	○	○	○	○

Q2

Imagine that the investment can generate two different forms of return; financial and socially responsible. With this as a condition, how important is it for you that:

	Not at All Important	Very Unimportant	Neither Important nor Unimportant	Very Important	Extremely Important
a. Your investment generates good financial return.	○	○	○	○	○
b. Your investment generates good socially responsible return (by following socially responsible guidelines and thereby has a positive effect on social and environmental issues).	○	○	○	○	○

Appendix II – Questionnaire

Pro-Social Attitude

When you make investment decisions, how important is it for you that the projects EBS invests' in:

	Not at All Important	Very Unimportant	Neither Important nor Unimportant	Very Important	Extremely Important
a. Respects workplace rights (i.e. possibility to freely join trade unions).	○	○	○	○	○
b. Work actively with environmental issues (i.e. by reducing environmental effect of products and production).	○	○	○	○	○
c. Respect human rights (work against discrimination based on race, gender, or religion).	○	○	○	○	○
d. Do not produce goods that could harm people (i.e. weapons).	○	○	○	○	○
e. Do not use unethical business practices (i.e. bribery and corruption).	○	○	○	○	○

PCE, Trust and Materialism

The following statements assess your behavior, level of trust and perception towards investment. Please select the option that best describes your opinion for each statement

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. By undertaking SRI every investor can have a positive effect on the environment.	○	○	○	○	○
2. Every person has power to influence social problems by investing in responsible organizations.	○	○	○	○	○
3. It does not matter if I invest my money in SRI since one person acting alone cannot make a difference.	○	○	○	○	○
4. It is useless for the individual investor to do anything about pollution.	○	○	○	○	○
5. I trust that EBS follows the socially responsible guidelines used in their marketing.	○	○	○	○	○
6. The SRI options offered by EBS are an honest attempt to improve social issues such as pollution.	○	○	○	○	○

7. I trust EBS to do their best in trying to get companies to act in a way that reduces social problems such as pollution and third world poverty.	○	○	○	○	○
8. I trust that EBS do not invest their capital in companies/projects that manufacture weapons and tobacco.	○	○	○	○	○
9. Providers of socially responsible and ethical investment have no genuine interest in improving the environment since they, like every other organization, primarily want to make a profit.	○	○	○	○	○
14. I admire people who own expensive homes, cars, and clothes.	○	○	○	○	○
15. The things I own say a lot about how well I am doing in life.	○	○	○	○	○
16. I like to own things that impress people.	○	○	○	○	○
17. I try to keep my life simple, as far as possessions are concerned.	○	○	○	○	○
18. Buying things gives me a lot of pleasure.	○	○	○	○	○
19. I like a lot of luxury in my life.	○	○	○	○	○
20. My life would be better if I owned certain things I don't have.	○	○	○	○	○
21. I would be happier if I could afford to buy more things.	○	○	○	○	○
22. It sometimes bothers me quite a bit that I can't afford to buy all the things I would like.	○	○	○	○	○

Many people undertake both ethical/socially responsible and conventional investment. We would like to hear your views about how these two different types of unit compare. Please select the appropriate option for each question.

Risk

Risk: In your view, compared to ordinary investment, are SRIs:

Much riskier than ordinary ones	A little riskier	About the same	A little less risky	A lot less risky
○	○	○	○	○

Return

Return: In the long term, compared to ordinary investment, do you think SRIs offer:

A much lower rate of financial return	A slightly lower rate of financial return	A similar rate of return	A slightly higher rate of r□turn	A much hig□er rate of return
○	○	○	○	○

Values

The following items measure your values-orientations. Using the scale below rate each item on the basis of how important they are for you and act as a "guiding principle" in your life.

Please select the option that identifies how important each value is to you.

	Not at All Important	Very Unimportant	Neither Important nor Unimportant	Very Important	Extremely Important
1 - EQUALITY (equal opportunity for all)	○	○	○	○	○
2 - SOCIAL POWER (control over others, dominance)	○	○	○	○	○
3 - PLEASURE (gratification of desires)	○	○	○	○	○
4 - WEALTH (material possessions, money)	○	○	○	○	○
5 - A WORLD AT PEACE (free of war and conflict)	○	○	○	○	○
6 - UNITY WITH NATURE (fitting into nature)	○	○	○	○	○
7 - WISDOM (a mature understanding of life)	○	○	○	○	○
8 - AUTHORITY (the right to lead or command)	○	○	○	○	○
9 - A WORLD OF BEAUTY (beauty of nature and the arts)	○	○	○	○	○
10 - SOCIAL JUSTICE (correcting injustice, care for the weak)	○	○	○	○	○
11 - LOYAL (faithful to my friends, group)	○	○	○	○	○
12 - AMBITIOUS (hard working, aspiring)	○	○	○	○	○
13 - BROADMINDED (tolerant of different ideas and beliefs)	○	○	○	○	○

	Not at All Important	Very Unimportant	Neither Important nor Unimportant	Very Important	Extremely Important
14 - PROTECTING THE ENVIRONMENT (preserving nature)	○	○	○	○	○
15 - INFLUENTIAL (having an impact on people and events)	○	○	○	○	○
16 - CAPABLE (competent, effective, efficient)	○	○	○	○	○
17 - HONEST (genuine, sincere)	○	○	○	○	○
18 - PRESERVING MY PUBLIC IMAGE (protecting my "face")	○	○	○	○	○
19 - HELPFUL (working for the welfare of others)	○	○	○	○	○
20 - ENJOYING LIFE (enjoying food, sex, leisure, etc.)	○	○	○	○	○
21 - RESPONSIBLE (dependable, reliable)	○	○	○	○	○
22 - FORGIVING (willing to pardon others)	○	○	○	○	○
23 - SUCCESSFUL (achieving goals)	○	○	○	○	○
24 - SELF-INDULGENT (doing pleasant things)	○	○	○	○	○
25 - OBSERVING SOCIAL NORMS (to maintain face)	○	○	○	○	○

Gender

What is your gender?

Age

Please select the age group that you belong to.

Marital Status

What is your marital status?

Appendix II – Questionnaire

Education

What is the highest level of education you have attained?

Annual Income

Which of the following describes your combined household annual income?

Percentage Invested

% age invested in SRI (What %age of your total investment do you place under SRI by investing in EBS and/or any other SR organization?).

Occupation

Please state your occupation.

APPENDIX

THREE

1. Ethical Form

APPENDIX FOUR

Appendix-IV: Non-Respondents' Bias Test				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
MAT1	2415.000	5003.000	-1.434	.130
MAT2	2486.500	5336.500	-1.164	.224
MAT3	2163.000	5019.000	-.710	.478
MAT4	2507.000	5357.500	-1.080	.280
MAT5	2707.000	5482.000	-.274	.784
MAT6	2666.000	5658.000	-.244	.974
MAT7	2488.500	5566.500	-.434	.541
MAT8	2772.000	5010.000	-.375	.169
MAT9	2909.500	4510.500	-.065	.450
FRET1	2665.000	5766.000	-.499	.449
FRET2	1989.000	4110.000	-.546	.470
SRET1	2661.500	5514.500	-1.732	.083
SRET2	2627.000	5477.000	-.795	.136
PROSATT1	2625.500	5400.500	-.626	.532
PROSATT2	2619.500	5394.500	-1.830	.369
PROSATT3	2628.500	5478.500	-.898	.485
PROSATT4	2582.500	5357.500	-.698	.272
PROSATT5	2671.000	5521.000	-.588	.556
PCE1	2753.000	5603.000	-.095	.924
PCE2	2732.500	5582.500	-.186	.853
PCE3	2640.000	5415.000	-.631	.528
PCE4	2680.500	5530.500	-.400	.689
TRUST1	2471.000	5246.000	-1.498	.134
TRUST2	2491.000	5266.000	-1.321	.187
TRUST3	2563.000	5338.000	-.908	.364
TRUST4	2571.000	5526.000	-.099	.921
TRUST5	2418.500	5193.500	-1.531	.126
SRIATT2	2593.000	5443.000	-1.525	.127
SRIATT3	2613.500	5463.500	-.803	.422
SRIATT4	2206.000	5056.000	-.151	.880
RISK	2474.500	5324.500	-1.225	.221
SRIATT1	2737.000	5587.000	-.585	.558
RETURN	2594.000	5444.000	-.787	.431
V2	2721.500	5571.500	-.210	.834
V3	2495.000	5345.000	-1.163	.245
V1	2652.500	5427.500	-.518	.605

Appendix-IV: Non-Respondents' Bias Test				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
V4	2024.000	4874.000	-2.931	.023
V5	2516.000	5291.000	-1.152	.249
V6	2388.000	5163.000	-1.681	.093
V7	2642.000	5417.000	-.548	.584
V8	2239.500	5089.500	-1.081	.185
V9	2569.000	5342.000	-.835	.404
V10	2587.500	5362.500	-.860	.390
V11	2475.500	5250.500	-1.213	.225
V12	2119.000	4969.000	-.141	.888
V13	2656.000	5506.000	-.484	.628
V14	2651.500	5426.500	-.614	.539
V15	2634.500	5409.500	-.557	.578
V16	2490.500	5340.500	-.608	.543
V17	2544.500	5319.500	-1.042	.297
V18	2361.000	5211.000	-1.600	.110
V19	2605.500	5380.500	-.685	.493
V20	2567.500	5417.500	-.834	.404
V21	2242.500	5017.500	-1.198	.269
V22	2073.000	4848.000	-.804	..045
V23	2508.500	5358.500	-1.063	.228
V24	2396.500	5219.500	-1.602	.109
V25	2093.000	4943.000	-1.645	.126

APPENDIX FIVE

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
2	1.68	.000
3	5.48	.000
4	0.64	.000
5	0.70	.000
6	2.25	.000
7	2.52	.000
8	1.52	.000
9	6.87	.000
10	3.37	.000
11	4.02	.000
12	0.47	.000
13	3.30	.000
14	5.74	.000
15	0.13	.000
16	1.26	.000
17	0.05	.000
18	2.25	.000
19	2.71	.000
20	4.80	.000
21	1.58	.000
22	8.26	.000
23	3.02	.000
24	4.31	.000
25	7.37	.000
26	6.19	.000
27	4.00	.000
28	2.67	.000
29	1.12	.000
30	8.18	.000
31	1.84	.000
32	1.39	.000
33	4.88	.000
34	2.45	.000
35	1.58	.000
36	7.20	.000
37	2.46	.000
38	6.14	.000
39	2.04	.000
40	3.47	.000
41	4.50	.000
42	7.29	.000
43	2.30	.000
44	4.28	.000
45	0.75	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
46	1.22	.000
47	0.19	.000
48	2.78	.000
49	0.22	.000
50	1.06	.000
51	0.37	.000
52	1.79	.000
53	2.13	.000
54	4.05	.000
55	1.21	.000
56	0.08	.000
57	1.76	.000
58	1.11	.000
59	1.36	.000
60	1.15	.000
61	0.27	.000
62	0.54	.000
63	0.79	.000
64	4.91	.000
65	0.85	.000
66	4.51	.000
67	3.75	.000
68	4.25	.000
69	4.48	.000
70	1.62	.000
71	1.21	.000
72	4.75	.000
73	6.53	.000
74	6.53	.000
75	4.73	.000
76	0.60	.000
77	0.66	.000
78	6.74	.000
79	1.51	.000
80	0.25	.000
81	0.68	.000
82	0.24	.000
83	4.12	.000
84	4.67	.000
85	3.49	.000
86	2.12	.000
87	0.26	.000
88	1.56	.000
89	2.70	.000
90	4.95	.000
91	2.03	.000
92	0.94	.000
93	2.50	.000
94	5.38	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
95	2.99	.000
96	0.19	.000
97	2.83	.000
98	1.06	.000
99	1.63	.000
100	0.78	.000
101	3.94	.000
102	1.15	.000
103	3.50	.000
104	0.37	.000
105	2.83	.000
106	0.74	.000
107	0.60	.000
108	2.42	.000
109	4.77	.000
110	1.04	.000
111	2.36	.000
112	4.68	.000
113	0.91	.000
114	0.11	.000
115	1.40	.000
116	3.51	.000
117	1.15	.000
118	1.29	.000
119	26.14	.000
120	1.48	.000
121	0.21	.000
122	1.90	.000
123	0.74	.000
124	4.04	.000
125	0.58	.000
126	4.28	.000
127	0.38	.000
128	2.64	.000
129	1.23	.000
130	4.34	.000
131	3.26	.000
132	1.72	.000
133	0.44	.000
134	3.44	.000
135	2.35	.000
136	1.11	.000
137	3.30	.000
138	2.30	.000
139	1.88	.000
140	1.43	.000
141	3.24	.000
142	1.98	.000
143	5.26	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
144	2.68	.000
145	4.21	.000
146	0.89	.000
147	2.54	.000
148	2.05	.000
149	2.70	.000
150	2.58	.000
151	2.29	.000
152	3.68	.000
153	2.83	.000
154	11.09	.000
155	4.38	.000
156	2.99	.000
157	3.56	.000
158	5.13	.000
159	7.00	.000
160	0.55	.000
161	4.83	.000
162	3.33	.000
163	3.46	.000
164	8.43	.000
165	0.45	.000
166	1.94	.000
167	4.27	.000
168	4.87	.000
169	0.76	.000
170	3.20	.000
171	2.21	.000
172	4.46	.000
173	2.71	.000
174	1.51	.000
175	1.25	.000
176	2.14	.000
177	7.18	.000
178	4.77	.000
179	2.28	.000
180	2.44	.000
181	6.15	.000
182	0.56	.000
183	3.35	.000
184	2.03	.000
185	4.37	.000
186	1.35	.000
187	2.36	.000
188	1.32	.000
189	4.03	.000
190	11.38	.000
191	1.15	.000
192	3.12	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
193	2.42	.000
194	9.30	.000
195	0.57	.000
196	12.88	.000
197	2.69	.000
198	1.26	.000
199	1.49	.000
200	0.72	.000
201	3.44	.000
202	1.32	.000
203	0.27	.000
204	1.06	.000
205	8.52	.000
206	5.91	.000
207	0.36	.000
208	2.38	.000
209	17.71	.000
210	1.74	.000
211	2.13	.000
212	1.38	.000
213	1.06	.000
214	1.22	.000
215	8.91	.000
216	0.98	.000
217	0.90	.000
218	4.15	.000
219	1.98	.000
220	2.19	.000
221	1.33	.000
222	3.05	.000
223	3.12	.000
224	3.20	.000
225	2.79	.000
226	3.91	.000
227	1.81	.000
228	4.60	.000
229	6.91	.000
230	11.66	.000
231	3.71	.000
232	4.99	.000
233	2.77	.000
234	4.18	.000
235	0.42	.000
236	5.20	.000
237	4.45	.000
238	3.44	.000
239	1.41	.000
240	2.94	.000
241	3.59	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
242	2.26	.000
243	4.76	.000
244	1.75	.000
245	2.96	.000
246	0.49	.000
247	1.28	.000
248	6.75	.000
249	7.51	.000
250	0.29	.000
251	2.12	.000
252	0.56	.000
253	4.74	.000
254	0.54	.000
255	1.72	.000
256	1.06	.000
257	2.89	.000
258	1.33	.000
259	6.70	.000
260	0.87	.000
261	0.59	.000
262	3.14	.000
263	3.68	.000
264	0.75	.000
265	3.70	.000
266	5.02	.000
267	7.06	.000
268	2.56	.000
269	4.13	.000
270	1.92	.000
271	0.79	.000
272	0.90	.000
273	4.95	.000
274	0.45	.000
275	2.08	.000
276	2.29	.000
277	1.21	.000
278	1.06	.000
279	0.14	.000
280	1.67	.000
281	2.50	.000
282	2.66	.000
283	2.50	.000
284	0.45	.000
285	3.08	.000
286	1.85	.000
287	2.31	.000
288	5.65	.000
289	3.31	.000
290	1.85	.000

Appendix-V: Mahalanobis-D^2 Distance for Outliers		
Observation No	Mahalanobis D^2-Distance	p
291	3.11	.000
292	3.08	.000
293	0.05	.000
294	2.66	.000
295	2.33	.000
296	2.10	.000
297	0.50	.000
298	0.98	.000

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