



Investigating Environmental, Social and Governance (ESG) considerations in Venture Capital & Private Equity firms

A study in US and UK venture capital industry

Authors: George Amankwah
Harrison Viyu Abonge

Supervisor: Dr. Anders Isaksson

Student
Umeå School of Business
Spring semester, 2011
Master thesis, two-year, 30 hp

Dedication

This work is dedicated to the Almighty God for his goodness and grace throughout our studies.

Acknowledgements

Our special appreciation goes to our supervisor, Dr. Anders Isaksson for his support and guidance throughout the period of this work. We value the meetings we had, your inputs and directions. We are grateful for the knowledge we have gained through discussions and seminars.

We would also want to thank the following people for their continued support to us;

George: To my parents, brothers and sisters for their moral and financial support throughout my education here, especially Ben and his family in the UK. Thanks also to Pastor Ogonna and the Ampomah family in Umeå, Sweden. God bless you all for your encouragement and support.

Harrison: To my sincere gratitude to my brother in-law Mr. Menang Ivo, for his marvellous financial and moral support as well as his encouragement. Special appreciation also goes to my parents and the entire family for their social and academic support given to me in course of my studies in Sweden.

Thank you all!!

George & Harrison

Umeå, 20th May, 2011

Abstract

Environmental, Social and Governance (ESG) issues are becoming more and more significant for comprehensive evaluation of companies responsible investing activities. Over the years, the growth in corporate responsibility to the society and policies towards environmental consciousness has necessitated the need for comprehensive ESG integration into investment decision-making process and the impact of such activities on company's financial performance. Although, studies suggest that there is an increasing trend in ESG considerations among large-cap companies and public investors, little have been written about the link with private investors. Venture capital and private equity investors have an important role in shaping current innovative companies to become future leaders in the market and therefore possess the ability to influence entrepreneurs towards sustainability by incorporating ESG issues in their investment selection processes.

This study sought to find out if venture capital and private equity investors consider ESG issues in their activities and if so, do cultural and institutional contexts in which they operate have any effect on their considerations? We have used two of the most advanced venture capital and private equity industries in the world – USA and UK to analyse the response of this sector to ESG issues. Essential ESG factors have been coded using content analysis method for 122 companies from both countries relating to how they practise and integrate environmental, social and corporate governance issues into their investment decision process. Statistical multivariate analysis was conducted with SPSS to analyse data gathered.

Our findings revealed that in general venture capital and private equity investors are responding to calls for ESG considerations in their activities, with almost all studied companies reporting some form of ESG issues on their corporate website. However, majority of them are just at the initial stage of mentioning with little information on how it is been used as part of investment selection criteria. Results of the study also show that, investors in environmental related products and services (Cleantech) have higher levels of ESG considerations than other investors. An indication that investor's who finance innovative companies that provide solutions to current environmental problems do impact more positively on society.

In addition, findings also confirmed earlier studies that differences in cultural and institutional contexts between countries do affect behaviour and values of companies. Thus, a country with strong regulations and incentives towards sustainability will impact on corporate culture that will increase ESG considerations among venture capital and private equity investors.

Therefore, our study concluded that there is an appreciable levels of ESG consideration among venture capital and private equity investor's, however investors need to increase their considerations by committing more resources to environmental solutions and social issues such as clean technologies and community philanthropy.

Keywords: ESG, Venture capital, Private equity, Responsible investing, Sustainability.

Table of Contents

Dedication.....	ii
Acknowledgements	iii
Abstract.....	iv
List of Figures and Tables	viii
List of Figures.....	viii
List of Tables	viii
CHAPTER 1: INTRODUCTION	1
1.1 Background of research problem.....	1
1.2 Statement of Problem.....	3
1.3. Research Questions.....	4
1.4 Purpose of the Study	4
1.5 Delimitations.....	5
1.6 Definition of Concepts.....	5
1.7 Organisation of the Study	6
CHAPTER 2: THEORETICAL FRAMEWORK.....	7
2.1 Responsible Investing (RI) and Environmental, Social and Governance (ESG).....	7
2.1.1 The concept of Socially Responsible Investing (SRI).....	7
2.1.2 UN Principles for Responsible Investments (UNPRI)	8
2.1.3 Responsible Investment Strategies	9
2.1.4 Responsible investing strategies in Private equity and Venture capital ...	11
2.2 Venture Capital Investment Strategies and ESG Integration.....	19
2.2.1 Definition and Stages of Venture Capital financing.....	19
2.2.2 Structure and types of VC/PE firms	20
2.2.3 Investment decision process of Venture capital firms.....	21
2.2.4 Implementation of ESG issues in PE/VC investment process	22
2.2.5 Theoretical aspects of venture capital and private equity sector	23
2.2.6 Role and importance of VC/PE investors.....	25
2.2.7 Institutional and Cultural differences in venture capital	25
2.3 Current trends of ESG application in Private Equity & Venture Capital.....	27

2.3.1	Development and Drivers of RI & ESG agenda in PE.....	27
2.3.2	Venture Capital for Sustainability	29
2.3.3	Overview of U.S. Venture Capital market	30
2.3.4	Venture Capital Industry in the UK.....	32
2.4	Summary and Propositions	33
CHAPTER 3: RESEARCH METHODOLOGY		36
3.1	Scientific Perspective.....	36
3.1.1	Choice of Subject and Preconceptions	36
3.1.2	Research Approaches	36
3.1.3	Research Philosophies	38
3.1.4	Literature Search.....	39
3.1.5	Criticism of Secondary Sources	40
3.2	Research Design	41
3.2.1	Choice of Research Method	41
3.2.2	Population and sampling plan.....	42
3.2.3	Definition and Coding instructions of Research Variables	43
3.3	Examples and explanation of how coding was conducted	48
3.4	Truth Criteria	50
3.4.1	Reliability	50
3.4.2	Validity	51
CHAPTER 4: RESEARCH FINDINGS & ANALYSIS		52
4.1	Descriptive statistics	52
4.2	Inferential Statistics	56
4.2.1	ESG considerations by Cleantech/Non-Cleantech investors.....	56
4.2.2	Relationship between investor type and ESG considerations	58
4.2.3	Relationship between country differences and ESG considerations	58
4.3	Discussion of Results.....	60
4.3.1	Overall ESG consideration by Private Equity & Venture Capital	60
	Investors	60
4.3.2	Relationship between Investment Preference and ESG considerations by PE/VC investors	61
4.3.3	Differences between investor's and ESG consideration	62
4.3.4	Country differences and ESG considerations	62

CHAPTER 5: CONCLUSIONS	64
5.1 Conclusions.....	64
5.2 Recommendations.....	66
5.3 Theoretical and Practical Contributions of our Study	67
5.4 Limitations and Suggestion for Further Research	67
LIST OF REFERENCES.....	69
APPENDIX: Content Analysis Framework	76

List of Figures and Tables

List of Figures

<i>Figure 1: Prominent RI Strategies.</i>	11
<i>Figure 2: Components of ESG.</i>	18
<i>Figure 3: Investment process of VC.</i>	21
<i>Figure 4: Country distribution of sample companies.</i>	52
<i>Figure 5: Types of investors with respect to investment stages</i>	52
<i>Figure 6: Distribution of investment sector preference of investors.</i>	53
<i>Figure 7: Histogram of total ESG scores.</i>	54

List of Tables

<i>Table 1: Frequency distribution of total ESG scores</i>	53
<i>Table 2: Scores of ESG components.</i>	54
<i>Table 3: Descriptive statistics of dependent variables.</i>	55
<i>Table 4: Mean Scores of variables</i>	56
<i>Table 5: Multivariate test table of investment preference</i>	57
<i>Table 6: Multivariate test table of investor type.</i>	58
<i>Table 7: Multivariate test table of Country differences</i>	59
<i>Table 8: Summary of hypothesis results</i>	64

Chapter 1: Introduction

1.1 Background of research problem

Recent trends towards environmental consciousness have necessitated the need to hold companies accountable for social consequences resulting from their activities. This has brought to fore the recent increase in the debate concerning environmental, social and governance (ESG) issues among businesses and institutions around the world. Currently, many organisations (e.g. UN, OECD), governments, activists (pressure groups) and the media are constantly pushing for businesses to incorporate ESG as an integral part of their activities. Although, many businesses have already responded to this call to improve the social and environmental consequences of their actions and activities, yet their efforts are considered little (Porter & Kramer, 2006, p. 78).

For example, The Organisation for Economic Co-operation and Development (OECD) in its analysis of the recent financial crisis concluded that to a large extent the crisis can be attributed to failures and weaknesses in corporate governance arrangements (Kirkpatrick, 2009, p. 1). Thus, it has become inherent on business to view ESG as essential need for their success. In the words of (Freeman, 2011, p. 24) “it is now greater that it matters the way companies handle social risks – labour and human rights – to their brands or address environmental risks or opportunities to create new products and build new markets”.

The importance attached to this subject results from the desire to create and have a sustainable environment. Sustainability according to the famous Brundtland report, the World Commission on Environment and Development (WCED, 1987) defined as “meeting needs of present generation without compromising the ability of future generations to meet their needs” (Marrewijk, 2003, p. 101). Therefore the actions and decisions taken by venture capitalists, private equity investors and other financiers to preserve the environment and society for future generation will go a long way to support sustainability.

Empirical evidence shows that ESG integration in business operations enables comprehensive understanding of risks and opportunities a company faces, leading to an enhanced security selection and effective risk management (Bassen & Kovacs, 2008, p. 184). In addition, proper evaluation of ESG issues has the capacity to provide investors with long-term insight into company prospects, which can allow mispricing opportunities to be identified and exploited to maximize financial returns (Dixon, 2009, p. 12).

Indeed, the desire to seek sustainability by some institutions and firm's is already starting to transform the competitive landscape, thus in no time companies will be obliged to change their way of thinking about technologies, processes and business models (Nidumolu, Prahalad, & Rangaswami, 2009, p. 58). If this assertion is true, then the time is long overdue for environmental regulations to target the financial sector, since many investors think of the short-term financial returns of their investments or are ignorant of the financial impact of corporate environmental performance (Richardson, 2006, p. 75).

Furthermore Richardson (2006) asserts that the scope of environmental laws and regulations currently in operation naturally are not associated with financial institutions and other financiers (e.g., venture capital, private equity) as most environmental problems are mainly the concern of companies that extract, consume and pollute. However, the financiers should also be seen as the economy's 'unseen polluters' and also be blamed as most activities they finance have environmental consequences (Richardson, 2006, p. 75).

With this call for shift in focus to the financiers, studies suggest that there have been an increase in the linkage of private equity and venture capital with sustainability motives, as investors see that financial returns can be achieved in addition to societal benefits (Blanc, Goldet, & Hobeika, 2009; Eurosif, 2007, p. 1).

Venture Capital (VC) and Private Equity (PE) firms are companies specialized in investing in unlisted companies or specialized in co-investing equity with the entrepreneur to fund an early stage or expansion of venture (Blanc, et al., 2009; Isaksson, 2006). Venture Capital is one of the main mechanisms for financing innovative companies and is often thought of as a 'neutral' way of financing start-up companies, independently of the kind of business. In addition venture capitalists are usually actively involved in the management of the ventures they invest in, and usually have a seat on their board thereby retaining or having an influence on their activities as well as policies of these companies (Sahlman, 1990, p. 473). Therefore, directing attention of ESG integration and consideration to venture capitalists and private equity investors will go a long way to support the call for sustainability.

The terms Venture Capital (VC) and Private Equity (PE) has been used interchangeably in certain literatures to mean the same thing. However Cumming & Johan (2009), note that the two terms differ mainly with respect to the stage of development of the entrepreneurial firm in which they invest. Venture capital represents investments in early-stage firms (seed, start-up and expansion) and private equity includes later-stage investments as well as buyouts and turnaround investments (Cumming & Johan, 2009, p. 5).

For the sake of clarity and consistency as well as avoid misunderstanding, the term Venture Capital (VC) will be use to mean funds at all private investments stages including private equity in our study, unless clearly stated otherwise.

This study is conducted with venture capital firms from the United Kingdom (U.K) and the United States of America (USA). Research has shown that the U.S.A has the largest and more developed venture capital market as compared to other countries. As at 2009, the VC industry had a total of 1,670 firms' with funds raised totalling around \$481.8 billion. Investments by this industry cuts across all sectors of the economy with the high-technology sector receiving much of the investment (Reuters, 2010, p. 17). For example, a number of VCs and private equity investors have directed attention to the new high-technologies providing clean water and renewable energy, a new sector commonly known as 'Cleantech' (Manigart et al., 2000, p. 392; Reuters, 2010, p. 17).

British venture capital and private equity industry is the second largest in the world and the leader in the whole of Europe, they have also been in the fore front of sustainability issues with respect to some environmental regulations in this geographic location (Murray & Lott, 1995; Renneboog, Ter Horst, & Zhang, 2008). According to British Venture Capital Association (BVCA) report, a lot of PE and VC firms are more and

more becoming active in the renewable energy and clean technology sector (Pwc & Waterman, 2010, p. 4).

The vibrant and active investors in these two advanced industries have impacted hugely on some successful companies in world currently, Microsoft, Apple, Facebook etc, all who started with the help of VC financing.

The two countries are also of particular interest to our study due to cultural and institutional differences between them. Hofstede a leading researcher in cultural differences between countries observed that, cultural differences affect the way people in a society or different cultures view and interpret the world. This tends to influence the way of life and work habits of people within cultures leading to different management styles and organisational structures (Westwood & Everett, 1987). Cultural differences have been reported in these two markets from previous studies relating to investment decisions (Gilson & Bernard, 1999; Manigart, et al., 2000). For example (Gilson & Bernard, 1999, p. 24) concluded that the gap between American and Europe venture capital markets can be partly attributed to cultural differences. Our study will also seek to find out if the cultural differences do affect the ESG considerations of private equity and venture capital companies in these two countries.

It is known that VC/PE has enabled countries to support its entrepreneurial talents helping in shaping many ideas into products and services that are envy of the world today (NVCA, 2011). It is therefore worth studying these two markets to find out how they are contributing to the phenomenon of sustainability, looking at their impacts on new and existing businesses.

1.2 Statement of Problem

Environmental, Social and corporate Governance (ESG) issues which forms part of sustainability and Socially Responsible Investment (SRI) on the broader scale has been receiving much attention in recent years. Environmental, Social and Governance issues refers to extra-financial material information about the challenges and performance of company on matters such as corporate social responsibility, environmental, sustainability and corporate governance reports (Bassen & Kovacs, 2008, p. 184). Socially Responsible Investing on the other hand relates to “investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis” (SIF, 2008, p. 2). For some years now social responsibility of businesses, otherwise known as CSR is receiving an increasing fair amount of time in the larger debates about globalization and sustainable development with the idea that businesses have an obligation to the society (Wood, 1991). In addition, organizations are using it as an accepted strategy to maintain their reputation and to respond to pertinent social issues (Matten & Moon, 2008, p. 420). However, it is believed that this growth has often been associated with large-cap equity investment (Eurosif, 2007, p. 2).

With the increasing and important role of private equity and venture capital sources of finance as a supplement to public sources, it is imperative to also consider how private equity financiers also consider ESG in their operations. Today’s business environment is constantly changing, and a lot have been written about venture capitalists and

mainstream businesses. A study by (Randjelovic, O'Rourke, & Orsato, 2003, p. 242) indicated that very little academic and popular literature makes an explicit link between environment (sustainability) and Venture Capital sector.

In relation to the financial management industry, private equity financing represent relatively a small segment of the industry, however, its role in shaping current innovative companies to become future leaders is in no doubt great and big (Blanc, et al., 2009, p. 4). The VC and PE companies are known to employ many thousands of people with their investments across all sectors in the economy. As an important player in economic development it is therefore critical we deepen their engagement towards responsible investing practices (Pwc & Waterman, 2010).

A study by (Eurosif, 2007, p. 2) further asserts that VC/PE investors have the opportunity to influence innovative ventures towards sustainability through the integration of ESG issues in investment decisions and client relations. Therefore, embracing the notion of sustainability through responsible investment practices could be a major example for these companies in their ESG considerations. In the past, socially responsible investment have emerged as successful type of financing but many eco-oriented start-up remain underfunded (Randjelovic, et al., 2003, p. 240). For this reason there is a need for innovative financing mechanisms to facilitate development for sustainability.

Considering this important role that PE/VC firms can perform in the area of sustainability, the limited research studies on their contributions to ESG issue and sustainability in the broader sense, it is relevant to investigate their role in promoting ESG issues. Hence, this study seeks to investigate ESG considerations in PE/VC firms.

1.3. Research Questions

With the aim of the study to find out whether Venture capital and Private Equity firms are incorporating ESG issues in their activities to promote sustainability, the following research questions are posed to guide the research process ;

1. *Does venture capital and private equity firms practise and consider ESG issues in their investment activities?*
2. *Do cultural background/ institutional context of VC and PE firms affect their ESG considerations?*

1.4 Purpose of the Study

The purpose of the study is to investigate if VC/PE firms consider ESG issues in their activities and to analyze how different cultural and institutional contexts in the selected countries might affect the industries adoption of ESG principles. We believe that, the need to develop and support innovative new solutions to the environmental problems as well as address social consequences of governance failures is a shared responsibility of all stakeholders. Therefore, private equity sector considered as a catalyst for new innovations are not left out. We are of the opinion that, this study will throw more light

on the advancing field of venture capital and private equity financing which contributes to sustainability.

In addition, the theoretical and practical contributions of the study to researchers, policy-makers and businesses will be enormous. Some of the goals we hope to achieve are that:

1. The research will contribute to current research on SRI and ESG in general and more specifically on the contributions of VC/PE firms.
2. It will bring to fore the ESG issues that are necessary for both the investors and the entrepreneurs to be aware of.
3. For entrepreneurs, the study results will serve as an important document that will help them position themselves better to benefit from PE/VC's investments.

1.5 Delimitations

Our study has a limitation that need to be considered before making generalizations from its conclusions. The study focus on private equity and venture capital firms, an area which is very broad and cannot be studied in full detail considering the time and other resources at our disposal for the studies. Therefore, the data was collected from only two countries (UK and USA) which in our view are narrow. This limits the extent to which our conclusions can be generalized given the effects of cultural differences on behaviour and attitudes as well as institutional differences prevailing in different markets.

1.6 Definition of Concepts

ESG: an abbreviation referring to **Environmental, Social and Governance**. It usually refers to extra-financial material information about the challenges and performance of organizations and requires investors to have a duty to act in the best long-term interests of their society and beneficiaries (Bassen & Kovacs, 2008, p. 184). The components are defined by MSCI Research Group as;

- **Environmental (E):** relates to issues concerning investments and management policies in areas that have positive environment impact such as reducing carbon emissions, management of environmental challenges and reducing impact on climate.
- **Social (S):** consider factors relating to how well a company manages the impact of its activities on the society. Areas considered include contributions to community development, product quality and safety and management of employee concerns.
- **Governance (G):** address the issues relating to company and investor relationships, ethics, reporting and accountability. *Source: (MSCI, 2011).*

Sustainability: Meeting the needs of present generation without compromising the ability of future generations to meet their needs.(Marrewijk, 2003, p. 101)

SRI: an abbreviation referring to **Socially Responsible Investments**. Defined as “investing in companies that meet certain baseline standards of social and environmental

responsibility; actively engaging those companies to become better, more responsible corporate citizens; and dedicating a portion of assets to community economic development” (Gay & Klaassen, 2005, p. 35).

CSR: an abbreviation referring to **Corporate Social Responsibility**. Davis (1973), defined as “the firm’s consideration of and response to, issues beyond the narrow economic, technical, and legal requirements of the firm ... (to) accomplish social benefits along the traditional economic gains which the firm seeks” (Wood, 1991).

Venture Capital: equity investments made for the early stage or expansionary stage of companies with particular emphasis on entrepreneurial business rather than mature businesses (EVCA).

Private Equity: provision of equity capital by financial investors – over the medium or long term – to non-quoted companies with high growth potential (EVCA, 2011)

1.7 Organisation of the Study

This chapter introduces the topic of this study, the background of the problem that give credence and importance of this study, discusses the research objectives as well as the relevance of the study and the possible limitations that should be considered when generalisations are made from the results and conclusions. This is followed by the Literature review in chapter two. Here, we will review some previous studies on this subject by presenting and explaining some relevant concepts and theories that will form the basis on which our results will be measured. The chapter ends with the summary of the literature on which hypothesis are derived to help us answer the research questions that has been stated in the previous chapter.

Chapter three, explains the research methodology used. The chapter begins with the scientific perspectives of the authors which includes research philosophy design, research approach, and ethical considerations in conducting research in social sciences. The section will afford us the opportunity to explain to readers the philosophical underpinnings that form the basis of our study and any conclusions that will be drawn. The second part of the chapter discusses the research design. This explains the procedures and methods as well as techniques and tools for data collection. Data collection method content analysis is described with emphasis on how it will be applied in our study. Validity, reliability and other ethical considerations of the method is also discussed in detail.

Chapter four presents the results and analysis of data collected. The outcome of the data that was collected is presented in descriptive and inferential statistical formats to give more meaning to the coded data. The stated hypotheses are tested here to find evidence to support or reject otherwise. Finally, chapter five will present the conclusions, recommendations and suggestion for further studies. Conclusions are drawn based on the results that will be gathered. The chapter links the results to theory to contribute to exiting theory.

Chapter 2: Theoretical Framework

Introduction

This section of our study aims to provide knowledge and understanding on the subject by reviewing relevant previous studies on how responsible investing and ESG trends has emerged. It will also help us to formulate the necessary hypotheses that are relevant for our studies. The chapter is divided into three parts. The first part of this chapter will mainly help the reader understand what Responsible Investments (RI) is and its relationship with Environmental, Social and corporate Governance issues (ESG). The second part will look at the definition and the current trends in private equity and venture capital market in relation to responsible investments. Emphasis is placed on the investment decision process in the industry, an overview of the activities that pertains in our selected markets as well as differences between the two countries that relate to culture and other institutional factors. Lastly, we will look at how the integration of ESG in private equity market has developed over the years. A brief summary of the whole literature reviewed will lead to the formulation of hypotheses that will be tested. The chapter ends with discussion on literature search and criticisms of our secondary literature.

2.1 Responsible Investing (RI) and Environmental, Social and Governance (ESG).

2.1.1 *The concept of Socially Responsible Investing (SRI)*

The surge in Responsible Investments (RI) in recent decades presents new ethical issues that need to be considered by investors and business organisations. It is believed that a growing number of investors are embracing this concept of RI (Viviers, Bosch, Smit, & Buijs, 2008, p. 15). The origin of this phenomenon dates back hundreds of years where the Jewish law laid down many directives about how to invest ethically. However, the modern roots can be traced to the impassioned political climate of the 1960s. A period where a succession of agitations from the anti-Vietnam war movement to civil rights, the Apartheid in South Africa, equality for women and concerns about the cold war raised the importance of social responsibility and accountability resulting in a new model for investment (Escrig-Olmedo, Munoz-Torres, & Fernandez-lzquierdo, 2010, p. 443; Schueth, 2003, p. 190) .

Socially Responsible Investment (SRI) can also be traced back in the United States where investors in the early 1900s avoided companies investing in the production of tobacco, alcohol, or operating gambling establishments for religious reasons(OECD, 2007, p. 4). The doctrine of “social responsibility” would extend the scope of political mechanism to every human activity if taken seriously, it would disclaim the notion of staunch businessmen believing that business concern is directed merely towards profit making (Friedman, 2008)

In recent years, the underlining ethical perspective of RI which was mainly based on religious convictions has shifted to investing processes based on social convictions of individual investors as well as the integration of personal values and societal concerns

in investment decisions (Escrig-Olmedo, et al., 2010; Statman, 2006, p. 101). In line with this new trend of RI, various names have been used to describe this phenomenon. Notably among them are ethical investing, responsible investing, socially aware investment, socially responsible investing, green investing and sustainability investing, among others (Schueth, 2003; Suzanne, 2005; Viviers, et al., 2008; Vyvyan, Chew, & Brimble, 2007). With this various descriptions, one will ask, what then is Socially Responsible Investing (SRI)?

Socially Responsible Investing (SRI) is an investment decision process that integrates ethical and ESG considerations. According to SIF (2008), it is “*an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis*” (SIF, 2008, p. 2). Thus, social investors consist of religious institutions, individuals, NGOs and businesses that deliberately invest in projects designed to achieve the investors’ traditional financial goals and societal benefits in terms of sustainability for future generation as well as the needs of all stakeholders (SIF, 2008, p. 2; Suzanne, 2005). In addition, SRI is described as investing with one’s values. This can be achieved by screening out or not investing in certain industries or projects or only investing in selected companies because they possess your characteristics in line with your values. To complement this responsible investing view is Environmental, Social and Governance (ESG) factors that need to be considered by businesses and institutions. This is considered as “an additional lens through which companies can be evaluated” (Drucker, 2009, p. 74).

2.1.2 UN Principles for Responsible Investments (UNPRI)

Issues concerning socially responsible investment have in recent years been addressed by the United Nations since the launched of Principle for Responsible Investment in 2005 by the Secretary General (Steurer, Margula, & Martinuzzi, 2008, p. 9). Principles for Responsible Investments (PRI) are set of guidelines designed to provide a framework of best- practice and possible actions for increasing transparency with attention on the need for environmental, social and governance (ESG) considerations relating to companies and institutions (Steurer, et al., 2008, p. 9). This principles were developed by United Nations Environment Program Finance Initiative (UNEP FI) and the UN Global Compact. It has a wide appeal amongst the professional investment industry with signatories including representatives from across the investment value chain together with asset owners, investment managers and professional service providers in 2009 (Eccles, 2010, p. 415). It consists of six principles aimed at helping investors incorporate and integrate ESG and related issues into investment decision making processes (Niklasson & Coninck-Smith, 2010, p. 2). The PRI also provides a framework to help manage costs, risks and ESG opportunity issues aimed at increasing returns and lowering risk (Miles, 2010, p. 6).

These principles for responsible investment basically incorporated ESG issues, and it is becoming an actual standard for defining the ‘character’ of mainstream investment practices that integrate these three variables (environment, social and governance), (Eccles, 2010, p. 416). This in fact explains the increasing need for social responsible investment with investors diverting their views towards corporate activities that promote environmental issues, consumer’s protection and human rights. In summary, social responsible investment involve areas dealing with environmental, social and

corporate governance activities. Below is a summary of the principles issued by UNEP FI;

- ❖ Incorporating ESG issues into investment analysis and decision-making process
- ❖ Being active owners and incorporating ESG issues into our ownership policies and practices
- ❖ Seeking appropriate disclosure on ESG issues by the entities in which we invest
- ❖ Promoting acceptance and implementation of the Principles within the investment industry
- ❖ Working together to enhance our effectiveness in implementing the Principles
- ❖ Reporting on our activities and progress towards implementing the Principles

Responsible Investment Principles, Source: (Miles, 2010, p. 9)

Although the principles principally address the institutional investors, its impact has grown overtime to other sectors. Currently, these principles form the primary framework for responsible investment in the Private Equity sector. It is providing a voluntary and inspirational structure for the incorporation of ESG considerations in the private equity investment decisions (Pwc & Waterman, 2010, p. 4). According to BVCA report 2010, the UNPRI have signatories of 38 Private Equity (PE) fund managers and fund of fund managers. Among them are leading PE houses such as Actis, BC Partners and Ironbridge. This in addition to the creation of UN PRI steering committee on Private Equity in 2008 has increased the need of RI among Private Equity (Pwc & Waterman, 2010, p. 5).

2.1.3 Responsible Investment Strategies

Recent dialogue on SRI incorporates concerns of modern finance theory centred on risk and return. Historically, three main factors are considered by SRI investors:

1. Social factors: Include community development, labour rights (such as the right to unionism) human capital such as training and education, working condition, and health.
2. Environmental: These include urban and industrial pollution, global warming, depletion of some natural resources (such as oil) and restrictive access to others such as clean water.
3. Ethical factors: Manufacturing or distribution of weapons, urban and industrial pollution, inhumane testing of products on animals, forced prostitution, alcohol and gambling, implicit support of oppressive regimes as well as slavery (OECD, 2007, p. 4)

Research studies shows that, RI is based on three core strategies with the aim to promote socially and environmentally responsible business practices or served as a means to incorporate non-financial criteria in the investment decision process. These are

Screening, Shareholder advocacy/activism and caused based investing/community investing (SIF, 2008, p. 3; Suzanne, 2005; Viviers, et al., 2008, p. 16).

Screening strategy is where investors evaluate investment portfolios or decisions based on social and environmental factors. Investors can apply negative screening, positive screening or best of sector screening to select investment to put their money into (SIF, 2008, p. 3; Viviers, et al., 2008, p. 16). Negative screening is where investors avoid or exclude companies with poor ESG track records (SIF, 2008, p. 3) or morally undesirable companies, industries and countries (Viviers, et al., 2008, p. 16). Here, investors choose not to be associated with firm's undertaken businesses that conflict with their personal values. Most often, investors base their criteria on religious convictions or decision to refrain from businesses whose activities are considered harmful to individuals, community or the environment. Example is the production and sale of tobacco and alcohol (SIF, 2008, p. 3; Viviers, et al., 2008, p. 16). Positive or inclusionary screening on the other hand, is where investors look to be part of companies that are deemed to make profitable and positive contributions or are considered to be good corporate citizens. Example, invest in businesses that places high value of corporate governance, sustainable business, human rights etc (SIF, 2008, p. 3; Viviers, et al., 2008).

Shareholder advocacy or activism strategy is where investors attempts to promote social values in businesses through dialoguing and actively engaging businesses on various ESG issues. These are done through filing resolutions, voting on shareholder resolutions and at times also divesting their funds from companies that fail to adhere to social and environmental concerns. These actions are generally aimed at forcing companies to improve their company ESG policies and practices while at the same time promoting long term financial performance and shareholder value (SIF, 2008, p. 3; Suzanne, 2005, p. 59; Viviers, et al., 2008, p. 16).

The third strategy adopted by investors is the caused-based or community investing. This strategy directs investors capital to support selected particular causes or to the communities that are considered undeserved by the traditional financial services. This can be to support social infrastructural development or provide access to equity or basic banking products to those deprived communities (SIF, 2008, p. 3; Viviers, et al., 2008, p. 16). According to SIF (2008), Community investing makes it possible for local institutions and organisations to provide financial services to low income individuals and provide capital for small businesses in the US and around the world (SIF, 2008, p. 4).

The diagram below gives a summary of these strategies that responsible investors adopt in their investment decisions.

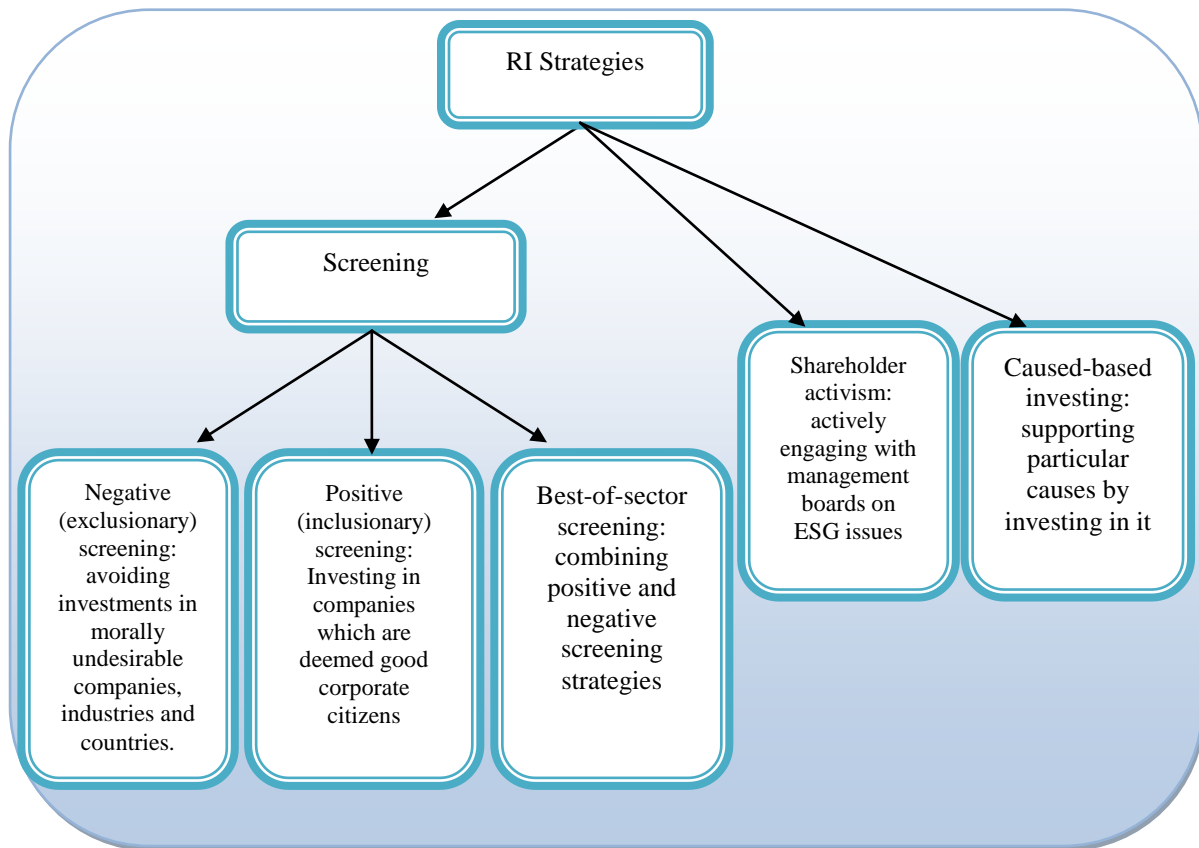


Figure 1: Prominent RI Strategies. *Source: (Viviers, et al., 2008, p. 16)*

The combination of these three strategies, community investing alongside social screening and shareholder advocacy in investment decision-making will go a long way to help promote the agenda of sustainability. It will be able to address the needs of financially underserved communities and promote corporate accountability and responsibility. In their studies SIF (2008), found out that the three core strategies of SRI when put together, not only help promote stronger corporate citizenship and social responsibility, but also build long term value for companies, their shareholders and their stakeholders and long term wealth in communities (SIF, 2008, p. 6)

2.1.4 Responsible investing strategies in Private equity and Venture capital

In relation to socially investing strategies among large-cap companies and investors, the private equity with venture capital as a sub-set also adopt various responsible investing strategies in their investment selection process. Broadly speaking, three main investment strategies are used. They are Product-focused or thematic approach; economically targeted and ‘double-bottom line’ investment or community venture; process-focused investments or ESG screening (Blanc, et al., 2009; Wood & Hoff, 2007). The strategies seek to incorporate ESG criteria in their investment decision making and also help assess ESG information required by investors when selecting ventures to invest in. In the same way, Venture capital firms can be evaluated based on

these approaches to determine whether ESG matters are considered during investment decision-making processes.

1. Product-focused investments or thematic ESG approach: With this approach venture capital firms and private equity firms select companies whose products and services offer sustainable solutions to societal needs. By the nature of their activities VC are well suited to provide support for the development of environmentally and socially beneficial products and services (Blanc, et al., 2009, p. 9; Wood & Hoff, 2007).

Common themes investors look for include environment, demographics and well being services, sustainable agriculture and fair trade. Environment generally consists of factors such as climate change, energy efficiency, renewable energy, waste and water management etc. The “Cleantech” investment is one example of product-focused investments as well as renewable energy, and other health care innovations. Demographics and well-being services provided by companies’ theme looks at investments that relate to the geographic area of the business as well as well being of the service or product offered (Blanc, et al., 2009, p. 9; Wood & Hoff, 2007). Example, Braemar Energy Ventures (US) invests in energy technology companies that provide environmental solutions such as pollution control, clean fuel processes, advanced power generation etc.

A critical question to evaluate this theme is: “Are there any inherent significant ESG concerns or opportunities associated with this sector or geographic area of operation?” (Blanc, et al., 2009, p. 9; Pwc & Waterman, 2010, p. 8).

This approach is commonly used by venture capital companies. According to Wood & Hoff (2007), venture capital firms make capital available to companies that are researching or bringing to market new technologies and techniques, as such using this approach investors are able to channel investments toward areas that offer the greatest promise of positive social and environmental returns that will impact on sustainability. Investments with this strategy can be made either at seed-stage or at later stage in the investment cycle. However, early stage investments can lead to higher returns financially and from ESG perspective by creating an enabling environment for new ideas (Wood & Hoff, 2007, p. 48).

A summary of what investors concerned with ESG issues should consider when selecting fund managers to manage product-focused portfolios is given below by Wood & Hoff, 2007.

Investors should;

- ❖ Clearly identify the type of product the investors want to focus on – for example, clean technologies, renewable energy and services that are directed to underserved groups or minorities or solutions to healthcare problems.
- ❖ Ensure that the fund manager has appropriate technical expertise to properly assess the potential of the technology to resolve the ESG issues identified as priorities
- ❖ Develop a mechanism for measuring impact – for example, the number of patents registered, products brought to market, or customers /patients assisted by the technology.

Essential ESG aspects to consider in product-focused investments.

Source: (Wood & Hoff, 2007, p. 49)

2. Economically Targeted and ‘Double-Bottom Line’ Investment or community venture: In line with community investing strategy in large cap companies, private equity and VC also use this strategy by targeting the flow of capital to low and middle-income neighbourhoods, companies owned and managed by women and minorities or social entrepreneurs. Mainly the focus is on social aspect and/or to contribute to the economic recovery of a region. It is believed that, with this strategy responsible investors can create social benefits in the form of job creation, improved access to services, better business linkages and healthier economic life. In the larger perspective, this same strategy of target investments can be used to channel capital to developing countries where access to capital is hampering proper economic growth and social development (Blanc, et al., 2009, p. 11; Wood & Hoff, 2007, p. 49).

According to Wood & Hoff (2007), investors are able to ensure that businesses supported are economically sustainable by directing capital to these underserved communities. Also focusing on the social and environmental impacts of their investments, they are able to create opportunities for indentifying unrecognised value through the discovery of untapped markets. In particular, UK and US private equity market has been placing much emphasis on urban investment that has the potential to increase economic revitalization of inner city and inner-ring suburban neighbourhoods, these areas have underutilized workforces and capital stocks that can be tapped into (Wood & Hoff, 2007, p. 50).

A summary of what investors concerned with targeted ESG impacts should consider when selecting fund managers to manage such portfolios is given below by Wood & Hoff, 2007;

Investors should;

- ❖ Identify the particular geographic region, historically underserved group, or economic area to which they want to make capital available.
- ❖ Determine the type of impact that is desired, for example, encouraging new businesses and entrepreneurship or supporting businesses that create employment opportunities in the region (Alternatively, it may be appropriate to determine the target groups or areas based on program-related objectives).
- ❖ Identify indicators that the fund manager will use to measure impact including job creation, minority management and hiring, quality of jobs created, products or services made available to underserved areas, etc.

Factors to consider when using targeted ESG strategy Source: (Wood & Hoff, 2007, p. 51)

3. Process-focused Investments or ESG Screening: Venture capital and private equity firms use this responsible investment strategy to screen companies that they can invest in, similar to the screening strategy in responsible investing among large-cap companies. This is done by integrating analysis of companies' management of ESG activities in their investment decision-making process. Investors can decide to focus only on companies with good governance records, good environmental management records etc. ESG screening strategy can also take the form of including companies seen as promoting sustainability or excluding investments in certain companies or ventures based on culture or their involvement in activities deemed as 'unethical', example weapons (Blanc, et al., 2009, p. 10; Wood & Hoff, 2007, p. 52). With this investment strategy, venture capital companies can reduce risks associated with invested funds by considering non-financial issues that may affect their investment in the near future.

In addition, by their nature the private equity and venture capital sector are in unique positions to influence management actions and decisions of companies they invest in. With opportunities such as sitting on the board, it is worth including companies that show potential of incorporating ESG issues in their activities in portfolio. It then become easier to influence those companies corporate culture towards social responsibility and sustainability (Wood & Hoff, 2007).

Summary of what investors that focus on process impacts should consider when selecting fund managers to manage process-focused investments portfolio is given below by Wood & Hoff, 2007;

Investors may wish to;

- ❖ Determine the key ESG performance indicators against which companies and the fund manager will be measured. It is important to ensure that the information on which these indicators are based is available: for example, evidence of environmental performance in terms of regulatory compliance issues and workplace performance indicators, such as base salary relative to other companies of similar size and in similar industries.
- ❖ Consider whether the fund manager develops company-specific strategies for improving the management of ESG issues prior to investment, then requires portfolio companies to measure and report against these goals.
- ❖ Look at whether the fund manager provides technical assistance to companies to assist with achieving greater integration of the salient ESG risks and opportunities associated with the business

Essential factors to consider when applying process-focussed strategy

Source: (Wood & Hoff, 2007, p. 53)

2.1.5 Environmental, Social and Governance (ESG) issues in investment decision making

There is growing concern that investment decisions, and financial markets broadly do not appropriately reflect all ingredients that go a long way to create high performing organizations (Amaeshi & Grayson, 2008), because of this, business valuations are often relied on incomplete information with regards to information on intangibles such as brand equity and risks. The need for ESG implementation by institutional investors is driven by high risks and investment opportunities (Steffensen, 2006). Corporate governance Issue in a company's decision making process is considered very important nowadays. Due to lack of good management systems, policy, and controls, 1200 public companies in US had to restate their financial results in 2005 (Steffensen, 2006). Some market participants such as analysts, regulators, business association and Investors are aware of this concern and are of the opinion that investment decisions and business valuations could be enhanced if they suitably reflect environmental, social and Governance (ESG) risks that often tag along with them (Amaeshi & Grayson, 2008).

This concern of business and ESG issues have gathered momentum, but while some investors mainly mainstream are yet to fully come to terms with it, other actors such as the SRI market see the need to implement it in investment decision making as opportunities for new market/product creations. A study by Strandberg reveals that the

emergence of Corporate governance reform is a critical issue, thrust on the world stage by a number of high profile corporate failures, it stretch further that, while regulatory efforts are underway to identify and codify good governance practices to rebuild public and market thrust, there are parallel number of efforts to map out social and environmental non-financial-boundaries (Strandberg, 2005). ESG is beginning to influence (and in some cases dominate) the business environment in areas such as investment, company activities and common stake holders such as consumers (green and sustainable funds) and shareholders (Miles, 2010)

Environmental, social and governance consideration are considered an integral part of the investment process for many investment managers, it is not a niche investment philosophies for a select group of environmentally sensitive investors (Dixon, 2009). Although all institutional investors have not embraced the need for ESG investment it is not without doubt that their attitude and appetite for ESG consideration for decision-making process do vary greatly and materially, some see no role for ESG issues in their decision making process, while others believe ESG issues is very informative for investment decision (UNEP, 2005). ESG is progressively considered a significant part of investment process and is regarded as a tool for successful investors, widening their sphere of influence. It is widely regarded that ESG research can provide long-term insight into companies prospects, which can allow mispricing opportunities to be identified and exploited to maximise returns to investors (Dixon, 2009)

2.1.6 The Growth and Relevance of ESG Consideration

Given the opposing views of different investors about ESG implementation to decision making or investment process, it becomes prudent to question whether ESG is really relevant when investment decisions are concern. UNEP (2005), reveals that there are different views as to precisely how the links between ESG factors and financial performance should be identified and measured, that links are widely acknowledged to exist (UNEP, 2005). It is evident that, the evaluation of ESG issues enables a comprehensive understanding of the risks and opportunities a company faces, which then leads to an enhanced security selection and risk management. In addition, it leads to an enhanced understanding of how future trends could affect a certain industry or the entire economic landscape (Bassen & Kovacs, 2008, p. 184).

Moreover, it is regarded that ESG considerations may help investor understand the nature, externalities, risk and likely return of the investments undertaken, in instances where the decision-maker is considering investing in a sector facing increased sustainability-driven regularity control (UNEP, 2005). The United Nations Principles for responsible Investment (UN PRI) encourages signatories to work hand in hand in order to effectively enhance the implementation of the principles, that close collaboration between asset owner clients, with each other and the broker community will facilitate development of ESG research which will in return help signatories fulfil their commitment (Dixon, 2009, p. 12).

The concept of ESG if understood is likely to aid decision-makers to adequately hedge and balance different types of investments or help in building an appropriate diversified portfolio (UNEP, 2005). In fact ESG consideration could be relevant if properly understood and implemented. It may help investor to better realize long-term viability and the sustainability of certain investments.

2.1.7 Measuring Environmental, Social and Governance (ESG) indicators.

The growth of SRI has necessitated the need for investors and company financiers to get access to more exact and accurate information regarding ESG. As investors seek to change the behaviours of companies by investing in socially responsible companies, this need becomes an important aspect. This is the question of how investors measure the ESG considerations in companies they invest or wish to invest in.

Over the year, a number of ESG agencies have emerged to help investors in this direction by given some specific indicators that can be used to measure. Notably among them are MSCI Research (USA), Accountability and EIRIS (UK), oekom research (Germany), Vigeo (France), ECP (Italy) etc. (Escrig-Olmedo, et al., 2010, p. 445). We will further explain the criteria used by MSCI Research Group and EIRIS in the USA and UK respectively.

MSCI Research and EIRIS

Morgan Stanley Capital International (MSCI) Research Group, the result of merger of industry giants - RiskMetrics, KLD Research & Analytics and Innovest is an independent investment research firm in the USA and is known to be a leading authority on social research and indexes. This firm has developed a system that enables management to incorporate ESG factors in their investment decisions (Escrig-Olmedo, et al., 2010, p. 447). The key issue addressed in this rating framework is how company's management deal with the impact of Environmental (E), Social (S) and Governance (G) activities. In measuring these key indicators, scores are given to companies based on the criteria above. The research team examines data collected from sources such as company filings, media, government etc, strength adds a point and a concern subtracts a point (MSCI, 2011; Statman, 2006, p. 102). A high ESG score at the end shows that a company is considered to have sustainable business. The evaluation of companies is based on;

- ❖ **The environment [E]:** issues include management of environmental losses, climate change, non-carbon emissions, efficient & waste and resources management & use.
- ❖ **Social [S] (Community & Society):** issues considered include philanthropy, impact on community and human rights – civil and political.
- ❖ **Social [S] (Customers):** Marketing and advertising, product/services quality & safety and anti-competitive practices.
- ❖ **Social [S] (Employees & Supply Chain):** Labour management relations, employee safety, workforce diversity and supply chain labour.
- ❖ **Governance [G]:** Sustainability reporting & management, governance board structures, business ethics and political accountability (MSCI, 2011).

On the other hand EIRIS (Ethical Investment Research Service) do not assign weight to the assessment criteria used but rather make independent evaluations to arrive at ratings. They are usually based on an assessment of a selection of business relevant ESG issues (Escrig-Olmedo, et al., 2010, p. 447) The criteria used here are also deliberately weighted towards social and governance matters as compared to MSCI who incorporates a chunk of environmental issues. EIRIS argue that, social and governance matters have most significant direct impacts on the society (Maler, 2009, p. 4). The evaluation is based on;

- ❖ **Environment** : environmental policy
- ❖ **Social**: equal opportunities policy, equal opportunities systems, employee training, customer policy and customer systems.
- ❖ **Governance**: responsibility for stakeholders, ESG risk management, bribery policy, systems and reporting, code of ethics and code of ethics systems (Maler, 2009, p. 4).

A summary of some components that should be reviewed in evaluating or measuring ESG among companies as presented by MSCI is given below;

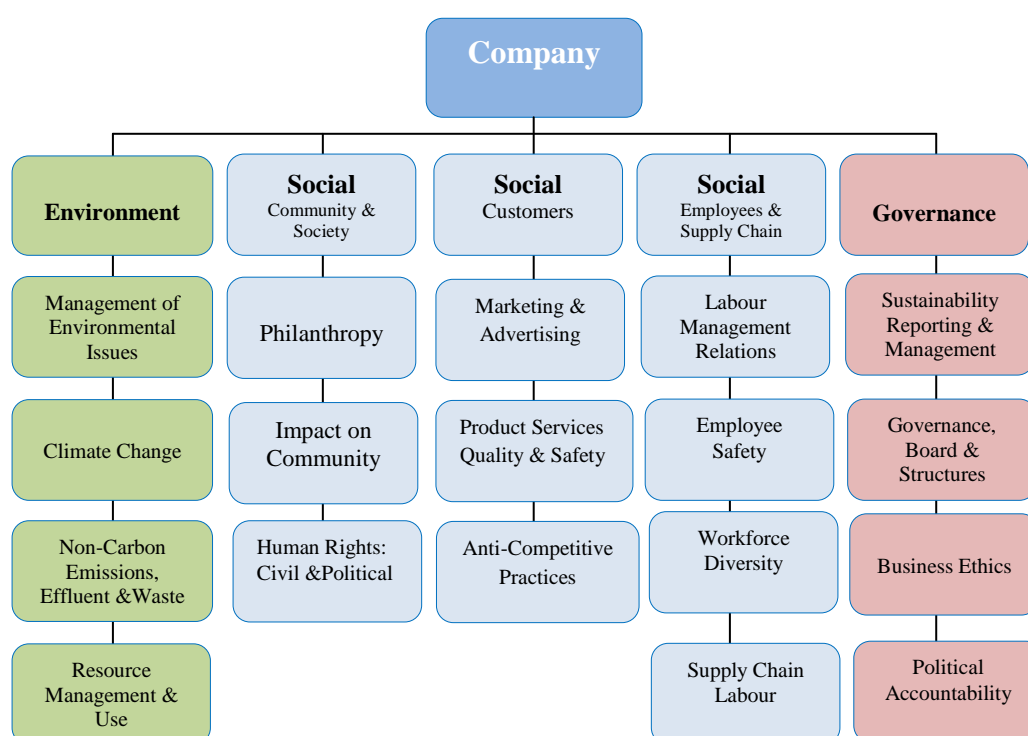


Figure 2: Components of ESG.

Source: MSCI (2011)

These ESG criteria and other elements have been discussed and used to measure how companies and institutions respond to responsible investment. In our study, these components and others will be used to design our coding instructions that will guide us measure how the private equity and venture capital firms also consider them in their investment decisions as well as their contribution to responsible investing. Another criteria known as ‘involvement’ will be added in our study to measure responsible investing behaviour. This criteria will look at whether venture capital and private equity firms invest in areas known to be controversial, harmful or against responsible investing or not. Examples are, investing in tobacco producing companies, conflict areas, military weapons etc.

Some key issues that arise from the evaluation methods presented above are standardization and comparability of the data provided. It can be seen that, the two evaluation research firm’s used different criteria to measure the ESG considerations in companies. Although, they all use the basic environment, social and governance criteria, detail comparison of the systems of categorisation and information contained in each criterion of evaluation showed some diversity (Escrig-Olmedo, et al., 2010, p. 449).

2.2 Venture Capital Investment Strategies and ESG Integration.

2.2.1 Definition and Stages of Venture Capital financing

Venture capital over the years has emerged as an important finance for entrepreneurial companies seeking to grow. It is described as a professionally managed pool of capital that is available for investment in private ventures, usually in the form of co-investing in equity to fund the business with the entrepreneur at various stages in their development, especially in the early and expansionary stages (Isaksson, 2006; Sahlman, 1990, p. 473).

The investment focus of venture capital firms may be in two forms, generalist or special venture capitalist depending on the strategy used. Generalist investors are VCs that invest in various industry sectors or various stages in the venture life cycle or various geographic locations. Specialist VCs on the other hand, tailor investments to only one or two specific industry sectors, or may decide to invest in only certain stages of the venture life cycle (eg. expansion stage) or concentrate operation and investments in a localized geographic area such as UK only and not other areas or countries (Ogden, Jen, & O'Connor, 2003)

Venture capitalists invest at reasonably well-defined stages and each stage is generally tied to a significant development in the company they invests in (Sahlman, 1990, p. 475). Traditionally, VC financing can be divided into eight (8) stages representing concept and design of products, pilot production, first profitability, introduction of second product and initial public offering (IPO). The stages as identified by (Ogden, et al., 2003; Sahlman, 1990) are seed financing, start-up, first stage/early development, expansion (second stage), profitable but cash poor (third stage), rapid growth (fourth stage), bridge/mezzanine and harvest (liquidity stage). In his studies (Cumming, 2005) identified five conventional stages that are commonly used in the industry and defined in literature as;

1. **Start-up stage:** where the entrepreneurial firm is based on a concept without a product or product is at initial development phase. Usually if results of seed stage are promising and there is potential, VCs provide these companies funds for product development, prototype testing and to explore market potential.
2. **Expansion stage:** the stage where entrepreneurial firm require significant capital to acquire and expand its property, plant and equipment (PP&E), develop marketing strategy and expand production capital as they initiate full commercial production and sales. Funds from VCs are important here to help meet working capital needs that emerge as a result of full scale production.
3. **Late/Mezzanine stage:** where there is rapid growth and the company is established. At this stage risks has been reduced considerably. VCs investments here can be used for further expansion of manufacturing facilities or product enhancement.
4. **Acquisition/buyout stage:** the point at which the operating management of the venture acquires a product line, a division of a company. That is a stage where the VC investors can gain liquidity for a substantial portion of their holdings in a company.
5. **Turnaround stage:** the stage where the once successful and profitable entrepreneurial firms reaches a point where earnings are less than cost of capital. (Cumming, 2005; Ogden, et al., 2003; William A. Sahlman, 1990)

Although, the stages outlined above are mutually exclusive, it worth noting that all firms go through the start-up and expansion stages but not all companies experience the buyouts and turnaround stages (Cumming, 2005, p. 555). Our study divides these stages into two; the first two stages referring to venture capital (VC) and the last three relating to private equity (PE).

2.2.2 Structure and types of VC/PE firms

Venture capital firms can be structured in different types but most mainstream firms are organised as a limited partnership, with the venture capital firm serving as General Partner (GP) and the investor as Limited Partner (LP). However, in recent years the tax code in the U.S.A has allowed new types such as Limited Liability Partnerships (LLPs) or Limited Liability Companies (LLCs) to be formed, though the LLP is still the predominant form of VC organisation (Ogden, et al., 2003; Sahlman, 1990).

The common type is the independent venture capital firm that has no association with any other financial organization, known as 'private independent firms'. Funds are normally raised from wealthy families and large companies and are commonly organized as limited partnership, seeking investors to invest in fund, the fund constructed as a separated legal entity with the venture capital firm being the managing partner and the Institutional investors the limited partners (Mason & Harrison, 2002, p. 428; Ogden, et al., 2003). Another type is where venture firms may be affiliated with a commercial bank, investment bank or insurance companies. Funds are provided by these parent companies and the ventures make investments on behalf of their parent company (investors). This type is known as 'Captives' in the venture industry (Ogden, et al., 2003).

In addition, there are some ventures that are not affiliated to non-financial institutions, but are subsidiaries of large companies particularly in the technology sector that make investments on behalf of their parent company. These are known as 'corporate venture capital' or 'direct investors'. The main aim is for the venture to invest in strategic areas that can complement the activities of research and development. Others are government backed venture capital funds that help start companies or invest in specific regions, state and cities. For example, in the UK there are Regional venture capital funds that have its source of capital from the government. The USA, also has the Small Business Investment Company or the SBIC program through which venture firms can increase its own funds with federal funds (Ogden, et al., 2003).

Institutional and cultural backgrounds of countries also in one way or the other affect the way VC are organised and investment focus of companies. In their studies (Black & Gilson, 1998), finds evidence to support the assertion that U.K has a strong venture capital industries as compared to other European countries because of its active stock market. In addition, European VC firms including UK are less specialized and often affiliated with commercial banks in comparison with American industry (Black & Gilson, 1998, p. 267). A major difference between the American VC market and the European market is in the extent of coverage that the definition of venture capital gives. For instance, the EVCA defines venture capital industry to include leveraged buyouts & buyins and replacement of a firms existing financing whilst in U.S.A, leveraged buyouts are separate industry from the venture capital industry (Black & Gilson, 1998). Differences in corporate governance institutions, entrepreneurial finance activities, labour market regulations and cultural differences in entrepreneurship all contribute to

different investment sizes, industry focus and geographical focus. For example, in cultural context, Americans are known to be more averse than European countries. This supports the situation where Americans invest in more technological industries known to be risky sectors. E.g. Cleantech sector (Black & Gilson, 1998).

2.2.3 Investment decision process of Venture capital firms

Venture capitalist is an intermediary between providers of capital and investee companies. Venture capital firms on behalf of their investors, select firms for investment, structure deals, perform due diligence and monitor the performance of the investee companies (Burgel, 2000). Venture capitalist decision to invest is usually a difficult one with serious adverse selection risk, for once investment is made, the investment is illiquid, and its success is highly dependent on a small group of entrepreneurs or managers (Fried & Hisrich, 1994, p. 28). (Tyebjee & Bruno, 1984, p. 1052) described the venture capital investment process with a five sequential stage model. They are deal origination, screening, evaluation, deal structuring, and post investment activities. The model in fact describes a complete investing process and largely highlights at each stage key venture activities. In building on this studies and other research, (Fried & Hisrich, 1994) in their study proposed a six stage model that represent the decision-making process of venture capitalists. The stages are origination, VC firm-specific screen, generic screen, first-phase evaluation, second-phase evaluation and closing. The various stages and models about VCs investment decision process and strategies can be divided in two parts, before investment (Pre-investment) dealing with how to identify and select the best deal to invest in and after investment (Post-investment) activities to protect investment made. The diagram below shows the two investment periods of venture capital;

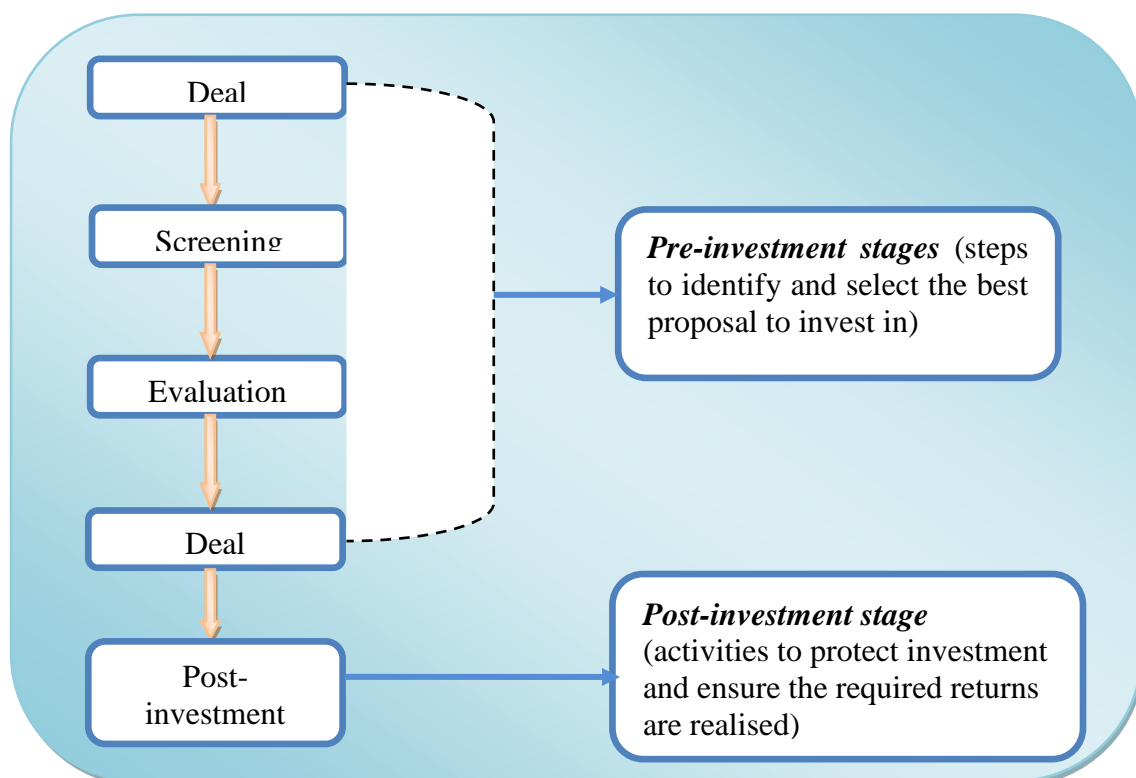


Figure 3: Investment process of VC. Source: Tyebjee & Bruno (1984)

Pre-investment processes involve, deal origination, screening (firm-specific and generic), evaluation and deal structuring. The first step deal origination, describes how VCs take steps to make themselves known to possible companies or position themselves to recognise potential investment activities. The second phase is screening. Screening refers to the stage where VCs decide whether to invest or not based on the investment focus of the venture company. Criteria can be the investment size, the geographic location or the industry of the deal. With this, venture capitalist seeks to eliminate proposals that do not meet their investment focus and concentrate on those they have the requisite knowledge and expertise to handle (Fried & Hisrich, 1994; Tyebjee & Bruno, 1984, p. 1052).

Proposals that go through the screening stage enter the third stage known as evaluation. This stage involves gathering additional information about the proposal to assess the possible return and risks. Assessment is usually based on the business plan presented by management of the venture company and through visits to the entrepreneur or company business premises to be familiar with the activities and experience of managers. A positive outcome from this assessment stage leads to the deal structuring step. This last step in the pre-investment phase is where venture capitalist enters into a negotiation with the potential venture to discuss the terms of the agreement and other legal documents finalized (Fried & Hisrich, 1994; Tyebjee & Bruno, 1984).

Post investment stage consists of activities that are carried out by venture capitalists to ensure that investment made yield the required returns at the end of the agreement. Activities undertaking here include setting up controls to protect the investment, providing consultations and management expertise and helping with exit arrangements. To achieve objectives of this stage, venture capitalists seek to have formal representation on the board of directors of the investee or through informal influence in market and creditor networks (Tyebjee & Bruno, 1984).

2.2.4 Implementation of ESG issues in PE/VC investment process

Effective and efficient ESG implementation requires a well defined strategy that incorporates ESG issues from beginning to the end of VC investment decision-making process. According to BVCA report on PE/VC responsible investment, “a well defined strategy can significantly support ESG decision-making during deals, but can also give support during fundraising activities by providing a framework for meaningful responses to LP enquiries and by helping to demonstrate a proven responsible investment track record” (Pwc & Waterman, 2010, p. 5).

The pre-investment stages outlined above provide avenues and opportunities to integrate ESG issues by venture capital companies. ESG decisions at this stage can be critical to ensure effective monitoring at the post-investment stage. Integration of ESG can begin at the deal origination and screening stage. At this stage, venture capitalist with ESG strategy focus will evaluate and screen potential ventures to determine if the proposed deal would in principle create synergies, conflicts or opportunities in relation to their investment focus or standards. Screening can be in the form of industry sector profiling or geographic location focus. For instance, responsible venture capitalists can decide to invest in clean technology ventures (Cleantech), renewable energy and other innovations based on known or possible environmental, social and governance issues (Pwc & Waterman, 2010). Key considerations at this stage could include;

1. Assessing if there is any probable significant ESG concerns or opportunities linked with the industry sector or geographic location of the venture.
2. Determining if potential venture ESG policy addresses adequately relevant concerns that may pertain in the sector.
3. Determining if the investee company appear to foster transparency in its activities.
4. Assess if there is any possible short-term impacts on business model, sector specific ESG issues arise (Pwc & Waterman, 2010, p. 8).

In addition, attention should be given to effective ESG due diligence during these stages. Due diligence helps VCs understand the target venture performance in detail especially, in the areas of risks and opportunities that could impact on the general business value. Consideration should be given to both current and reasonably foreseeable ESG issues that cover legal compliance as well as non regulatory issues (Pwc & Waterman, 2010, p. 10).

The post-investment role where venture capitalist becomes an integral part of the new venture management, presents an opportunity to monitor and support the implementation of ESG issues. They have the responsibility to encourage and motivate the companies they invest in to implement and practise responsible business practices. The benefits of doing so include, protecting their financial interest in the venture, effective monitoring and support at this time has the potential to protect or greatly increase the profitability of the venture and/or a higher value during exit (Pwc & Waterman, 2010, p. 11).

2.2.5 Theoretical aspects of venture capital and private equity sector

Agency Theory

A large amount of activities undertaken by venture capital and private equity investors involves agency costs. A term generally used to explain the situation where parties to a contract might take certain actions that are in their own self-interest to the detriment of the other party (Cumming & Johan, 2009, p. 27). Earlier discussions in our study have established that venture capitalist act as intermediaries for their fund providers (limited partners). They have the responsibility to choose an entrepreneur to invest in on behalf of their investors therefore; they have the role as principal and agent in this circumstance. The principal-agent conflict arises where the interests and goals of the principal and agent contradict each other and the situation where it becomes difficult for the principal to verify the activities of the agent (Eisenhardt, 1989, p. 58; Sahlman, 1990). Possible conflicts maybe from contrasting views between the venture capitalist as agent and fund providers as principals; venture capitalist as principal (investor) and entrepreneurs as agents. For example, in a limited partnership VC, funds are provided by investors (limited partners) with VC fund managers (general partner) responsible for the fund management. As investors are not involved in the daily activities of the VC, the fund manager has the responsibility to operate on behalf of them in such a way that will increase their financial returns. However, there are lots of things that VC mangers might do which are contrary to the interests of their investors (Cumming & Johan, 2009, p. 33). The possible problems from this agency conflicts between investors and venture capitalist are moral hazard and adverse selection mainly as a result of information asymmetry.

Information Asymmetry

The theory of information basically deals with a situation where one party to a transaction or contract has more or quality information than the other party. This theory has been widely discussed in academic literatures with early pioneers being Akerlof (1990) and Spencer (1973). Akerlof illustrated this theory with a situation where sellers of used automobiles possess certain private information about the quality of their cars, but buyers cannot tell the differences in quality before purchase. In this case, the low-quality automobiles referred to as 'lemons' dominate the market, leading to a situation where consumers in the market selects adversely (Amit, Brander, & Zott, 1998, p. 444; Ogden, et al., 2003). Amit et.al (1998), proposed two main forms of information asymmetry in their study namely 'hidden information' and 'hidden action'.

Adverse selection

Hidden information or adverse selection arises when one party to a contract is possessing relevant information that are not available to the other party. Example is a situation where entrepreneur may be motivated to overstate the success rate of new projects in order to attract investors. Thus, the market will be choked with sub-standard products making it hard for investors to distinguish between good quality projects and low quality projects. However, there is the possibility of avoiding failure from investing in low quality products, if extra due diligence costs can be accommodated in investment decision-making process by investors (Amit, et al., 1998, p. 443).

This represents a form of agency problem that arise even before contracts are entered into between investors and entrepreneurs. Investors can therefore adopt responsible investing strategy such as screening to select the best possible projects among the lot offered. Venture capital and private equity firms can use ESG to screen potential projects to eliminate those that are difficult to monitor. Using ESG as a screening model, venture capital firms can concentrate investments on prominent industries such as biotechnology, computer software and renewable energy which are relatively easy to monitor given the importance of their informational concerns (Amit, et al., 1998, p. 452; Ogden, et al., 2003).

Moral Hazard

The second type is hidden action or moral hazard. It describes the possible risks that, an agent whom money is given to will not be putting in much effort against the interest of the principal due to lack of accountability (Cumming & Johan, 2009, p. 35). It is a situation where one party to a contract is not in the position to monitor or verify the authenticity of actions taken by the other party. Thus, the informed party then has an advantage to behave out of self interest; even if such behaviour will result will bring high costs to the other partner in the agreement. This is the case in the relationship between venture capitalists and entrepreneurs, where it becomes difficult to monitor the day to day operations of the entrepreneur (Amit, et al., 1998, p. 443). In venture capital industry, one way to avoid this problem is to have a possible contract that provides incentive to all parties to put in much effort, so as to increase expected value of the entrepreneurial venture as each benefit in the end (Cumming & Johan, 2009, p. 35).

2.2.6 Role and importance of VC/PE investors

One likely difficulty in establishing a new venture stems from lack of access to capital. Venture capital firms play significant role in providing capital to a broad variety of enterprises (Pintado, deLema, & VanAuken, 2007, p. 70). Venture capital is now available on the policy agenda of most advanced countries, and is seen by policy makers in Europe and elsewhere as a very important key instrument to support economic growth and employment (Mason & Harrison, 2000, p. 428). Venture capital firms do make important contribution by management support and closing funding gap for young, innovative firms (Engel, 2004, p. 249). Small and Medium Enterprises (SMEs) with high risk products and rapid growth extremely need the services of Venture capital due to unavailable traditional financing sources and the reluctance of financial institution providing risk capital (Chu & Hisrich, 2001, p. 68). Given the fact that businesses often consume personal equity in the early stages of production, the need for venture capital during this period is highly necessary.

In the words of (Moran, 2010) “If your business plan is to start fast, grow big and sell or go public, then venture capital might be the way to fund that plan. In addition to an infusion of capital, you usually get access to the brain trust and contacts at the VC firm, providing experience and leverage for your fledgling enterprise”. (Bottazzi & Da Rin, 2002, p. 251) reflects on studies conducted for venture capital industry association, reporting that they portray venture capital as conducive to job creation and to the growth of technologically oriented firms. This view is supported by British venture-backed companies which between the years of 1993 and 1997 annually increased employment by 24%, and sales by 40% (Bottazzi & Da Rin, 2002, p. 252)

VC plays an important role in facilitating ownership change in family-owned businesses and corporate restructuring (Mason & Harrison, 2002). “Without a doubt, the main value of venture capital is to fund attractive propositions that could grow into large global businesses” (Linthwaite, 2006, p. 76). Large companies divert part of their operation through the help of VC- which may either be part of a planned strategic refocus due to financial difficulties- or by financing incumbent or in coming management to purchase subsidiary or division through management Buy-In (MBI) or Management Buy-Out (MBO) (Mason & Harrison, 2000, p. 431).

2.2.7 Institutional and Cultural differences in venture capital

Hofstede's dimension of national culture

Differences in national culture have been the major factor behind the varying different behavioural patterns exhibited by countries. With an increasing trend in cross-border businesses, the issue of cultural differences has been discussed at length given its impact on relationships and management. Hofstede, a leading researcher on cultural differences defines culture as “the collective programming of the mind that distinguishes one group or category of people from another”. Thus in this sense, culture is a system of collectively held values, it is not directly visible but noticeable in behaviour and common to some but not all people (Hofstede, 2007, p. 16). With this definition, Hofstede as cited by Westwood & Everett (1987), established that “each culture provides the grounds for a different socialisation of its members via the socio-educated processes, causing ‘value sets’ or ‘mental programmes’ which are culture-

specific” Furthermore, they explain that programming of the mind affects the way people in each culture observe and interpret the world, influencing their way of life such as expectations, goals, beliefs and work habits (Westwood & Everett, 1987, p. 187).

After analysing data from different countries, Hofstede proposed four major attitudes or value dimensions that differentiate various national cultures. They are ‘power distance’ (large or small), ‘uncertainty avoidance’ (strong or weak), ‘individualism versus collectivism’ and ‘masculinity versus femininity’. Later studies added Long term orientations scores. Each country’s relative score on these dimensions shows the unique characteristics that exist based on their national culture (Hofstede, 2007, p. 17; Westwood & Everett, 1987, p. 189). Power distance refers to the extent to which people in a society believe and accept that power and status in organisations and institutions are distributed unequally. Uncertainty avoidance also explains the scale to which people in a society are threatened or feel uncomfortable with uncertainty, unknown or unstructured situations. Individualism versus collectivism refers to the extent to which members of a society prefers to stress the role of individual as opposed to that of the group. Finally, masculinity versus femininity refers to the degree to which a society prefer traditional values such as competitiveness, achievement, assertiveness and material success to more feminine ones such as modesty, relationships, caring for the weak and quality of life (Drogendijk & Slangen, 2006; Westwood & Everett, 1987).

In his conclusion to the study, Hofstede pointed out that, different cultures have different value systems, therefore management styles, organisational structures and practices differ from each other (Westwood & Everett, 1987, p. 190). These organisational structure and management styles differences among countries can also be seen in the private equity sectors also. An eminent reason behind the gap in venture capital activities between Europe and America representing our study markets of Britain and America respectively is the presence of cultural differences (Gilson & Bernard, 1999, p. 24).

Cultural differences according to (Hazarika, Nahata, & Tandon, 2009, p. 3) can influence transactions between venture capital investors and portfolio companies in countries. (Christofidis & Debande, 2001, p. 36) Compared well-developed IPO market in the U.S with that existing in Europe and came with result revealing a striking difference. In their estimation, part of the difference between them is cultural. For example, U.S employees are more willing to work for young, unstable companies which make it easier to start a firm or encourage entrepreneurial businesses as there is possibility of getting competent hands right from the beginning. Venture capitalists on the other hand are willing to finance these firms, on grounds that an active IPO market will allow them to cash out if the start-up firm succeeds (Christofidis & Debande, 2001, p. 36). Comparing the cultural aspect of the willingness between UK and US potential entrepreneurs in starting a venture, (Clarysse, Knockaert, & Wright, 2009, p. 15) acknowledge that the UK entrepreneurs are afraid of starting a business because they fear failure. In fact 38% of UK potential entrepreneurs are afraid of beginning a business to 28% for the US (Clarysse, et al., 2009). This supports an earlier studies conducted by (Christofidis & Debande, 2001, p. 46) which found out that, European managers are less entrepreneurial and less willing to risk failure than Americans. This in one way or the other affects venture capital industry as it is considered as one of the high risk areas in the financial sector. This of course could be one of the reasons why US venture capital is the largest in the world.

If institutional infrastructure is available and willing to help business ventures, then there will be a high probability of emerging entrepreneurs. This is the case with countries having strong venture capital market like the U.S, which has attracted immigrant entrepreneurs from Asia, and Israel (Black & Gilson, 1998, p. 271). The influx of these entrepreneurs into U.S is due to the fact that their countries of origin are lacking in cultural support for their entrepreneurs (Black & Gilson, 1998). Indeed, the supply of venture capital is also affected by “cultural pattern”. (Christofidis & Debande, 2001) pointed out that European venture capitalists are reluctant to invest in high-tech sectors, due to lack of training in high technology field, making later stages financing more attractive since it is much easier to value already profitable businesses.

In the U.S, venture capitalists have better understanding of technology (due to scientific backgrounds or engineering studies), while in Europe in general and U.K in particular the situation is different since most venture capitalists are known to have studied non-technological subjects in the University and have professional experience in accountancy and finance (Christofidis & Debande, 2001, p. 46).

2.3 Current trends of ESG application in Private Equity & Venture Capital

2.3.1 Development and Drivers of RI & ESG agenda in PE

The dynamic nature of current global marketplace has increased the need for continues ESG integration. In the same way private equity and venture capital are gaining more popularity around the world in recent years. It is worth noting that, as the world begins to think of how to regulate the financial institutions after recent financial crisis, a look at the significance of and impact of alternative investment asset classes such as private equity and venture capital is essential.

Current studies suggest that private equity houses are beginning to view responsible investments and ESG integration as an important component of their business (Gitman, Chorn, & Fargo, 2009; UNEPFI, 2009; Pwc & Waterman, 2010) . This investment is mainly in unlisted companies which include venture capital investments. According to BVCA publication, the UNPRI reported in October 2009,that 71% of Limited Partner (LP) and General Partner (GP) attendees in a conference agreed that ESG issues could influence the realisation process of private equity (Pwc & Waterman, 2010, p. 4). This was not the case in some years back as the notion has been that, responsible investing is the concern of public equity investors and companies whose activities pollute and harm the environment. However, current discussions and debates on climate change, labour issues, and health & safety issues have increased the calls for investors to also incorporate in their decision-making process.

In their recent report on US Socially Responsible Investing, SIF reported that sustainability and SRI in the US has continued to grow at a faster pace. It is estimated that, professionally managed assets following SRI strategies stood at about \$3.07 trillion at the beginning of 2010. This is a remarkable increase over the \$639 billion figure reported in 1995 when SRI began to gain roots in the US investments market (SIF, 2011). Furthermore, the rate at which ESG criteria is incorporated into investment decision making process has increased over the years. SIF reported that, about \$2.51

trillion valued total assets explicitly incorporate EG criteria into investment analysis and portfolio construction (SIF, 2011).

As noted earlier, it is important to state that both public and private equity investors all do the same work – investing in companies. Therefore, it can be said that much of the ESG - related requirements expected from public investors should be accomplished by private investors also. It is however necessary to note that, despite the obvious similarity in the underlining asset they invest in, PE has a number of characteristics that need to be considered when developing Responsible Investment approach (UNEPFI, 2009).

The major driving force behind this growth of interest ranges from new regulations to social and humanitarian grounds. Among these drivers outline by (Pwc & Waterman, 2010) are;

1. **Regulatory developments** : growth of new public policy and regulations around ESG issues within both the industrialised and emerging markets (Pwc & Waterman, 2010, p. 5). In addition, the anticipation of new regulations have resulted in SMEs and investors taking proactive ESG strategies in anticipation of future regulatory requirements (Blanc, et al., 2009, p. 16). As proactive measures are less costly than forced compliance, many PE and Venture capitalists are beginning to consider the ESG to maximize their returns in the near future. For example, in UK the CRC Energy Efficiency Scheme that holds PE houses liable for the carbon emissions of the companies over which they have management and financial control (Pwc & Waterman, 2010, p. 5). In the US, several legislative and regulatory developments in 2009 and 2010 have place higher standards requirement in the area of ESG issues and corporate disclosures (SIF, 2011, p. 11)
2. **Investor demands**: Influential investors currently want to see evidence that their PE managers are taking ESG considerations into account in their investments and ownership analysis. Also the demand for social investing products from these investors are driving the increase of ESG considerations (Pwc & Waterman, 2010, p. 5).
3. **New business opportunities**: The increase demand for green products and services such as clean technologies and energies has resulted in innovation and new product developments towards this direction. More and more environmentally conscious related products and services are emerging at a faster pace. Examples in green building, renewable energy, responsible property development among others. Venture capitalist and PE as major players to fund entrepreneurs are also by default been driven to this area (Pwc & Waterman, 2010, p. 5; SIF, 2011).
4. **Value added through ESG considerations**: Effective management of ESG issues can reduce operating and regulatory compliance costs, thus enhancing cost efficiency and profitability of company portfolios. In addition, it can also open access to new markets and customers who are more conscious about responsible products and services and also can ginger companies to product innovations to meet the growing demand of consumers (Pwc & Waterman, 2010, p. 5)

2.3.2 *Venture Capital for Sustainability*

The increasing interest in responsible investment as well as sustainable investments across the globe poses a challenge to the traditional financial goals of businesses. It is believed that, companies that make sustainability their goal can lower costs and increase revenues. Thus, sustainability will be a key factor to achieve competitive advantage (Nidumolu, et al., 2009, p. 58). With these findings it is nothing strange that, the notion of ‘sustainability’ has been growing in the financial sector rapidly for some time now. According to Worrell (2006), the current trend started in 1999, and investors only started to flood their money into this category only within the past few years. He observed that this sector is currently investing and supporting companies with environmentally friendly products and technologies (Worrell, 2006, p. 67). This current trend in venture investing is becoming visible as many venture capitalists are now banking on the so-called “clean tech” sector and company start-ups committed to sustainable practices and products, thereby embracing such industries as alternative energy generation and water purification (Scheer, 2004, p. 46)

According to Eurosif (2007), the linkage between Venture Capital and sustainability are becoming popular nowadays. This is basically so because investors are beginning to realise that financial returns can also coincide with societal benefits. This growing sector within the Venture Capital industry has its profit objectives being supplemented by a mission which has a direct impact on sustainability. The term ***Venture Capital for Sustainability*** (VC4S) is used to describe this sector (Eurosif, 2007, p. 4). Three main dimensions are used by these venture capital firms in their investment selections – economic, ecological and social considerations.

Research conducted by Eurosif in 2007, presents that this sector within the industry is growing despite the huge differences as compared to the mainstream VC. It was reported that, VC4S roughly represent about 6% of the venture capital market as of 2006. Although this seems insignificant, it can be considered as something big looking from the background that this sector seemed not existent in the preceding five years (Eurosif, 2007, p. 5). In terms of geographical focus of this size of investment, it was reported that the United Kingdom (UK) appears to have the bigger share of the whole VC4S investments. UK alone had about 33% of the total investments as compared to about 39% of the market for the entire Europe (excluding UK). The North America (USA) market also had about 16% of this market (Eurosif, 2007, p. 10). This is a clear indication that the revival of sustainability issues in the US that started around 2004 were beginning to yield significant impacts. For example, the announcement of major allocations to ‘Cleantech’ sector by CalPERS and CalSTRS, Silicon Valley funds among others in 2004 (Eurosif, 2007, p. 16)

Even though clean venture is gaining grounds, and is beginning to be accepted by many nowadays, (Randjelovic, et al., 2003, p. 241) explains that, words such as ‘ecological’ or ‘environment’ are used by many firms as a way of promoting some of their eco-related activities, while other firms purposely do not market themselves this way because they assume it would be more difficult for them to secure funding. Many eco-entrepreneurs and green VCs alike do consider ‘sustainability’ or ‘environment’ as problematic for the promotion of the enterprise, leading to start-up companies and VCs reluctant to use these words even if sustainability principles are somehow embedded in their products (Randjelovic, et al., 2003, p. 247).

With the business case for sustainable investments becoming clearer, pressure from media and other activists as well as some proven evidence that sustainability investing is yielding much better returns compared with conventional investing, the future look good for this sector. One important driver for this growth will be the increase in institutional investors devoting much capital to this area and helping VC4S to grow successfully (Eurosif, 2007).

2.3.3 Overview of U.S. Venture Capital market

The U.S. venture capital market has grown over the years amidst difficult and good times till today. It has been credited as the pillar behind most successful businesses in the last thirty years through the support to most entrepreneurial talents that have turned ideas into products and services that are envy of the world nowadays. For the past years, U.S venture capital has supported companies like Microsoft, Apple Inc, Intel Corporation, Google, etc. all known for innovative technology products. In the same way companies like Starbucks Corporation, The Home Depot, eBay, Staples had their innovative business models turned into great companies with the help of venture capital funds. The successes of these companies and others have made the U.S an attractive place for the globe's best and brightest scientists and entrepreneurs (IHS Global Insight, 2009; Reuters, 2010, p. 7).

According to Sohl & Rosenberg (2003), the total venture capital investments in the U.S market increased almost 15 fold in six years, ranging from \$6.3billion in 1995 to about \$90billion in 2000. However, the number of deals only increased from 1,128 deals to 5,485 deals within the same time period under review. Meaning the value of investments increased rapidly within this period (Sohl & Rosenberg, 2003, p. 3). The growth and success story has continued throughout the past years.

The National Venture Capital Association (NVCA) a body of venture capital firms in the U.S reports that, since the beginning of the venture capital industry to the end of 2009, the number of firms founded stood at 1,670 firms. The total funds that had been raised over this period totalled \$481.8 billion (Reuters, 2010, p. 17). The total funds invested cuts across all industry sectors of the U.S economy, telecommunication, biotechnology, business products and services, financial services, media and entertainment etc. Mainly funds are invested in high-technology industries. As at 2009, the Biotechnology industry sector received the largest venture capital investments of 20% followed by Software (18%), Medical Devices & Equipments (14%), Industrial /Energy (13%) and Media & Entertainment (7%) in that order (Reuters, 2010, p. 12)

Investments to companies in the US market have been at all stages in the investment cycle of venture capital firms. U.S companies invest in companies at start-up/seed stage, early stage, expansion and later stages. In 2009 for example, the later stage investments accounted for 34% of total investments in that year. It was followed by the expansion stage, early stage and seed stage with 31%, 26% and 9% respectively (Reuters, 2010, p. 11).

Venture capital industry in the U.S not only provides the capital to nurture entrepreneurial ideas to become innovative and successful companies' but also are actively involved in the management of the companies with their expertise. Most often investors take a seat on the board to help with the running of the company. In the case

of start-up companies, daily interaction with management is common to ensure smooth operation. This active engagement by venture capitalists is considered very critical to the success of start-up stage ventures. This role provided by venture capital firms in addition to the investments provided to seed stage companies have limited the number of investments at this stage. As stated already, this stage receives the least investment of only 9% of the total investments by venture capitalists (Reuters, 2010, p. 7).

In evaluating potential companies to receive investments, venture capitalist in the US market consider factors such as the management team, the concept, scalability, marketplace conditions, fit to the fund's objectives, the value-added potential for the firm, the capital needed to build a successful business and the potential of returns (IHS Global Insight, 2009; Reuters, 2010, p. 7). With this strict evaluation criterion, the NVCA reports that, for every 100 business plans that come to a venture capital firm for funding, it is estimated that only 10 get a more serious look or make it to the due diligence phase and ultimately only one ends up being funded (Reuters, 2010). This is mainly because given the high rate of failure in the sector, venture capitalists focus on innovations and business concepts that have the potential to revolutionize existing industries or give birth to new ones (Gompers & Lerner, 1999; IHS Global Insight, 2009, p. 4). Therefore these days, entrepreneurs are expected to have a business concept that address needs in the world market, have scalability, to be made successful in a reasonable timeframe and above all be truly innovative (Reuters, 2010, p. 7).

The form or type of legal and economic structures used to create a venture capital fund in the U.S. is similar to others but unique in itself. In general, the structure used by the venture capital firms is Limited Partnership with the investors as 'Limited Partners' (LPs) and the firm VC firm as the 'General Partners' (GP). Thus each 'fund' or portfolio is a separate partnership (Reuters, 2010, p. 8). In this way, the success of the venture capital firms is truly shared among stakeholders. With this structure, economic success occurs when the stock prices go above the purchase price, that is when the company is successful and it reflects strong public offering, the stock price indicates its success (Reuters, 2010).

Economic importance

Venture-backed companies impact the U.S. economy in large ways. Job creation has been one important area that the industry has contributed immensely to the economy. According to the market analysis conducted by IHS Global Insight in 2009, venture-backed companies in the U.S account for more than 12 million jobs; this represented about 11% of total private sector employment. This impact reflects the focus of the industry on finding and funding only those companies with high growth potentials. In addition to these is development of highly skilled and environmentally friendly jobs that many economists point to as critical for the future health and growth of the American economy (IHS Global Insight, 2009, p. 7).

In addition to employment, venture capital nourishes the entire industries in the economy. Studies show that, VCs has developed many life-changing innovations into entirely new industries that have triggered the growth and creation of many other companies (IHS Global Insight, 2009, p. 11).

In recent years, economic impact has also centred on development of clean-tech. This area comprise of companies offering alternative and renewable energies, recycling, electric cars, clean water etc. that is currently viewed as critical for the US economy. It

promises jobs for the people and at the same time address critical climate and sustainability issues. For example, in 2008 alone the investment made by VCs stood at \$4.1 billion, signifying the importance on this sector and at the same time making it the industry's fastest growing sector (IHS Global Insight, 2009, p. 12).

With growing demand to employ these sustainable solutions across the globe, directing investments in these areas will help in creating positive impacts on the society at large aside the financial benefits that comes out of their investments.

2.3.4 Venture Capital Industry in the UK

With the creation of the Industrial and Commercial Financial Corporation (ICFC) in 1945, the Venture Capital industry in UK today is the most advanced and developed in Europe (Clarysse, et al., 2009). Clarysse et al (2009 p.6) reveals that UK represents the largest venture capital in Europe, investing over £1 billion in 2008. Prior to 1979 there were just a handful of VC funds in the UK, of which Industrial and Commercial Finance Corporation (ICFC) was the most significant (Mason & Harrison, 2002). It was only in the 1980s that VC become probably established in the UK, in 1981 UK introduced unlisted securities market which made it easier for smaller firms to achieve a flotation and in the process provided venture capitalists with potential exit route for their shareholdings (Mason & Harrison, 2002). UK venture capitalists in order to attract new deal flow with little contact being made directly with potential users of equity finance, have been essentially reactive in their efforts (Robbie & Murray, 1992, p. 36).

Unlike the US where venture capital is usually referred to the provision of funds for entrepreneurial businesses, with private equity mainly associated with the financing of leveraged management buy-outs and buy-ins, in the UK and much of continental Europe, venture capital is synonymous with the term private equity (Burgel, 2000, p. 4). The venture capital industry in the UK evolved tremendously in a period lesser than ten years, from a minor form of institutional finance to a major source of funds for new, growing and restructuring businesses (Robbie & Murray, 1992, p. 32). The main providers of formal private equity in the UK are venture capital firms (Burgel, 2000, p. 4). The UK venture capital industry is the largest in Europe, with members of the British venture association investing over £7.3 billion between 1985 and the end of 1991 (Robbie & Murray, 1992, p. 32).

The development of the UK VC industry can also be attributed to the US venture capital industry. (Clarysse, et al., 2009) discusses the imminent growth of UK VC industry, acknowledging that it only started to take-off in the 1970s when experienced VC managers who had been operating in the US industry, and drew heavily on US capital had arrived UK. The availability of these experienced VC managers, serve as a key factor in creating a successful VC in UK. However, a report by (Burgel, 2000, p. 12) specify that UK venture capital and private equity industry has grown steadily over the past two decades. In 1984 for instance, 480 firms invested a total of £190 million, and in 1998, the investment had amounted to £4,919 million for 1332 firms (Burgel, 2000). During the mid and late 1990s, UK witnessed a vast formation of premier technology VC funds established in London, Cambridge and Scotland by a mix of ex-entrepreneurs, Scientists and financiers (Clarysse, et al., 2009, p. 10)

(Lockett, Murray, & Wright, 2002) analyses the changing attitudes of UK venture capital firms to investment in technological enterprises and its importance, revealing UK venture capital firms at the start of the 1990s were non-technology focused and dominated by buy-outs and other later-stage development activity. A report by (BVCA, 2009, p. 5) contrast venture capital market in the UK and US, the report identifies that the UK Venture market has not achieved the critical mass necessary to fund an appropriate proportion of the most promising and innovative companies through all stages of their development. However (Lockett et al 2000 p.1010) discussed that UK venture capital firms by the year 2000 had evolved, becoming a robust and highly international, specialist investment community. UK venture capitalists unlike USA have tended to concentrate on the financing of later stage such as leveraged management buy-out and buy-ins (Robbie & Murray, 1992, p. 32). The UK Venture capital industry have experienced rapid growth in investments value made of over 60% per annum over the period of 1981 to 1987 (Robbie & Murray, 1992). The UK does not place on average a much higher proportion of their total investment in venture capital in both private and public pension funds, as well as other institutional investors as their US counterpart, recent estimate shows nearly 7% for US against just under 1% for the UK (Doran & Bannock, 2000, p. 256). With barriers to entry based on human capital essentially, the UK venture capital grew fourfold to peak in 1989 at 124 full members of the British Venture Capital Association (BVCA) (Robbie & Murray, 1992, p. 33).

Burgle (2000 P.4) states that majority of Venture capital firm providing formal private equity in the UK are independent, and they raise their funds for investment from external sources, mainly institutional investors such as banks, insurance companies and pension funds.(Doran & Bannock, 2000, p. 255) acknowledges the fact that venture capital in the UK occupies a central position in new labour's efforts to create a competitive knowledge-driven economy. (Mason & Harrison, 2002, p. 248) describes the encouraging growth of UK venture capital industry over the years, explaining that the UK venture capital during the 1990s increased massively. During this period amounts raised by UK independent venture capital companies (from pension funds, banks and insurance companies) increased to £9 billion in 2000 from less than £0.5 billion in the early 1980s (Mason & Harrison, 2002). Venture capital industry in the UK has witnessed a number of new developments in the last few years. One of these developments is the increasing number of "public to private" transactions where firms listed on the stock exchange are delisted (Burgel, 2000, p. 26). The idea behind these transactions is motivated by the fact that some of these firms are undervalued by the public market.

2.4 Summary and Propositions

In this section, we have reviewed related literature and studies relevant to our study. The review mainly considered issues relating to responsible investing in general and in particular reference to the private equity and venture capital industry. We have looked at how ESG issues integrates into this responsible investing concept and point out that, integrating ESG in investment decisions can result in both financial and societal benefits in the long run and also contribute to sustainable development. Responsible investing strategies such as thematic ESG approach, economically targeted strategy and process –focused approach (Wood & Hoff, 2007) applicable to this industry were

highlighted to point out the means through which the private equity sector can implement ESG issues in their activities.

Discussions on private equity and venture capital structure revealed the various stages in a new venture life-cycle that investment can be made and the possible benefits and risks associated with such investments to both the investor and the entrepreneur. Investment decision making processes and theoretical aspects encompassing principal-agent conflict, information asymmetry, moral hazard and adverse selection were also discussed in this review. For clearer understanding of the two markets selected for this study, a review of these two markets was done to know the current trends in the industry.

In the end it was found out that, there has been an upsurge in ESG and sustainable interest of late in the private equity sector due to new regulations and the anticipation of such regulations in corporate and environmental reporting. In addition, growing demands by investors to see their investments impact on society and the desire for more green products such as renewable energy, green buildings have contributed to this development. The cultural and institutional differences between our selected markets were also highlighted to help us see if different cultures impact on responsible investing sustainability behaviours.

To determine if investors in these two advanced markets are integrating this ESG concept in their investment decisions, any possible differences in ESG considerations owing to different cultures and their CSR activities, we have developed these propositions that will be measured to help us answer our research questions.

Propositions

Hypothesis 1:

Cleantech investors have a higher ESG consideration than Non- Cleantech investors.

According to (Eurosif, 2007; Scheer, 2004), many PE and VC investors are now channelling their resources to a new and emerging sector known as 'Cleantech'. A sector where focus is placed on investing in green, environmentally friendly and sustainable products and services such as renewable energy, clean fuel, reducing pollution, etc. As some investors explicitly indicate their preference for this sector and its related activities, others do not indicate such preferences. This research hypothesis seeks to find out if these different investment sector preferences (Cleantech and non-Cleantech) do affect their ESG considerations in investment decision-making strategies. Hence, the proposal that investors with more environmental products and services focus will have a higher ESG considerations than other investors.

Hypothesis 2:

Private Equity (PE) investors exhibit a higher ESG consideration than Venture Capital (VC) investors.

As pointed out earlier, there are two types of investors in our study. They are venture capital (seed/early/expansionary stages) investors and private equity (later/buyouts/turnarounds). From literature reviewed, venture capitalists invest in entrepreneurial firms based on concept without a product or products in its initial

development stages and companies in its expansionary stages. Private equity investors here also refer to investing in late and buyout stages where there is rapid growth and the company is established (Cumming, 2005; Ogden, et al., 2003). Therefore, VC investors are exposed to more risks as compared to their PE counterparts; they also have less information on the venture they are investing in to apply proper screening strategies. However, PE investors that usually comes in at later stages are privy to better and more information to apply screening based on ESG factors in selecting their investment portfolios (Pwc & Waterman, 2010). We therefore test this hypothesis to find out if these two types of investors affect SRI behaviour through their ESG considerations.

Hypothesis 3:

There is a relationship between country differences and investors Environmental, Social and Governance considerations.

This hypothesis seek to test if there is any relationship between culture and institutional differences between the two countries (UK and US) and their impact on responsible investing strategies by looking at their ESG considerations in investment decisions. As pointed out by Hofstede, different cultures between different countries results in different value systems, therefore management styles, organisational structures and practices differ from each other (Westwood & Everett, 1987). In addition, (Gilson & Bernard, 1999) in their study found out that, an important reason behind differences between venture capital activities in Europe and America is the presence of cultural differences. Differences in corporate governance structures, labour market regulations, cultural differences in entrepreneurship all contribute to how investors behave in terms of industry and geographic focus (Black & Gilson, 1998). Our study therefore measure Governance considerations (relationship with clients, shareholders, business codes & ethics etc,) among the selected companies to establish whether this reported cultural difference have a relationship with investor's responsible behaviour and in particular with ESG considerations.

Chapter 3: Research Methodology

Introduction

The chapter presents and explain the research methodology adopted for this thesis. The first part of this chapter will discuss the scientific perspectives underlying our study. This involves the points of view taken and preconceptions of the authors that might affect the course of the study, the research philosophies and research approaches with emphasis on deductive research approach adopted for this study. The second part of the chapter will look at the research design. This consists of the research method, definition of variables and coding instructions. The validity and reliability of our chosen method is also discussed. At the end of this chapter, readers will be able to appreciate the basis of the methodological approach supporting this research and the reason why this particular method was adopted by the writers.

3.1 Scientific Perspective

3.1.1 *Choice of Subject and Preconceptions*

The desire and passion to study this subject comes from prior knowledge in venture capital and corporate governance gained during our studies in USBE as Finance students. Although we had this academic knowledge and experience on this subject area, the research theme was realised when our supervisor, Dr, Anders Issakson who is researching in venture capital and ESG issues suggested some possible research areas in ESG and venture capital during our first discussion meeting. After considerable readings and further discussions with our supervisor, we were inspired to study this topic that considers how the private equity and venture capital companies adopt ESG in their activities.

The author's preconceptions can be described as the already acquired knowledge in this subject area that might affect the judgements of the researchers. Our previous knowledge basically from theoretical studies and practical experiences has the propensity to influence the way we view or interpret data. (Bryman & Bell, 2007) explains that, it is important for business researchers to conduct their research with open mind or objective by avoiding personal biases that will affect the validity. We are aware of possible biases resulting from our values which reflect the personal beliefs or feelings (Bryman & Bell, 2007, p. 30). Therefore, this problem has been considered by taking an open-minded and objective position in this study.

3.1.2 *Research Approaches*

The choice of a particular research approach is mainly determined by the type of study being conducted. The main approaches are empirical or theoretical, deductive or inductive, quantitative or qualitative or mixed and subjective or objective. Although, none of them is better than the other, one would be better suited to a particular research depending on the research questions and the study context (Saunders, P., & Thornhill, 2009).

Quantitative/Qualitative/Mixed Approach

In conducting research, the three common approaches that come to mind are quantitative, qualitative and mixed methods. The choice between these approaches requires the researcher to foresee the type of data needed to answer the research question or hypothesis stated. For example, depending on whether numerical, textual or both numerical and textual data are needed; the researcher uses one of the stated approaches to conduct the research (Charmaz, 2006; Strauss & Corbin, 1998; Williams, 2007, p. 65).

According to Bryman and Bell (2007), quantitative research is a “research strategy that emphasizes quantification in the collection and analysis of data” This type of strategy involves a deductive approach to establish the relationship between theory and research with emphasis on theory testing. It is an approach that adopts the practices and norms of positivism and places much emphasize on objective reality as against social reality (Bryman & Bell, 2007, p. 29). Leedy and Ormrod (2001), as cited by (Williams, 2007, p. 66) adds that, quantitative researchers look for explanations and predictions with the intention to establish, confirm or validate relationships and come out with generalisations that contribute to theory.

Qualitative research strategy on the other hand, is the “type that places emphasis on words rather than quantification in the collection and analysis of data” (Bryman & Bell, 2007, p. 28). Inductive approach is mainly employed in this research strategy when linking theory to research and stresses the need for practice and norms on the ways in which individuals interpret their social world (Bryman & Bell, 2007, p. 28). Qualitative research can be carried out with several methods depending on the problem, research questions and objective of the research. Most common methods usually adopted are ethnography, case study, phenomenology, grounded theory and narrative research (Creswell, 2003, p. 14).

The mixed method approach is the integration of quantitative and qualitative research approaches in the area of collecting or analysing data (Creswell, 2003; Williams, 2007). With this strategy, researchers do not only collect and analyse numerical data, which is commonly associated with quantitative approach, but also make use of narrative data, which is also associated with qualitative research in order to address the problem and research questions of a particular study (Williams, 2007, p. 68). This method has the aim of providing researchers opportunity to draw from the strengths and minimize the weakness linked with the different research approaches.

Our choice of appropriate research approach was made given recognition to the unique characteristics each approach described above. In our study we adopt the quantitative research approach as the information is coded during data collection based on pre-determined coding instructions. Therefore, our data are quantitative in nature. Content analysis method used here can be described as quantitative approach because it aims “to produce counts of key categories and measurement of amounts of other variables” (Neuendorf, 2002, p. 14). This approach was selected over the qualitative approach because content analysis as defined by Neuendorf (2002), places emphasis on its attempt to meet the standards of scientific method and fits the positivism idea of social research as well as objectivity.

Deductive or Inductive Approach

Deductive approach illustrates the relationship between theory and research, where a researcher deduce hypothesis to be tested empirically from what is already known in a particular subject area or theory. The process consists of a logical sequence starting from theory, hypothesis building, data collection, findings or data analysis, hypothesis confirmed or rejected and revision of theory. Although, the process are listed in a logical sequence manner, there are instances where this will not be the case (Bryman & Bell, 2007, p. 11). Therefore, deductive approach can be described as a research method that moves from more general views to more specific theories through hypothesis testing or in a 'top-down' approach (Trochim, 2006).

Inductive approach on the other hand, is where "theory is the outcome of research". Thus, the process involves a situation where the researcher makes generalisations out of observations (Bryman & Bell, 2007, p. 14). Therefore, this approach follows that "bottom-up" approach, where the researcher begins with observations, detect patterns and regularities, develop tentative hypothesis and finally make inferences or build hypothesis (Trochim, 2006). It has its main advantage in comparison with deductive as allowing for better understanding the way humans interpret their social world (Saunders, et al., 2009, p. 89).

Our study is mainly based on deductive approach, where we have used theories to build hypothesis that will be tested to either confirm or reject. Deductive reasoning is applicable to our study because we have design a coding scheme (pre-determined key words, categories and variables) based on already existing theories, and this will be used to collect the necessary data to confirm or disproof the stated hypothesis (Bryman & Bell, 2007, p. 302; Kondracki, Wellman, & Amundson, 2002; Neuendorf, 2002; Potter & Levine-Donnerstein, 1999). Thus this follow the pattern of deductive approach explained above as against the inductive which is vice versa of this approach.

3.1.3 Research Philosophies

When carrying a scientific research, study researchers are exposed to many philosophical considerations. Whether quantitative or qualitative, the researcher's choice for a particular philosophy is selected base on researcher's perception. Research philosophies are important to allow researchers clearly state their statement of intent and also describe the perceptions and beliefs that can affect the study in one way or the other. It also provides readers an understanding of the main focus of the study (Saunders, p83). Two main philosophies are discussed in our study.

Epistemology

One concept which is very popular and has different fundamental philosophies guiding researches is epistemology. (Remenyi, Williams, Money, & Swartz, 1998, p. 282) defines epistemology as "the study or the theory of the nature and grounds of knowledge especially with the reference to its limits and validity". (Remenyi, et al., 1998, p. 23) elaborates on three philosophical questions that are vital and should be addressed at the outset of a research. They are: Why research? ; What (and where) to research? ; How to research?

Given that an epistemological issue concerns the question of what is (or should be) regarded as acceptable knowledge in a discipline (Bryman & Bell, 2007, p. 16) it is empirical to know what epistemology is and what role it plays, since it will be pivotal in our research study. Two main approaches positivism and interpretivism are used to explain this concept.

Positivism and Interpretivism

Positivism is research with an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond (Bryman & Bell, 2007, p. 16). Being a positivist, or a logical, implies that the researcher is working with an observable social reality and that the end product of such research can be the derivation of law-like generalisations similar to those produced by the physical and natural scientists (Remenyi, et al., 1998, p. 32). Bryman & Bell (2007) links positivism to epistemology, describing it as a position that affirms the importance of imitating the natural sciences invariably associated with epistemological position. (Saunders, et al., 2009, p. 113) acknowledges that, if a research reflects the philosophy of positivism then the researcher will probably adopt the philosophical position of natural scientist. With this phenomenon, the researcher in order to generate a research strategy to collect data will likely use existing theory to develop hypothesis, which can be tested and confirmed in whole or part, leading to further development of theory which then may be tested by further research (Saunders, et al., 2009, p. 113).

On the other hand, Saunders et al (2009) are of the opinion that those who criticise or are against positivism are likely to be nearer the concept or philosophy of interpretivist, that is the necessity of researchers to understand differences between humans in our role as social actors. In addition, they argued that with this approach knowledge is built on emotions and attitudes that could not be seen, and also stresses the need for researcher's to understand the notion that reality of the research depends on the people who interpret it.

Our study conforms to the positivism reasoning explained above. We follow the scientific method of research where hypothesis have been developed out of existing theories. Quantitative data has also been collected and analysed using content analysis to find evidence in support of stated hypothesis or otherwise.

3.1.4 Literature Search

There are different techniques in collecting a data for a social research. Each technique or alternative used depends on which method that will be suitable in answering the question under investigation. In the process of gathering information for our theoretical framework and the study as a whole, we have used secondary sources of literature. This source of data is essential because of the important role it plays in helping us answer pertinent questions and providing us with general information in our research field. Secondary data is known to embrace a whole spectrum of empirical forms, which includes the generating data through systematic reviews, documentary analysis as well as the results from government sponsored surveys (Smith, 2008, p. 324). In our study we have made use of peer reviewed articles, books and other important organizational reports.

To source relevant literature related to our study, we relied primarily on resources from the Umea University library mainly books and the articles database. Specifically, we sourced most of our academic literature from Business Source Premier (EBSCO), Emerald Fulltext, Wiley Interscience and ScienceDirect Economics databases available through the Umea University Library database system. In addition to this, we have also sourced from Google search engine relevant reports and publications from organizations such as Social Investment Forum (SIF), United Nations, EUROSIF, OECD and European Venture Capital Association (EVCA) that provided us with important information relating to governance, sustainability, ESG integration and responsible investing in general. This search was mostly carried out with key words such as responsible investing, sustainable investment, ethical investing, corporate social responsibility, environmental and risk management reports. Additionally, we also got some relevant articles and publications from our Supervisor, Dr. Anders Isaksson, who is well versed in the area of venture capital and responsible investing issues.

Moreover, important sources of information for our study have been the websites of British Venture Capital Association (BVCA) and National Venture Capital Association (NVCA) in UK and US respectively. Their website's has provided us information on activities in their respective countries such as reports and publications on how responsible investing and ESG are been applied and current trends in the industry.

3.1.5 Criticism of Secondary Sources

Although Secondary data analysis offers social, methodological and theoretical benefits as we indicated earlier it is not without its own critics. For instance, it involve the analysis of data that has been collected with a very different purpose in mind (Saunders, et al., 2009). As these sources are not directly related to what the author intends to do, it gives him/her hard time in interpreting, reviewing and analyzing the source in order to come out with a meaningful result. In our study, it was difficult for us to find specific secondary sources on ESG issues relating to private investors, basically due to the fact that ESG concept is still under development in this industry. Hence, the main critic here is the use of other sources. But we heavily relied on literature on Social Responsible Investing (SRI), Corporate Social Responsibility (CSR), Sustainable Investments (SI) and United Nations Principles of Responsible Investing (UNPRI) which in our view all are concepts relating to ESG issues.

However, much emphasis was placed on relevance, and validity of the sources used by restricting our search to peer reviewed literature to increase relevance of articles used. Other reports were also sourced from reputed agencies and organizations making them appropriate for our study. To avoid risk of missing new ideas and information in the subject area, we have combined both articles and current publications in our study.

3.2 Research Design

This section of the study describes the practical steps taken to collect data and how analysis will be carried out. According to (Bryman & Bell, 2007, p. 39), research design provides the structure that directs how the research data will be collected and analysis carried out. (Saunders, et al., 2009), further described this as a general plan that guides a researcher in answering research questions. As indicated earlier, our approach for this study will be quantitative and will follow the deductive reasoning as we seek to apply certain theories to our target population to arrive at evidence that support or reject them. Content analysis will be applied to collect quantitative data, results and analysis will be tested on the already stated hypothesis to draw conclusions.

3.2.1 *Choice of Research Method*

The use of content analysis as a research methodology has received attention in the literature recently as a result of increase in web pages, emails, blogs and other forms of electronic communications (Hopkins & King, 2010, p. 229). Over the years, this method has been employed in various fields of research such as sociology, communication, business, journalism and psychology as a technique that has the capacity to analyse large data within a reasonable time period (GAO, 1996; Krippendorff, 2004; Neuendorf, 2002). Content analysis as defined by (Neuendorf, 2002, p. 1) is “the systematic, objective, quantitative analysis of message characteristics”. In other terms, it refers to a systematic research technique for analysing textual information (documents and texts in printed or visual format) in a standardised way that allows valid inferences about that information (Bryman & Bell, 2007, p. 302; GAO, 1996; Krippendorff, 2004, p. 18). Furthermore (Bryman & Bell, 2007, p. 302) notes that, this approach allow researchers to “quantify content in terms of predetermined categories and in a systematic and replicable manner”. Thus, content analysis technique adopted here goes beyond just simple word counts; rather this technique is particularly rich and meaningful because of its reliance on coding and categorization of data (Stemler, 2001). In like same manner we also have applied this research technique to extract data from web pages of our study sample to be analysed in this research.

As explained above it is evident that, content analysis is the primary tool that has been used for analysing published information or texts. This research tool has been employed by several researchers to help “investigate if certain words and concepts are present within texts” (Jose & Lee, 2007, p. 311). In relation to our study about Environmental, Social and corporate Governance (ESG) issues which forms the core part of social responsible investing, this method has been applied in numerous research studies relating to corporate social, environmental responsibility and other extra non-financial disclosures. Some of them are (Chen & Bouvain, 2009; Holder-Webb, Cohen, Nath, & Wood, 2009; Jose & Lee, 2007; Maignan & Ralston, 2002; Tate, Ellram, & Kirchhoff, 2010). Thus this method provides a perfect tool to also investigate private equity ESG considerations by examining the information put up on their corporate website. As their corporate website is the main medium of communicating their investments requirements and interests to their prospective clients and the general public, it provides us with a good data source to investigate their role in responsible investing. In addition (Bryman & Bell, 2007, p. 318), notes that “content analysis offers an important method for the cultural study of organisations because it enables researchers to analyse organisational

values, traces which can be observed in organisational documents”. Therefore, this method was suitable for our study which also seeks to find out the role cultural differences have on ESG considerations by these two countries. This is because measuring rate of recurrence of values and ESG issues as well as the extent of emphasis will enable us to determine their importance within these two different cultural contexts.

In our research, we have used the conceptual analysis method or thematic analysis of content analysis. With this method, a chosen concepts, subjects and themes is subjected to examination and analysis, with the analysis involving quantifying and tallying the presence of chosen concept or theme (Bryman & Bell, 2007; Jose & Lee, 2007, p. 311). We used the *a priori* coding method in this research. This method involves having established categories prior to the analysis based on existing theory. Therefore, a strong theoretical foundation for coding categories is required to code the data (Jose & Lee, 2007; Stemler, 2001; Weber, 1990).

We followed the procedure outline by (Neuendorf, 2002) in conducting content analysis. First, we identified our research questions and hypothesis that will be tested based on previous studies and theories. Then, a sample of 122 companies was chosen, information about their environmental, social, governance and involvement practises were collected from their websites by saving their WebPages in PDF file formats. After this, we use the literature reviewed previously particularly the SRI and ESG criteria and factors set out by MSCI research group, EIRES research group, BVCA, NVCA, EVCA, SIF and other academic literatures to formulate our coding instructions and content analysis framework. Lastly, we analysed the E, S, G and I information of our sampled companies based on the framework developed.

3.2.2 Population and sampling plan

The target population of our study has been the total number of PE/VC firms registered with the national association of our selected countries. Therefore, only companies within National Venture Capital Association (NVCA) and British Venture Capital Association (BVCA) representing the US and UK respectively have been considered in our study. All other companies outside these two associations database were excluded. As at 10th March, 2011 when we collected our data, there were a total of 331 VC/PE companies with complete information on the various associations’ websites. Therefore, the population for this study is limited to 331 companies comprising of 199 and 132 from the UK and US respectively.

Sampling in our study denotes the approach that was used to select part of the population for data collection purposes. Selecting this sample is important for our study as it was practically impossible to study the entire population consisting of all private equity and venture capital firms in NVCA and BVCA database due to time and resource constraints. Sampling is commonly done in two ways; probability sampling and non-probability sampling. Probability sampling which is used in this study has several approaches including simple random sampling, stratified sampling, systematic sampling, cluster sampling and multi-stage sampling (Bryman & Bell, 2007; Remenyi, et al., 1998; Saunders, et al., 2009, p. 213). This sampling method is consistent with the positivisms view of our study as against non-probability relating to phenomenologist thinking.

In this study, we have adopted the random stratified sampling method or technique. With this method, the population was subdivided into homogeneous groups (strata) consisting of investment stage divisions, and industry or sector investment preferences. Random sampling was then applied to draw samples that were used for this study. This sampling method is appropriate for our study as it allows us to control the relative quantity of each stratum as against being controlled by random processes. In addition with random stratified sampling, proportions of different strata within the population are guaranteed thereby providing us with a final sample that fairly represent each sub-group in the population as against what simple random method can offer (Bryman & Bell, 2007, p. 187; Holder-Webb, et al., 2009, p. 503; Remenyi, et al., 1998).

Our study samples have been limited to only USA and Britain (UK). As explained earlier, these two countries were selected ahead of other countries as they are considered the two most advanced private equity/venture capital markets. The two markets also have different cultural and institutional backgrounds that can be compared as our research hypothesis stated. In addition, the countries have organised industry associations; British Venture Capital Association (BVCA) and National Venture Capital Association (NVCA) with database on all members making it easy to gather information on companies that are located in that geographical area. With investment stage divisions, all companies listed in the two association's database were grouped into two; Venture Capital (VC) representing investment in early or seed stages and Private Equity (PE) for investment in later stages, buyouts and turnarounds. Investment preferences were also divided into clean technology or environmentally friendly investments (Cleantech) and other sectors investment (Non-Cleantech).

A total of 122 firms (about 37% of the total population) were selected using random stratified method described above comprising of 55 VC and PE firms from USA and 67 VC and PE companies from UK. Although, we had hoped to get the same number of companies from each country, lack of information limited our sample size. A summary of how the sample size was selected is given below;

Country		Cleantech	Non-Cleantech	Total
UK	PE	15	23	38
	VC	12	17	29
US	PE	5	8	13
	VC	18	24	42
TOTAL		50	72	122

3.2.3 Definition and Coding instructions of Research Variables

Independent and Dependent variables have been used in our study. Independent variables represent those variables that can be manipulated by the researcher in the course of the study whilst the dependent variables relate to the variables which are observed and measured to find out the effect of independent variables on them.

Independent Variables

In our study, we have used the following main independent variables – investor type (private equity and venture capital), investment preferences (Cleantech and Non-

Cleantech). In addition, other variables such as number of investment managers, organisational form (private or government), geographical focus (regional, national or international), investment size (amount invested), the total amount of capital under management and number of companies in portfolio among others that are available on their respective associations webpage have been used to determine its relationship with socially responsible investing and ESG.

The variable investor type has been looked at to establish its relationship with ESG considerations by investors. That is, whether a particular stage of investment affects the way and manner ESG issues are looked at. According to Eurosif report 2007 studies conducted showed that, the focus of sustainability issues by investors is mainly on the company development (seed and early) stages compared with expansion and late stages. From their study, about 41% out of 23 European-based VC funds respondents indicated that venture capitals with focus on sustainability funding take place in the early stages (representing VC in our study) as against 14% of the respondents who indicated funding in the late stages (representing PE in our studies). Explanation given for this sharp difference is inconclusive suggesting it could be that investors in sustainability issues or socially responsible investors do not have enough money to keep funding companies through expansion and late stages or investors with sustainability focus just prefer early stage investments to later stages (Eurosif, 2007, p. 9). Our study therefore, seeks evidence in this regard by establishing the relationship of PE/VC investor types with ESG considerations during investment decisions.

Investment preference of investor's variable is also considered in our study to determine how investors select their companies to invest in. We look at whether investors focus and use environmental issues such as clean or energy technologies, waste management, clean water etc. as investment criteria or do not adopt such criteria in their decision making process. In addition if they consider, to what extent – just mentioning or goes extra mile to use it as a requirement for funding as well as companies own considerations aside business benefits.

As indicated earlier, other variables such as geographical focus of PE/VC firms are analyzed to assess the impact on their ESG considerations in investment decision-making process. Organisation forms of selected companies are also studied to see if government-backed VC/PE firms and private firms have different orientation towards ESG issues.

Dependent Variables

To measure social responsible investing practices among private equity and venture capital firms, we have observed and measured four (4) main variables namely Environmental (E), Social (S), corporate Governance (G) and Involvement (I). In addition is two extra variable Transparency and Gender diversity used as a proxy for high governance. As defined already, SRI relates to investment decisions that considers social, environmental, ethical and transparency issues to achieve both financial and society benefits (SIF, 2008; Steurer, Margula, & Martinuzzi, 2008a; Suzanne, 2005). In our study, information to measure these four variables have been gathered through content analysis, data have been gathered by coding information found on companies web-pages. Variables were coded based on the criteria explained below;

Environmental (E)

The environmental variable looks at investors concerns of investing in an environmentally friendly way, their contribution to cleaning waste from their investments and general environmental management policy. For example, policies and actions to reduce carbon dioxide and greenhouse gases impact on climate that affects the society and generations to come. In measuring this variable, key issues that have been considered include pollution, waste, efficient resource use, efficient energy use, product impact on environment, controversies, environmental risk management systems etc. See content analysis framework (appendix 1) for complete list of environmental factors and key terms considered.

Ordinal data level has been used in measuring this variable, so that data values are categorical and can be ranked in numerical way. In coding environmental variable the following instructions and measurements were used;

Data value	Explanation
0	No information is given on this issue: there is no indication that the PE/VC firm practise or consider this issue in investment decision-making.
1	Topic is mentioned: expressing some concern for environmental issues (see appendix 1). Example, “we invest in environmental friendly technologies”.
2	Topic is included in selection process: Here, PE/VC firms goes beyond expressing concern (1) to include it as a criteria in selecting companies to invest in. Thus emphasis is placed on environmental issues during investment decision-making process. Example, “we invest in entrepreneurs and businesses that share this (green) vision and use technology as a tool to address these challenges”.
3	1 + 2 + Wider environment support such as indicating concern for topic beside business or internal environment policies. Thus, this value is only given if PE/VC firm has fulfilled the requirements for data value 2 (included in selection process). Example, company provides support to environmental organisations or engages portfolio companies in discussing their environmental policies.

Social (S)

Social variable in our study described factors that relates to how investments affect society. Broadly speaking, three areas are emphasized relating to community & society, customers and employees & supply chain. Here, we have looked at how PE/VC firms address social issues in investment decisions and general company policies. Key issues considered in this variable include community relations, child labour practices, human rights, product quality and safety, equal opportunities, discrimination issues, relationship with customers, employee diversity etc. A complete list of all key terms used is given in appendix 1.

This variable is also measured in ordinal data scale ranging from 0-3. The coding instructions and instructions are explained below;

Data Value	Explanation
0	No information is given on this issue: there is no indication that the PE/VC firm practice or consider this issue in investment decision-making.
1	Topic is mentioned: expressing some concern for social issues (see appendix 1). Example, “we have an obligation to help people in our community”
2	Topic is included in selection process/relationship with stakeholders: Here, PE/VC firms goes beyond expressing concern (1) to include it as a criteria in selecting companies to invest in. Thus emphasis is placed on issues that affect company’s relationship with other stakeholders - community, customers and employees during investment decision-making process. Example, “committed to recognizing and respecting the diversity of all employees, job applicants, clients and other people with whom we deal”
3	1 + 2 + Wider social support such as indicating concern for topic beside business or internal practices. Thus, this value is only given if PE/VC firm has fulfilled the requirements for data value 2 (included in selection process). Example, “our philanthropic philosophy is to make monetary donations that will provide a meaningful contribution to the community”.

Governance (G)

Governance variable measured concerned factors relating to how the PE/VC firms are managed or directed. With governance we look at areas like executive compensation, transparency and relationships between limited partners – general partners – portfolio firm management. In general, key issues considered include compensation, political accountability, transparency, proxy issues, board diversity etc (see full list of all key issues in appendix 1). Governance variable is measured with ordinal data level as used previously for environment and social with 0-3 being the possible values to be obtained. In addition, two new nominal variables known as transparency and gender will also be used. Below is the explanation of how these variables were measured;

Data Value	Explanation
0	No information is given on this issue: there is no indication that the PE/VC firm practice or consider this issue in their work as well as investment decision-making process.
1	Topic is mentioned: expressing some concern for proper governance issues (see appendix 1). Example, “we believe that good governance contributes to superior performance”
2	Topic is included in relationship with other stakeholders: Here, PE/VC firms go beyond just expressing concern (1) about topic but actually conduct their activities to ensure good governance principles. In addition, work with their portfolio companies to achieve this goal also. Example, “we work with our portfolio companies to ensure they maintain high ethical standards in their relationships with employees, customers, suppliers and other stakeholders”
3	1 + 2 + Wider governance concerns such as indicating that they follow certain general code of conduct that require them to observe proper corporate governance issues. Examples of such codes of conduct include UK Stewardship Code, EVCA corporate governance guidelines, NVCA guidelines, Sarbanes-Oxley Act. Thus, this value is only given if PE/VC firm has fulfilled the requirements for data value 2 (relationship with other stakeholders). Example, “we believe our engagement activity is consistent with the principles of the UK Stewardship Code”.

The two additional variables under governance – transparency and gender diversity were collected as a proxy for high governance. These two extra fields are coded with nominal data levels. Coding was done on the basis described below;

Transparency: we use this term to represent a situation where a PE/VC firms are open enough to give detail backgrounds of general partners and or investment team. Thus, showing more transparency to portfolio companies and entrepreneurs of the experiences they can offer in addition to the finance they provide. This variable was coded;

Yes (1) - representing detail explanation or

No (0) - representing just mentioning names with no explanation at all.

Gender diversity: with this extra variable we look for gender diversity in investment team and or general partners. Representation of both sexes (female and male) is coded, Yes with value 1 and No (0) for otherwise.

Involvement (I)

The final variable involvement that we have introduced in our study concerns factors or expressions indicating that investors (PE/VC firms) avoid investments in ventures that are involved in controversial (non-responsible) or in activities deemed ‘unethical’. Key issues considered in coding this variable are activities relating to weapons, nuclear power, alcohol, tobacco, faith-based investments, avoiding conflict countries etc (see appendix 1 for full list). This variable was coded with nominal scale as follows;

Data Value	Explanation
0	No information is given on this issue: there is no indication as to whether the PE/VC avoid investment in these area or not
2	Topic is included in or selection: Indication that they avoid investments in this area (see appendix 1 for key issues and terms). Example, “we do not invest in the production and sale military weapons”.

3.3 Examples and explanation of how coding was conducted

Based on the coding instructions described above and content analysis framework (appendix 1) developed, we have coded information on environment, social, governance and ethical considerations of private equity/venture capital firms within our sample frame. Below are some examples of how coding values were assigned to give readers more insight into our method of data collection.

Environmental factor

Coding value 1

“GIP's *sector focus* is in: Natural resources infrastructure, Power and utilities, Water distribution and treatment, Waste management”

Explanation: *We have coded this statement 1 because; there is an indication of some concern towards environmental sustainability by indicating their focus on environmental solutions related activities without any further information on how it is implemented in their company.*

Coding value 2

“...water and air technologies; waste management; clean energy; energy efficiency, agricultural technologies. Many businesses involved in “sustainability” or “Cleantech” bring together several distinct areas of technology and ***we see it as one of our core strengths that we are able to analyse and add value to opportunities building on the convergence of diverse scientific fields***”.

Explanation: *Indicating that environmental solutions and protection is seen as core strength in their business (highlighted text) is a clear signal that, they go beyond just mentioning to include it as a requirement to receive finance.*

Coding value 3

“Climate change is one of the most pressing issues the world faces today. In response to this challenge, ***UK Steel Enterprise will be part of the solution. We have adopted the following policies regarding energy usage.***

- At our properties we will actively manage our energy usage and find ways to reduce the carbon footprint of our properties.
- Through our investment activities, wherever possible, we will support new and existing clients in their initiatives to reduce their carbon footprint.

- At all times we will actively engage our workforce, encouraging everyone to contribute.

We have also been keen to promote recycling and waste reduction initiatives at all our Innovation Centres and managed work space. For example facilities such as the waste compactor and recycling units at our Sheffield site have been made available to tenants as well as for our own use”

Explanation: concern for environmental sustainability goes beyond just practicing within the company by providing and supporting the outside community to also get involved. Thus, this company adds external concerns about the environment to what they practice themselves.

Social factor

Coding Value 1

“It is not enough to live, work and thrive in this world. **We have an obligation to help people in need in our community.** It's an obligation our employees fully embrace.”

Explanation: just expressing concern about the need to help the community alone without further indicating how they have carried it out in their operations.

Coding Value 2

“Midven Limited is an equal opportunities employer and is **committed to recognizing and respecting** the diversity of all employees, job applicants, clients and other people with whom we deal. **We are committed to ensuring they are treated fairly and are not subjected to unfair discrimination.**”

Explanation: the statement above indicates that the social concerns and commitment goes beyond just mentioning – “is an equal opportunities employer” to express more commitment by given how it is followed and applied in the company.

Coding Value 3

“Here at Terra Firma, **we take our responsibility to the wider community very seriously.** We recognise that the **businesses we invest in touch the lives of many people and we are mindful of the social responsibilities that our investments bring**” In addition to the Terra Firma Charitable Trust, **Terra Firma often donates gifts-in-kind to charity auctions, and has recently taken tables at charity balls held by organisations**”.

Explanation: Aside recognising the need to take responsibility to community seriously, they further go on to use social responsibility as criteria in selecting firms they invest in. In the wider sense denoting 3 here, the company is involved in donations to charitable auctions indicating external concerns for this factor aside the internal concerns expressed.

Governance factor

Coding Value 1

“We are *open minded in our approach to everything we do*, taking the time to understand issues and communicating appropriately”.

Explanation: Here the topic of proper communication of required information (transparency) is just mentioned.

Coding Value 2

“...*a culture of professional excellence and integrity is pursued* in all our work and services, and *we strongly encourage our portfolio companies to achieve the highest standards of corporate governance*”.

Explanation: concern about good corporate governance goes beyond just practicing themselves to encouraging portfolio companies to also practice it. Thus, they see it as part of their conditions to fulfil in order to receive financing.

Coding Value 3

“Impax Asset Management *continually engages with companies regarding business and governance issues*, both independently and through joint representations with other institutions. Proxy voting is a key component in the ongoing dialogue and engagement with companies in which we invest. *Through implementation and disclosure of our voting policy, we aim to enhance the long-term value of our shareholdings and to foster corporate governance best practice*. We believe *our engagement activity is consistent with the principles of the UK Stewardship Code*”.

Explanation: this statement shows that, a company recognizes good corporate governance issues to be of high value to achieve long term value for all stakeholders. They implement them in their operations as well as going extra to follow industry accepted code of ethics and governance principles – UK Stewardship Code.

3.4 Truth Criteria

3.4.1 Reliability

Reliability in research is a termed used to describe the question of whether or not the results of a study are consistent or repeatable (Bryman & Bell, 2007, p. 40). Within content analysis framework, reliability is explained by (Weber, 1990, p. 12) as “ to make valid inferences from text, it is important that the classification procedure be reliable in the sense of being consistent: Different people should code the same text in the same way”. Thus, the extent to which the measuring process yields the same results on repeated trials (Neuendorf, 2002, p. 141). Three types of reliability are peculiar to content analysis; stability, reproducibility and accuracy (Krippendorff, 2004, p. 214). Stability also referred to as intra-coder reliability relates to the degree to which processes are consistent over time. That is, how can the same coder get the same results when one content is coded more than once? To ensure stability in our study, some

selected companies were coded more than once by the same coder to verify that results are consistent (Krippendorff, 2004; Stemler, 2001; Weber, 1990).

Reproducibility or inter-coder reliability refers to the degree to which the content coding process can be replicated by different coders to produce the same results. Differences in results are usually the result of some ambiguity in coding instructions or difference in interpretation of instructions. In order to ensure inter-coder reliability in our study, both researchers first coded some data together, then we coded separately and the results exchanged to be verified. In addition, one researcher conducted 'key terms' search in the PDF files that have been saved to ensure that all necessary information's are captured (Krippendorff, 2004; Neuendorf, 2002; Potter & Levine-Donnerstein, 1999). Lastly, accuracy relates to the extent to which coded procedure "conforms to its specifications and yields what it is designed to yield" (Krippendorff, 2004, p. 215), thus in this reliability test the results of coders are compared with some standard. In our research, we have ensured that coding procedure conforms to those of well established rating agencies in this particular area. With this in view, we have developed our analysis framework based on factors given by institutions such as MSCI research, EIRES, NVCA, EVCA, and BVCA among others.

3.4.2 Validity

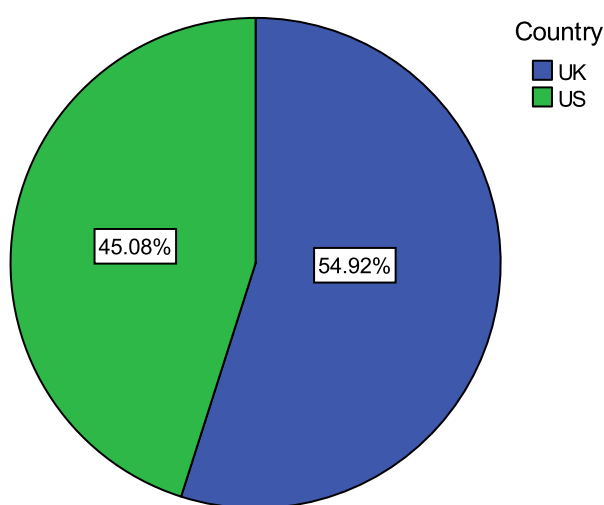
Research validity looks at the integrity of the conclusions drawn from a particular research, which is to determine if a measure of particular perception actually measures that concept (Bryman & Bell, 2007). In establishing validity in content analysis (Potter & Levine-Donnerstein, 1999, p. 266) relates it with a two-step process. First, is "to develop a coding scheme that guides coders in the analysis of content". In this study, we have developed this coding scheme which is referred in our study as 'content analysis framework' (see appendix 1) based on theory and literature reviewed. Coders therefore followed this framework to code content based on the key issues and concepts found from theory. It also serves as guide to other researchers that might wish to conduct further studies within this context. The second is to measure the judgements arrived at by coders against some standard. We have ensured in this study that our framework encapsulate all necessary key terms and concepts relating to SRI and ESG as well as ensuring that codes follows an acceptable procedures for correct decision making. We therefore believe that, our study have met the requirements of validity.

Chapter 4: Research Findings & Analysis

Introduction

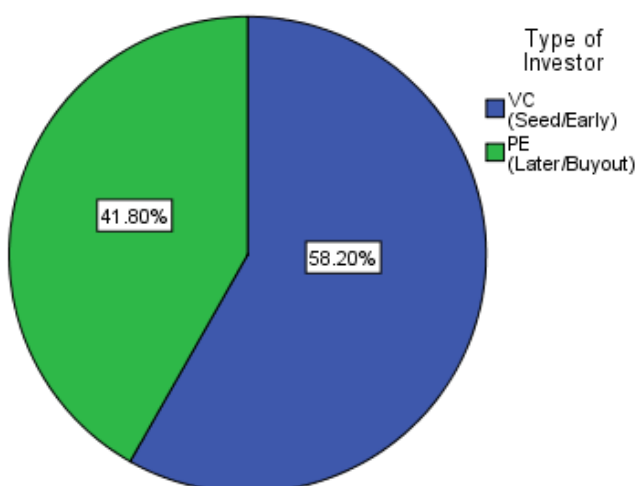
The following chapter presents the results and discussions of data gathered with content analysis for our study. First, we have use descriptive statistics to give an overview of what our data tells us, followed by inferential statistics that will be used to test our stated hypothesis. The chapter ends with analyses of our results highlighting the link between theory and our empirical findings.

4.1 Descriptive statistics



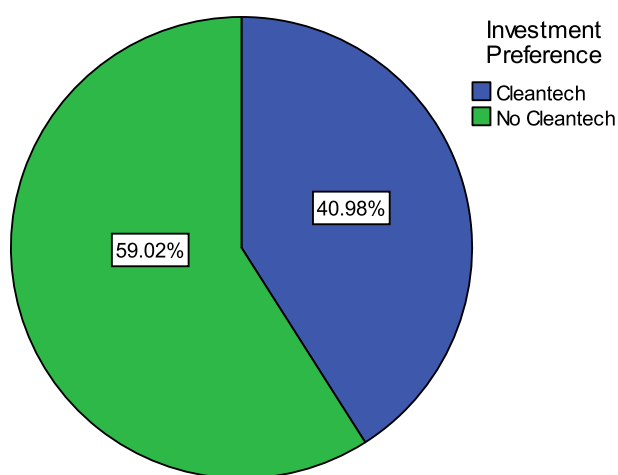
A total number of 122 private equity and venture capital firms have been used in our study. The diagram shows approximate 55% (67 out of 122) of our sample from UK and approximate 45% (55 out of 122) from US.

Figure 4: Country distribution of sample companies



Investors in our sample are divided into two groups based on the stage of investment and type and financing they provide. Fig. 2 depicts that 58.20% (71 out of 122) and 41.80% (51 out of 122) companies are venture capital (VC) and Private equity (PE) respectively. VC here representing investments in early, seed and expansionary stages whilst the PE in our study represent investors in later and buyout stages.

Figure 5: Types of investors with respect to investment stages



Sector preferences by investors in our sample consist of 'Cleantech' investors representing 40.98% (50 out of 122) and 'No Cleantech' investors of 72 out of 122 firms with a total percentage of 59.02%.

Figure 6: Distribution of investment sector preference of investors

Table 1: Frequency distribution of total ESG scores

Total ESG					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.8	.8	.8
	1	6	4.9	4.9	5.7
	2	30	24.6	24.6	30.3
	3	33	27.0	27.0	57.4
	4	20	16.4	16.4	73.8
	5	11	9.0	9.0	82.8
	6	5	4.1	4.1	86.9
	7	6	4.9	4.9	91.8
	8	4	3.3	3.3	95.1
	9	3	2.5	2.5	97.5
	10	1	.8	.8	98.4
	11	2	1.6	1.6	100.0
Total		122	100.0	100.0	

Table 1 gives the frequency distribution of total ESG scores. The output shows that almost all companies have some form of information relating to ESG on their websites with about 99% having a score of 1 and above. However, majority of companies (73%) had scores in the lower range between 1 to 4 scores and only few companies obtaining the scores in the upper range between 9 and 11. A graphical presentation is shown below;

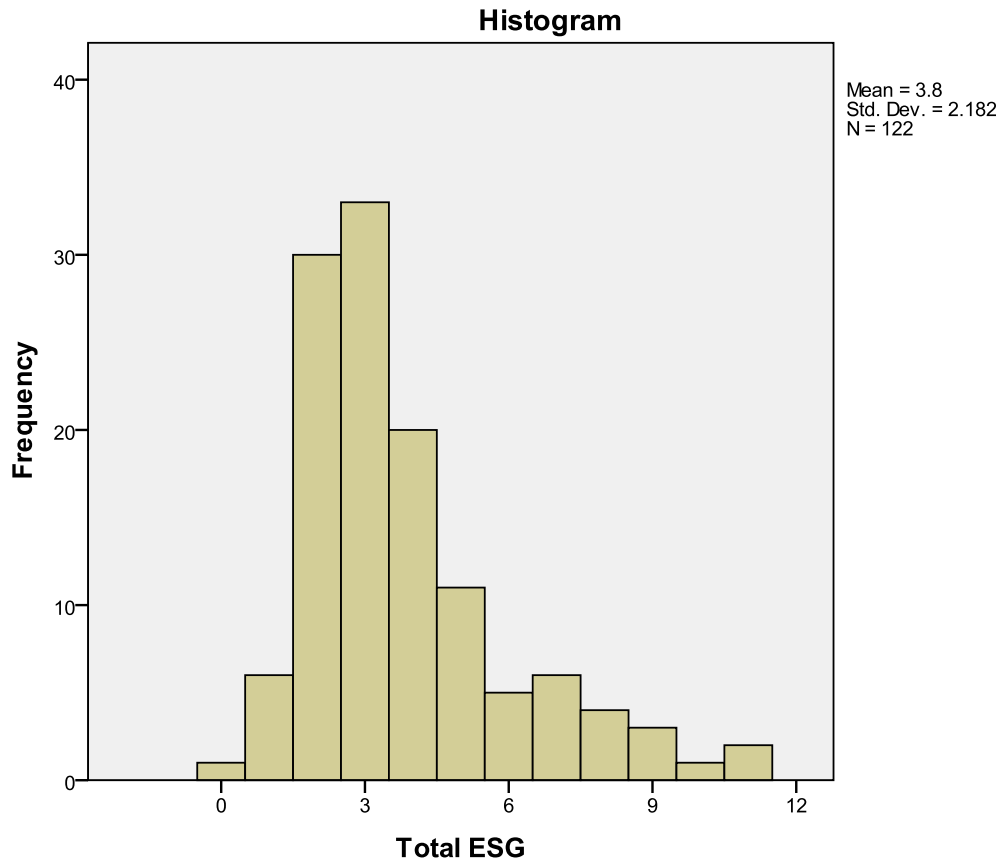


Figure 7: Histogram of total ESG scores

Looking at the performance of our study sample on their ESG considerations and practices, the histogram depicts that the performance of most companies is below par with a mean score of 3.8. This is supported by the skewness value of 1.296 indicating the scores are clustered to the left (low values).

Dependent variables distribution

Table 2: Scores of ESG components

		ESG Scores				
Variables		0	1	2	3	Total
Environment	Frequency	70	28	14	10	122
	%	57.4	23	11.5	8.2	100
Social	Frequency	99	6	4	13	122
	%	81.1	4.9	3.3	10.7	100
Governance	Frequency	58	18	41	5	122
	%	47.5	14.8	33.6	4.1	100
Transparency	Frequency	2	120	-	-	122
	%	1.6	98.4	-	-	100
Gender Diversity	Frequency	34	88	-	-	122
	%	27.9	72.1	-	-	100

The table above gives an overview of the frequency and percentages of ESG scores recorded by our dependent variables measured. The results show that 81.1% (99 out of 122) of our sample companies had a score of 0 under Social variable, 57.4% under Environment variable with Transparency variable recording 1.6% (2 out of 122) all recording the least value (0) under this score. In relation to our main variables (Environment, Social and Governance), 10.7% had the maximum score under Social, followed by Environment with 8.2% and 4.1% for Governance. Transparency and Gender diversity, the extra variables measured as a proxy for high governance recorded high scores. Transparency variable had approximate 98% obtaining the maximum value of 1 and Gender having 72.1% companies scoring the maximum score of 1.

These results show that, majority of our sampled companies performed poorly on our main variables with almost half of them scoring 0.

Table 3: Descriptive statistics of dependent variables

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Environment	122	0	3	0.7	0.968	0.937
Social	122	0	3	0.43	0.979	0.958
Governance	122	0	3	0.94	0.99	0.98
Transparency	122	0	1	0.98	0.128	0.016
Gender Diversity	122	0	1	0.72	0.45	0.203
Total ESG	122	0	11	3.8	2.182	4.759
Valid N (listwise)	122					

The table above shows that a total of 122 companies were analysed in this study. Five out of the six proposed variables were used to measure investor's social responsible behaviour through their ESG considerations. The variable Involvement (I), described in our methodology part was not used in our analysis because from the data collected all companies in the sample scored 0 as no information was found during our data collection. Therefore, its score will not have any impact on the results of our study, hence it was neglected. The remaining five (5) variables Environment, Social and Governance (main variables) as well as Transparency and Gender diversity (extra variables used as proxy for high governance) were all coded. The minimum and maximum value of each of these variables was between 0-3 for E, S, & G whilst Transparency and Gender had between 0-1. Thus, the total possible score attainable by a company was between 0-11.

Out of the three main variables (E, S, G), Governance had the highest mean value of 0.94, followed by Environment and Social with 0.70 and 0.43 respectively. This can be explained that, on the average investors do consider and practice Governance issues more than Environment and Social issues.

4.2 Inferential Statistics

In our inferential statistics we have used multivariate analysis of variance (MANOVA) in SPSS. This type of statistics was suitable for our set of data because it gives us the opportunity to explore the use of analysis of variance to compare groups on a single dependent variable. In addition, it tells us if there is a significant difference between our groups on the combined dependent variable as well as provide us with results on how each of the variables can be explained separately. Also, as all our dependent variables are related in some way; all of them add up to measure the extent of ESG integration. This test will help us consider them together and analyse their effects on our independent variables.

Table 4: Mean Scores of variables

Variable	Groups	Mean ESG Score
Investment Preference	Cleantech	4.38
	Non- Cleantech	3.39
Country	UK	3.7
	US	3.91
Type of investor	VC	3.66
	PE	3.98
Total ESG		3.80

Table 4, presents the mean scores of all groups within our independent variables. In relation to investment preference the results show that, there is a difference in the level of ESG considerations by the two groups. Cleantech investors have a higher mean score than Non Cleantech investors, 4.38 and 3.39 respectively. Types of investors in our study also show some differences between PE (Later/Buyout) and VC (Early/Seed). PE investors show a little higher average score than VC investors with mean values of 3.98 and 3.66 respectively. Lastly, there is also some relationship between country and the ESG considerations with US companies obtaining a higher mean of 3.91 than 3.70 recorded by UK companies.

4.2.1 ESG considerations by Cleantech/Non-Cleantech investors

To understand and state the relationship between the investment preference of investors and their ESG considerations, we have estimated the mean scores of each category within our variables. Comparing the mean ESG scores of Investment preference of investors (Cleantech and Non-Cleantech), results indicate that Cleantech investors on average has a higher ESG considerations than Non-Cleantech investors with a mean score of 4.38 and 3.39 respectively. The average of Cleantech investors is also higher than the average of the total ESG scores recorded (see table 2). Therefore, we can conclude from this that, Cleantech investors consider ESG issues more than non-Cleantech investors during investment process. To further explain the relationship that exists between these variables we have conducted a one way multivariate analysis to

investigate investment preference differences in ESG considerations. In this test, five dependent variables (Environment, Social, Governance, Transparency and Gender diversity) were used. Summary of results are shown below;

Table 5: Multivariate test table of investment preference

Multivariate Testsb						
Effect		F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Wilks' Lambda	1399.649	5.000	116.000	.000	.984
Investment Preference	Wilks' Lambda	10.906	5.000	116.000	.000	.320

From the table presented above, there is a statistically significant difference between groups of Cleantech and Non-Cleantech investors on the combined ESG score (dependent variables). Using $p < .05$, analysis revealed investment preference with Wilks' Lambda $F(5,116) = 10.91, p = 0.00$; *partial eta squared* = 0.32 (which is the proportion of the dependent variable that can be explained by the independent variable investment preference). This test is a confirmation of findings reported on Table 4, showing that there are differences between the mean scores of the two groups of investment preference on the combination of dependent variables (E, S, G.T, and G). This will be followed by the test of between-subject effects analysis to establish the variables that brought about this difference.

Tests of Between-Subjects Effects			
Dependent Variables	F	Sig.	Partial Eta Squared
Environment	39.391	.000	.247
Social	0.985	.323	.008
Governance	3.626	.059	.029
Transparency	1.405	.238	.012
Gender Diversity	2.623	.108	.021

When the results for the dependent variables were considered separately, the only difference to reach a statistical significance using Bonferroni adjusted alpha level of 0.01 (we divide 0.05 by 5) was Environment, $p = 0.00$. This means the different environment focus of the two groups led to the differences in total ESG mean scores recorded. A partial eta squared of 0.25 was recorded indicating the variance in the dependent variable (Environment) that can be explained by the independent variable (investment preferences). In addition to this, a check at the estimated mean scores table shows that, Cleantech investors have a higher level of Environment considerations ($M = 1.28$) than non-Cleantech investors ($M = .31$). Also Cleantech investors reported slightly higher mean scores than non-Cleantech in Social, Transparency and Gender diversity.

Therefore, Cleantech investors reported a higher level of ESG considerations than Non-Cleantech in our study. This argument therefore supports our first hypothesis ‘*Cleantech investors have a higher ESG consideration than Non- Cleantech investors*’.

4.2.2 Relationship between investor type and ESG considerations

In measuring the relationship between type of investor and SRI behaviour using total ESG scores, tests conducted showed that PE(Later and Buyout) investors has a slightly higher mean ESG score of 3.98 than VC (Seed/Early) investors with a mean score of 3.66. (Table 4). To further understand the relationships, a one way between-groups multivariate analysis was performed using our five dependent variables on investor type (independent variable). The summarised results are presented below;

Table 6: Multivariate test table of investor type

Multivariate Testsb						
Effect		F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Wilks' Lambda	1404.663	5.000	116.000	.000	.984
Type of Investor	Wilks' Lambda	1.630	5.000	116.000	.157	.066

Although our average (mean) ESG scores shows a slight difference in PE and VC investors, subsequent tests conducted indicate there is no statistically significant difference between VC and PE investors on the combined ESG score (dependent variables). Values recorded were Wilk’s Lambda $F(5,116) = 1.63, p=.157$ which is not statistically significant with $p<.05$, therefore we cannot conclude from sample studied companies that the type of investor (VC or PE) do influence the level of ESG considerations as there is no statistical evidence. Therefore we cannot accept our hypothesis ‘*Private Equity (PE) investors exhibit a higher ESG consideration than Venture Capital (VC) investors*’.

4.2.3 Relationship between country differences and ESG considerations

This relationship between countries and ESG considerations is to help us establish the relationship between cultural differences and ESG considerations by PE/VC companies using country differences. Our ESG mean scores table (Table 4) indicate that US companies has a mean ESG score of 3.91, higher than 3.70 reported for UK companies. Therefore we can say that, using these mean scores US companies have a high level of ESG considerations than UK companies. To test the significance of this difference, one way between-groups multivariate analysis was performed using the five dependent variables that make up the total ESG on independent variable, country. The results are summarized below;

Table 7: Multivariate test table of Country differences

Multivariate Testsb						
Effect		F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Wilks' Lambda	1435.08	5.000	116.000	.000	0.984
Country	Wilks' Lambda	3.196	5.000	116.000	.010	0.121

From the multivariate test table above, there was a statistically significant difference between countries (US and UK) on their ESG considerations, Wilks' Lambda $F(5,116) = 3.2, p = 0.01$; *partial eta squared* = .12. Using $p < .05$ as significant level, there is statistical evidence to conclude that there is differences in groups. This confirms our mean scores that there is actually a difference between the two countries. With statistically significant difference, we went further to look at how the dependent variables differ for the separate independent variables by looking at the 'Test of Between-Subject Effects' Table below which will give an indication on which dependent variables brought about the differences.

Tests of Between-Subjects Effects			
Dependent Variables	F	Sig.	Partial Eta Squared
Environment	.110	.741	.001
Social	.123	.726	.001
Governance	7.110	.009	.056
Transparency	1.665	.199	.014
Gender Diversity	5.449	.021	.043

When the results for the dependent variables were considered separately, it can be seen that country has a statistically significant effect on only Governance, $F = 7.11, p = .01$; *partial eta squared* = .56. This result reported is based on Bonferroni adjusted alpha level of 0.01 (divided 0.05 by 5). This shows us that, the difference between the two countries can basically be explained by the differences in their governance considerations. Based on the marginal mean estimates as part of this test, it showed that US companies have a mean value ($M = 1.20$) against ($M = .73$) by UK companies on Governance variable.

4.3 Discussion of Results

4.3.1 *Overall ESG consideration by Private Equity & Venture Capital Investors*

With our study aimed at investigating how PE/VC companies perform on ESG integration, we have visited the websites of the 122 companies in our sample to look at how ESG issues are been considered in their activities. The results as reported above indicate that about 91.8% of the companies recorded ESG value between 2 and 9 on a scale where 11 was the highest and 0 the lowest. This gives an indication that, based on what companies report on their websites, there is a high level of ESG consideration and practise among PE/VC in USA and UK. With only less than 6% of companies scoring between 0 and 1, there is an indication that this sector is viewing the concept of ESG as an important input toward their overall sustainability and responsible investing behaviour. It can be seen that investors are considering or practising at least one of the components of ESG as indicated earlier in their investment activities. This trend is consistent with what our literature suggested that, the private equity sector is beginning to view responsible investing and ESG integration as an important component of their business (Gitman, et al., 2009; Pwc & Waterman, 2010; SIF, 2011).

This development we can say, gives a sign that current discussions and debates on climate change, pollution, child labour issues, and other unethical activities is having a positive impact on this sector. Investors are now realising that, responsible investing are not only for the public equity sector and companies that pollute, but also requisite ingredient for all business that want to succeed. Important drivers for this increasing trend of ESG integration in this sector can be attributed to new business opportunities that it offers investors and new governance requirements and policies. With increasing demand for green products and services, there has been an increase in new innovations that provide solutions to environmental problems. Investors now see this area as generating income as well as promoting themselves as responsible investor's, therefore many are now shifting their focus to this sector. From our content analysis it is clear that investors are now positioning themselves as environmentally friendly companies (Cleantech) to attract investors in this area. The result is increase ESG considerations that go beyond just environmental issues but with social and governance considerations as well.

In addition, our results shows that only few companies scored above six (6) (approximate half mark of total ESG score), a situation which can mean that there is more to be done with respect to integrating ESG issues by PE/VC investors. Thus, there should be more strategies and policies to promote environment sustainability, engage in more corporate social responsibility activities to give back to the society in the form of charity as well as increase their corporate governance considerations. On the other hand, it could be that companies are not reporting some of these activities on their websites, which was the source of our information. If this is the case, then we urge these investors to consider reporting such issues on their corporate websites as it promotes company image and also attract potential clients with sustainability concerns.

An important finding in our study also relate to specific components of the ESG that are considered by investors. It was clear from the result that, investors tend to consider or

report corporate governance considerations (in our study relating to Governance, Transparency & Gender diversity) more than the other components of ESG. This was no surprise to us as our literature pointed out that there has been a sharp increase in sustainability and governance reporting after recent financial crisis which was partly blamed on corporate governance failures. This shows that governance principles and code of conducts such as reporting standards and effective stakeholder relationships are been adhered to. Environment and Social factors received a bit much less attention among the investors, especially those who formed the category of Non-Cleantech investors.

4.3.2 Relationship between Investment Preference and ESG considerations by PE/VC investors

Our multivariate analysis results shows a significant statistical difference between Cleantech investors and Non-Cleantech investors when considering their level of ESG considerations with ESG components; Environment considerations, Social issues, corporate Governance, Transparency in investment partners and Gender diversity of board and investment team (Table 5). This establishes that there is some form of relationship between the investment sector focus of investors and their ESG considerations. With a total mean score of 4.38 and 3.39 for Cleantech and Non-Cleantech investors respectively, showing Cleantech investors obtained higher values for total ESG, we can confidently accept our hypothesis that *‘Cleantech investors have a higher ESG consideration than Non- Cleantech investors’*. Further analysis of this relationship indicates that, among the components of ESG only ‘Environment’ showed statistically significant difference between the two sectors. Thus, it is mainly environmental issues that resulted in the difference between Cleantech and Non-Cleantech investors. Although, other components such as Social, Gender and Transparency were not statistically proven to cause differences, the mean scores of these variables all indicate good performance by Cleantech investors than Non-Cleantech investors.

This findings is in line with literature reviewed earlier which suggest that, Cleantech investors have their main focus on green and environmentally friendly issues such as clean fuel, renewable energy, reducing pollution, climate change issues among others (Eurosif, 2007; Scheer, 2004). Thus, promoting themselves on environmental issues they are able to position themselves as more responsible investors than others who do not market themselves on this line of environment. In addition, as investors adopt this ESG theme to select their investments, they are able to incorporate the other components in their investment strategy that yields higher performance on ESG issues. As noted by (Wood & Hoff, 2007), investors in this sector are able to channel investments to specific areas that promises high positive social and environmental returns.

Although, Non-Cleantech investors also considered ESG issues in their activities, their impact were far less than their counterparts. The most probable cause of this situation is that because they are not applying environmental theme approach in their investment decisions, they are not able to have effective policies dealing with sustainability issues.

4.3.3 Differences between investor's and ESG consideration

In our study, we have considered two types of investors within this industry; investors of companies in its seed, early and expansionary stages (VC) and investors in later and buyout stages of a company (PE). Findings regarding the types of investor's and their ESG considerations as reported in the previous chapter indicate that there is no statistically significant difference between type of investor and ESG considerations. Therefore, our hypothesis '*Private Equity (PE) investors exhibit a higher ESG consideration than Venture Capital (VC) investors*' that seek to claim that investors at later/buyout stages have higher ESG considerations than early stage investors cannot be supported. This implies that based on our study it is difficult to establish that a specific type of investor have a greater influence in ESG considerations. In our view, possible reasons for this result are first, there is no difference between the ESG considerations by these two types of investors as our literature reviewed sought to give based on the level of information available to different investors to outline better ESG strategy in their companies. Secondly, there is a difference between the ESG considerations by different investors but we have too few observations to detect it statistically. Thus, differences in our samples with regard to the number of PE/VC investors might have affected our result.

The results also showed that taking the overall ESG mean scores into consideration, however, seemed to indicate that Private Equity (PE) investors have a higher ESG scores than Venture Capital investors, a result that tends to support our hypothesis although it is not statistically significant. Based on this we cannot completely reject our hypothesis but rather a more detailed study looking at the difference between these types may provide some support for this difference.

4.3.4 Country differences and ESG considerations

Our results showed a statistical significance difference between USA and UK when their ESG considerations under the country variable was tested. This gives us the leeway to accept our hypothesis that country difference influence investors ESG considerations. With USA companies reporting an average ESG score of 3.91 against 3.70 recorded by UK companies, we can conclude based on our results that companies in USA do consider ESG issues more than their counterparts in UK. Further, analysis on this difference revealed that the variable 'Governance' which looks at issues such as (ESG risk management, governance and board structures, business code of ethics, sustainability reporting and management, relationship with stakeholders etc.) was statistically significant to have caused the difference between the two countries. Thus, USA companies have better governance considerations than UK companies.

As governance systems in a particular country is highly influenced by cultural values and institutional structures, we can infer that cultural and institutional differences between these two countries was a major factor for the difference in ESG considerations reported in our study. This result is consistent with literature by (Black & Gilson, 1998) and (Westwood & Everett, 1987) who indicated that, different corporate governance structures, labour market regulations, cultural differences in entrepreneurship all results in different value systems leading to differences in management styles, organisational structures and in general how investors behave. In addition, with institutional infrastructures available in USA and a culture of taking risks (Christofidis & Debande,

2001), they are able to invest in high technology areas providing solutions to the environment, an area that promote sustainability.

Chapter 5: Conclusions

Introduction

The chapter presents conclusions from the analysis presented and contributions of the study. This is followed by recommendations to both investors and entrepreneurs based on the conclusions drawn and contributions of our study to theory and practise. We end with some limitations of the study and how future researchers can build on them for future research.

5.1 Conclusions

Our research on investigating how PE/VC investors consider ESG issues in their business activities found several interesting facts regarding ESG integration within USA and UK. First, our results from the study suggest that the integration and practice of ESG issues is present among PE/VC investors, with almost all sample companies reporting some form of ESG issue on their corporate website. This is a clear indication that private equity investors are also responding to calls for responsible investing with ESG issues as its core component. However, majority of these investors had relatively small amount of information about their practise, such as how it is used as investment selection criteria and how they go beyond internal practise to support this cause externally. This led to many companies recording very low scores on the ESG score ratings used for this study.

Two of our three stated hypothesis were confirmed from the findings from this study, the other one we could not find statistical significance to accept the hypothesis proposed. The table below presents the summary of our hypothesis results;

Table 8: Summary of hypothesis results

Hypothesis	Multivariate test (differences in mean scores)	Between subjects effects	Accept/Reject
H1	0.00*	0.00** (Environment)	Accept
H2	1.57	-	Reject
H3	0.01*	0.01** (Governance)	Accept

* Significance at $p < 0.05$

** Significance at $p < 0.01$

Results from our study shows that there is a statistical significant relationship between investment preference and ESG considerations. More specifically, Cleantech investors have higher ESG considerations than Non-Cleantech investors; therefore our hypothesis 1 (H1) 'Cleantech investors have higher ESG considerations than Non-Cleantech investors' can be accepted. Moreover, the results also confirm that environmental issues is the major difference between these two investors with between subjects effects test

proving that Environment factors have a statistically significant influence on ESG considerations by Cleantech and Non-Cleantech investors.

The second hypothesis (H2) looked at whether different investor types (VC and PE) have any influence on ESG considerations of investors. Our results have shown that the mean difference between the two types of investors is not statistically significant (Table 8). Therefore, the differences in mean ESG considerations recorded in Table (4) where PE investors showed slightly higher ESG considerations than VC cannot be statistically confirmed. We cannot therefore accept our hypothesis that PE investors exhibit higher ESG considerations than VC investors.

In our final hypothesis (H3), we have tested to find if cultural and institutional differences between US and UK have any effect on their ESG considerations. Results show that there is a statistical significance difference between the two countries with US recording higher ESG considerations than UK. The main difference between these two countries is Governance factor which tested statistically significant (Table 8). As governance factor concerns investor's relationship building and corporate governance mechanisms prevalent in a particular country, we can therefore conclude that cultural and institutional differences affect ESG considerations of investors, hence our hypothesis can be accepted.

With the help of our research questions, hypothesis results and analysis, we are able to draw the following conclusions from the study;

- Private Equity and Venture Capital investors are considering ESG issues in their activities relating to clients, staff and shareholders. This finding is line with studies conducted by (Gitman, et al., 2009; Pwc & Waterman, 2010; SIF, 2011). These studies concluded that investors are now viewing ESG, a component of sustainable investing as an essential part of their activities. While the presence of ESG issues considerations and practises have been found among almost all companies within our study, integration is still at its early stages as most firms recorded low ESG values based on our ratings. This result in our study is also consistent with the findings of (Eurosif, 2007) which concluded that although 'Green' is relatively popular nowadays as seen with its increasinly high media coverage, public policy discussions and other corporate investments, the reality is that it is still in its early stages. Therefore, investors still have more work to be done to ensure better and comprehensive integration. This involves incorporating these ESG issues in their selection criteria rather than just mentioning it and also developing proper communication strategies to report sustainability and ESG issues to clients and investors.
- The presence of cultural and institutional differences among countries leading to different value systems, governance mechanisms, corporate cultures and reporting standards affect ESG integration of investors. As these differences affect the way investors behave and consider issues, a country with strong corporate culture towards sustainability issues will be more positioned to make ESG factors part of their investment decisions leading to higher ESG ratings. With our results pointing to the fact that, different governance considerations caused the main difference

between the two countries; US companies having higher ESG considerations than UK countries, we can also say that the advanced and developed corporate governance mechanisms used in US contributed to how investors performed on this component of ESG. This is consistent with studies by (Black & Gilson, 1998) and (Manigart, et. al, 1997) which concluded that “it is likely that venture capital managers are influenced by the dominant corporate culture in their home country” by showing that the corporate culture and corporate governance practises of Anglo-Saxon countries are different from others. (Manigart, et. al, 1997 p. 41). It is possible that as investors extend their presence to international markets, there will be common mechanisms and regulations that can help bridge this gap.

- When looking at investment sector preference of investors, we can conclude that investors with preference for environmental friendly products (Cleantech) do have higher ESG scores than other investors (Non-Cleantech). Our hypothesis 1 has confirmed this conclusion. This supports the general view that investors in environmental friendly products and services are more responsible than investors that are not aligned to the environment (Wood & Hoff, 2007). Investing in this sector serves as a medium through which investors can appeal to the public and entrepreneurs with innovative ideas to solve society’s problems. In the same way, it leads to also higher levels of social and corporate governance considerations as it raises manager’s general awareness of ESG issues (Blanc, et al., 2009).
- In terms of different investor types – VC (seed/early/expansion) stage investors and PE (later/buyout) stage investors, we are not able to conclude that either VC or PE has higher ESG considerations than the other. However, we could observe that, to some extent, PE investors have higher ESG ratings than VC investors with the mean scores comparisons, although this difference was statistically not significant (Table 8). This results contradicts the findings by (Blanc, et al., 2009) that investors at later/buyout stages (PE) have advantage over seed/early (VC) investors in ESG integration. They assert that, Private Equity companies are already prepared to implement sustainable development policies because of their long existence and structured reporting. Based on the results obtained from our study and what previous studies have concluded, we think that some form of relationship is possible if given representative samples of each type of investor, a situation which was not the case in our study.

5.2 Recommendations

The results of our study and discussions above present some important implications for investors and entrepreneurs. First, while many investors may be involve in some form of corporate social responsibility or sustainability activities, it is important communicating these activities to their clients, fund providers and the outside world. This will help position them as responsible investors to attract entrepreneurs and also investors. Secondly, investors need to be aware that with sustainability agenda growing rapidly, investing in environmental products and services has the propensity to drive them to higher ESG ratings and at the same time long term financial returns.

In addition, for entrepreneurs it is important to note that, new innovations and ideas focusing on solving environmental problems and with less negative impacts on society

is preferred by investors to already environment unfriendly products and services. Proper governance and board structures are also important to be able to receive funding from investors who are implementing ESG issues in their activities. Lastly, we recommend that policy makers design and implement policies and regulations that promote sustainable future as we have seen that governance mechanisms and regulations have the impact of increasing ESG considerations by professionals in this industry. New regulations and policies targeting this sector that compel investors to consider these issues as much as possible in their investments will help increase the integration in this industry.

5.3 Theoretical and Practical Contributions of our Study

In all, we believe that we have accomplished the purpose of this study by examining how Environmental, Social and Governance issues are considered by PE/VC investors. The study has contributed to the knowledge base of the increasing and advancing field of responsible investing by highlighting that, private equity investors also has a role to play in the fight for sustainable future as they integrate ESG issues in their investment decision-making processes. This is because with their role as helping entrepreneurs with financial and managerial resources, they can influence companies to respond to sustainable issues and invest responsibly. In addition, our results have also added more insight to earlier studies that call for more investors to commit resources to new entrepreneurs coming out with environmental innovations by revealing that, investors who focus on this sector tend to increase their ESG performance and general responsible investing practises.

In addition, our results and discussion encourages private investors (VC/PE) to embrace the concept of social responsible investing by incorporating ESG issues in their investment criteria and even supporting this course outside their internal activities. By doing this, they are able to contribute their quota to the calls for sustainable future and at the same time take advantages of enhanced opportunities that are associated with investing responsibly. This leads to increased market share and financial returns in the long run. Moreover, we have by this study call on investors to adopt effective communication strategies to inform clients and stakeholders their ESG considerations and other activities that promote sustainability, this can help attract more clients and funds to their company.

5.4 Limitations and Suggestion for Further Research

Although our study contributes to the advancing field of responsible investing among venture capital and private equity sector, there are some limitations. Perhaps one of the most obvious ones is that our study focuses on only two countries. We chose these two countries because of their advanced market in venture capital industry. This limit the extent to which one can generalize our findings given divergent cultural values across the globe; therefore further studies can apply similar approach on different countries to validate our findings.

Another limitation in our study relates to the method used. We have used only content analysis of corporate websites in gathering data; this has limited the amount of

information available to make conclusions in our study. For example, information on company's involvement in activities considered unethical such as investing or avoiding investment in weapons, alcohol, conflict countries among others were not available on their websites. Future studies can therefore consider using content analysis in addition to interviews and other methods to get more in-depth understanding of the issues under consideration.

A further interesting area of research may be to investigate the financial benefits associated with ESG integration. Does the use of ESG criteria in selecting companies lead to superior financial performance or does it have effect on the company performance and sustainability? This will help increase the drive for venture capital and private equity investors to integrate ESG issues in their activities.

List of References

- Amaeshi, K., & Grayson, D. (2008). The Challenges of mainstreaming Environmental, Social and Governance (ESG) issues in Investment Decisions: A mini-survey of practitioners' reports
- Amit, R., Brander, J., & Zott, C. (1998). Why do venture capital firms exist? theory and canadian evidence. *Journal of Business Venturing*, 13(6), 441-466. doi: 10.1016/s0883-9026(97)00061-x
- Bassen, A., & Kovacs, A. M. (2008). Environmental, Social and Governance Key Performance Indicators from a Capital Market Perspective. *Zeitschrift für Wirtschafts- und Unternehmensethik*, 9(2), 182-192.
- Black, B. S., & Gilson, R. J. (1998). Venture capital and the structure of capital markets: banks versus stock markets. *Journal of Financial Economics*, 47(3), 243-277. doi: 10.1016/s0304-405x(97)00045-7
- Blanc, D., Goldet, B., & Hobeika, S. (2009). Where do private equity business stand on the integration of ESG issues? *Working Paper* (pp. 1-22). Paris: Novethic.
- Bottazzi, L., & Da Rin, M. (2002). Venture capital in Europe and the financing of innovative companies. *Economic Policy*, 17(34), 229-270.
- Bryman, A., & Bell, E. (2007). *Business Research Methods*. Oxford.
- Burgel, O. (2000). UK Venture Capital and Private Equity as an Asset Class for Institutional Investors.
- Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. London: Sage Publications, Inc.
- Chen, S., & Bouvain, P. (2009). Is Corporate Responsibility Converging? A Comparison of Corporate Responsibility Reporting in the USA, UK, Australia, and Germany. *Journal of Business Ethics*, 87(0 suppl.), 299-317.
- Christofidis, C., & Debande, O. (2001). Financing Innovative Firms Through Venture Capital. from European Investment Bank
- Chu, P., & Hisrich, R. (2001). Venture capital in an economy in transition. *Venture Capital: An International Journal of Entrepreneurial Finance*, 3(2), 169-182.
- Clarysse, B., Knockaert, M., & Wright, M. (2009). Benchmarking UK Venture Capital to the US and Israel: What lessons can be learned? : BVCA.
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative and Mixed methods Approaches* (2nd Edition ed.). California: Sage Publications, Inc.

- Cumming, D., & Johan, S. A. (2009). Venture Capital and Private Equity Contracting: An International Perspective.
- Cumming, D. J. (2005). Capital Structure in venture finance. *Journal of Corporate Finance*(11), 550-585.
- Dixon, D. (2009). Bringing ESG considerations into the investment process. [Opinion]. *Money Management*, 23(13), 12-12.
- Doran, A., & Bannock, G. (2000). Publicly sponsored regional venture capital: what can the UK learn from the US experience? [Article]. *Venture Capital*, 2(4), 255-285. doi: 10.1080/13691060050176997
- Drogendijk, R., & Slangen, A. (2006). Hofstede, Schwartz, or managerial perceptions? The effects of different cultural distance measures on establishment mode choices by multinational enterprises. *International Business Review*, 15(4), 361-380. doi: 10.1016/j.ibusrev.2006.05.003
- Drucker, D. J. (2009). from SRI to ESG. [Article]. *Financial Planning*, 39(10), 72-77.
- Eccles, N. (2010). UN Principles for Responsible Investment Signatories and the Anti-Apartheid SRI Movement: A Thought Experiment. *Journal of Business Ethics*, 95(3), 415-424.
- Eisenhardt, K. M. (1989). Agency Theory: An Assessment and Review. [Article]. *Academy of Management Review*, 14(1), 57-74.
- Engel, D. (2004). The Performance of Venture-Backed Firms: The Effect of Venture Capital Company Characteristics. *Industry and Innovation*, 11(3), 249-263. doi: <http://www.tandf.co.uk/journals/titles/13662716.asp>
- Escrig-Olmedo, E., Munoz-Torres, M. J., & Fernandez-Izquierdo, M. A. (2010). Socially responsible investing: sustainability indices, ESG rating and information provider agencies. *International Journal of Sustainable Economy*, 2, 442-461. doi: 10.1504/ijse.2010.035490
- Eurosif. (2007). Venture Capital for Sustainability. 1-20. Retrieved from <http://www.eurosif.org/research/venture-capital-for-sustainability> website:
- EVCA. Guide on Private Equity and Venture Capital for Entrepreneurs Retrieved 11/02/2011, 2011
- Freeman, B. (2011). Five Questions. [Interview]. *On Wall Street*, 21(1), 24-24.
- Fried, V. H., & Hisrich, R. D. (1994). Toward a Model of Venture Capital Investment Decision Making. *FM: The Journal of the Financial Management Association*, 23(3), 28-37.
- Friedman, M. (2008). The Social Responsibility of Business Is to Increase Its Profits. In K. E. Meyer (Ed.), *Multinational Enterprises and Host Economies. Volume 2*. (pp. 375-380): Elgar Reference Collection. Globalization of the World Economy

- series, vol. 21. Cheltenham, U.K. and Northampton, Mass.: Elgar. (Reprinted from: [1970]).
- GAO. (1996). Content Analysis: A Methodology for Structuring and Analyzing Written Material.
- Gay, G. R., & Klaassen, J. A. (2005). Retirement Investment, Fiduciary Obligations, and Socially Responsible Investing. *Journal of Deferred Compensation*, 10(4), 34-49.
- Gilson, R., & Bernard, B. (1999). Does Venture Capital Require an Active Stock Market? <http://www.bmibourse.org/Report%5CFiles%5CSSRN-id219174.pdf>
- Gitman, L., Chorn, B., & Fargo, B. (2009). ESG in the Mainstream: The Role for Companies and Investors in Environmental, Social and Governance Integration (pp. 1-35): BSR Group.
- Gompers, P., & Lerner, J. (1999). An analysis of compensation in the U.S. venture capital partnership. *Journal of Financial Economics*, 51(1), 3-44. doi: 10.1016/s0304-405x(98)00042-7
- Hazarika, S., Nahata, R., & Tandon, K. (2009). Success in Global Venture Capital Investing: Do Institutional and Cultural Differences Matter? http://siteresources.worldbank.org/INTFR/Resources/Hazarika_Nahata_Tandon_0709.pdf
- Hofstede, G. (2007). A European in Asia. *Asian Journal of Social Psychology*, 10, 16-21.
- Holder-Webb, L., Cohen, J., Nath, L., & Wood, D. (2009). The Supply of Corporate Social Responsibility Disclosures Among U.S. Firms. *Journal of Business Ethics*, 84(4), 497-527.
- Hopkins, D. J., & King, G. (2010). A Method of Automated Nonparametric Content Analysis for Social Science. *American Journal of Political Science*, 54(1), 229-247. doi: 10.1111/j.1540-5907.2009.00428.x
- IHS Global Insight Inc. (2009). Venture Impact: The Economic importance of Venture Capital-Backed Companies to the U.S Economy (5th Ed. ed.). Arlington, U.S: National Venture Capital Association. Retrieved March 11, 2011, from http://www.nvca.org/index.php?option=com_content&view=article&id=255&Itemid=103
- Isaksson, A. (2006). *Studies on the venture capital process*. Doctoral thesis, comprehensive summary (Other academic), Handelshögskolan vid Umeå universitet, Umeå. (91-7264-160-6)
- Jose, A., & Lee, S. M. (2007). Environmental Reporting of Global Corporations: A content Analysis based on Website Disclosures. *Journal of Business Ethics*, 72, 307-321.

- Kirkpatrick, G. (2009). Corporate Governance Lessons from the Financial Crisis. [Article]. *OECD Journal: Financial Market Trends*, 2009(1), 61-87.
- Klonowski, D. (2006). Venture Capitalists' Perspectives on Corporate Governance in Transition Economies: A Comparative Analysis of Hungary, Poland, the Czech Republic, Slovakia, and Russia. *Problems of Economic Transition*, 49(8), 44-64. doi: 10.2753/pet1061-1991490803
- Kondracki, N. L., Wellman, N. S., & Amundson, D. R. (2002). Content Analysis: Review of Methods and Their Applications in Nutrition Education. [Article]. *Journal of Nutrition Education & Behavior*, 34(4), 224.
- Krippendorff, K. (2004). *Content Analysis: an introduction to its methodology* (2nd Edition ed.). Thousand Oaks, California: Sage Publications, Inc.
- Linthwaite, P. (2006). The voice of venture capital. *Business Strategy Review*, 17(4), 74-77.
- Lockett, A., Murray, G., & Wright, M. (2002). Do UK venture capitalists still have a bias against investment in new technology firms. *Research Policy*, 31(6), 1009.
- Maignan, I., & Ralston, D. A. (2002). Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses' Self-presentations. *Journal of International Business Studies*, 33(3), 497-514.
- Maler, S. (2009). Taking stock: how leading stock exchanges are addressing ESG issues and the role they can play in enhancing ESG disclosure. 1-8. Retrieved from <http://www.eiris.org/files/research%20publications/StockExchanges&ESGNov09.pdf> website:
- Manigart, S., Wright, M., Robbie, K., Desbrieres, P., De Waele, K., P. (1997). Venture Capitalists' Appraisal of Investment Projects: An Empirical European Study. *Entrepreneurship: Theory & Practice*, 21(4), 29-43.
- Manigart, S., De Waele, K., Wright, M., Robbie, K., Desbrieres, P., Sapienza, H., & Beekman, A. (2000). Venture capitalists, investment appraisal and accounting information: a comparative study of the USA, UK, France, Belgium and Holland. [Article]. *European Financial Management*, 6(3), 389-403
- Mason, C. M., & Harrison, R. T. (2000). The Size of the Informal Venture Capital Market in the United Kingdom. *Small Business Economics*, 15(2), 137-148. doi: 10.1023/a:1008143713722
- Mason, C. M., & Harrison, R. T. (2002). The geography of venture capital investments in the UK. *Transactions of the Institute of British Geographers*, 27(4), 427-451.
- Matten, D., & Moon, J. (2008). "Implicit" and Explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Journal of Academy of Management Review*, 33(2).

- Miles, E. (2010). Environmental, Social and Corporate Governance (ESG) and the UN PRI: Practical implementation: Environmental Resource Management (ERM).
- Moran, G. (2010). The VOICES of venture capital. [Article]. *Entrepreneur*, 38(7), 76-80.
- MSCI. (2011). ESG Research Methodology Retrieved 25/12/2011, 2011, from http://www.mscibarra.com/products/indices/thematic_and_strategy/esg_indices/esg_research_methodology.html
- Murray, G. C., & Lott, J. (1995). Have UK venture capitalists a bias against investment in new technology-based firms? *Journal of Research Policy*, 24, 283-299.
- Neuendorf, K. A. (2002). *The Content Analysis Guidebook*. California: Sage Publications, Inc.
- Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review*, 7.
- Niklasson, T., & Coninck-Smith, C. (2010). The importance of the UN PRI. 1-8. Retrieved from http://www.threadneedle.com/media/236184/en_sri_article_unpri.pdf website:
- NVCA. Venture Capital 101: What is Venture Capital Retrieved 28/02/2011, 2011, from http://www.nvca.org/index.php?option=com_content&view=article&id=141&Itemid=133
- OECD. (2007). Recent trends and regulatory implications in socially responsible investment for pension fund. Paper presented at the 2007 OECD Round table on Corporate Responsibility. <http://www.oecd.org/dataoecd/3/0/38550550.pdf>
- Ogden, J. P., Jen, F. C., & O'Connor, P. F. (2003). *Advanced Corporate Finance: Policies and Strategies*. New Jersey: Pearson Education Inc.
- Pintado, T., deLema, D., & VanAuken, H. (2007). Venture Capital in Spain by Stage of Development. *Journal of Small Business Management*, 45(1), 68-88.
- Porter, M. E., & Kramer, M. R. (2006). *Harvard Business Review*, 84(12), 78-92.
- Potter, W. J., & Levine-Donnerstein, D. (1999). Rethinking Validity and Reliability in Content Analysis. *Journal of Applied Communication Research*, 27, 258-284.
- Pwc, & Waterman. (2010). Responsible Investment: A guide for private equity and venture capital firms (pp. 1-12). London, UK: BVCA.
- Randjelovic, J., O'Rourke, A. R., & Orsato, R. J. (2003). The emergence of green venture capital. *Business Strategy and the Environment*, 12(4), 240-253.
- Remenyi, D., Williams, B., Money, A., & Swartz, E. (1998). *Doing Research in Business and Management: An introduction to Process and Method*. London.

- Renneboog, L., Ter Horst, J., & Zhang, C. (2008). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance*, 32.
- Reuters, T. (2010). NVCA YEARBOOK,2010 (pp. 1-111). New York: National Venture Capital Association. Retrieved from http://www.nvca.org/index.php?option=com_content&view=article&id=257&Itemid=103.
- Richardson, B. J. (2006). Financing Sustainability: The New Transnational Governance of Socially Responsible Investment. *Yearbook of International Environmental Law*, 17(1), 73-73.
- Robbie, K., & Murray, G. (1992). Venture Capital in the UK. *International Journal of Bank Marketing*, 10(5), 32-40.
- Sahlman. (1990). The structure and governance of venture-capital organizations. *Journal of Financial Economics*, 27(2), 473-521. doi: 10.1016/0304-405x(90)90065-8
- Saunders, M., P., L., & Thornhill, A. (2009). *Research methods for business students* (Vol. 5.ed). Harlow.
- Scheer, R. (2004). Greening Venture Capital. *E: The Environmental Magazine*, 15(6), 46-47.
- Schueth, S. (2003). Socially Responsible Investing in the United States. [Article]. *Journal of Business Ethics*, 43(3), 189-194.
- SIF. (2008). 2007 Report on Socially Responsible Investing Trends in the United States (pp. 84). Washington: Social Investment Forum.
- SIF. (2011). 2010 Report on Socially Responsible Investing Trends in the United States. Washington D.C: Social Investment Forum Foundation.
- Sohl, J. E., & Rosenberg, W. (2003). The US Angel and Venture Capital Markets: Recent Trends and Developments. *Journal of Private Equity*, 6(2), 7-17.
- Statman, M. (2006). Socially Responsible Indexes. *Journal of Portfolio Management*, 32(3), 100-109.
- Steffensen, H. (2006). Environmental, Social, & Governance Issues:Materiality and Relevance to Investors.
- Stemler, S. (2001). An Overview of Content Analysis. *Practical Assessment, Research & Evaluation*, 7(17), 10.
- Steurer, R., Margula, S., & Martinuzzi, A. (2008a). Socially Responsible Investment in EU Member States: Overview of government initiatives and SRI experts' expectations towards governments. . Vienna: Research Institute for managing sustainability.

- Strandberg, C. (2005). The convergence of corporate Governance and Corporate Social Responsibility. Burnaby: Strandberg Consulting.
- Strauss, A. L., & Corbin, J. M. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (2nd Edition ed.). CA, USA: Thousand Oaks, Sage Publications Inc.
- Suzanne, K. H. (2005). Socially Responsible Mutual Funds: Issues to Consider When Investing with Your Conscience. *Journal of Financial Service Professionals*, 59(5), 59-63.
- Tate, W. L., Ellram, L. M., & Kirchoff, J. F. (2010). Corporate social responsibility reports: a Thematic Analysis related to Supply Chain Management. *Journal of Supply Chain Management*, 46(1), 19-44.
- Trochim, W. M. K. (2006). The Research Methods Knowledge Base. Retrieved from <http://www.socialresearchmethods.net/kb/philosophy.php>
- Tyebjee, T. T., & Bruno, A. V. (1984). A Model of Venture Capitalist Investment Activity. *Management Science*, 30(9), 1051-1066.
- UNEP. (2005). A legal framework for the integration of environmental, social and governance issues into institutional investment.
- UNEPFI. (2009). Responsible Investment in Private Equity: A guide for Limited Partners. 1-14. Retrieved from <http://www.unpri.org/files/PE%20LP%20Guide%20FINAL.pdf> website:
- Viviers, S., Bosch, J. K., Smit, E. v. d. M., & Buijs, A. (2008). Is responsible investing ethical? [Article]. *South African Journal of Business Management*, 39(1), 15-25.
- Vyvyan, V., Chew, N., & Brimble, M. (2007). Socially Responsible Investing: the green attitudes and grey choices of Australian investors. *Corporate Governance: An International Review*, 15(2), 370-381. doi: 10.1111/j.1467-8683.2007.00567.x
- Weber, R. P. (1990). *Basic Content Analysis* (Vol. 2nd ed). Newbury Park, CA.
- Westwood, R. G., & Everett, J. E. (1987). Culture's Consequences: A Methodology for Comparative Management Studies in Southeast Asia? *Asia Pacific Journal of Management*, 4(3), 187-202.
- Williams, C. (2007). Research Methods. *Journal of Business & Economics Research*, 5(3).
- Wood, D., & Hoff, B. (2007). *Handbook on Responsible Investment Across Asset Classes*. Boston: Boston College Center for Corporate Citizenship.
- Wood, D. J. (1991). Corporate Social Performance Revisited.. *Academy of Management Review*, 16(4), 691-718.
- Worrell, D. (2006). Keen On Green. [Article]. *Entrepreneur*, 34(9), 67-72.

Appendix

Framework for content analysis

Responsible investing criteria	Indicated by or exemplified by
Environment	<ul style="list-style-type: none"> • Focus on green-technology, clean technology, green building • Committed to environmental responsibility, reducing pollution, climate change and GHG emissions. • We invest in alternative energy, renewable energy, future and clean fuel solutions • Support efficiency, biodiversity, sustainable water, recycle • Help manage environmental risks and resource depletion • Management of environmental issues, resource management and use.
Social factors	<ul style="list-style-type: none"> • Concern about employee safety and health, social welfare, workforce diversity, supply chain labour and employee management relations. • Committed to human rights principles, equality, anti discrimination • Give back to the society, use community investing strategy, and carry out social responsibility, philanthropy, impact on community • Invest in quality and safe products, fair competition
Governance factors	<ul style="list-style-type: none"> • Committed to board diversity and independence, accountability and transparency • Demonstrate good stakeholder relationships (GP/LP), interest alignment of all stakeholders • Importance on ethics and principles, sustainability reporting, disclosure issues and good governance • Risk and crisis management measures
Transparency	<ul style="list-style-type: none"> • Transparency: Given detail information on investment professional and partners to clients to promote high governance.
Gender	<ul style="list-style-type: none"> • Gender diversity in management and investment professionals
Involvement Key issues	<ul style="list-style-type: none"> • Avoid the production and sale of military weapons • Do not invest in tobacco and alcohol production • Avoid investments in conflict countries, nuclear power projects • Avoid discriminatory investments (faith based, gambling and animal welfare, etc.)



Umeå School of Business

Umeå University

SE-901 87 Umeå, Sweden

www.uisb.umu.se