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Trabajo Final de Master

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Fecha de entrega: 10-jul-2018 10:04 a.m. (UTC+0200)

Identificador de la entrega: 981611852

Nombre del archivo:

69052_Rafael_Fernández_Manuel_Rafael_Fernández_Manuel_Trabajo_Final_de_Master_1253520_807793188.pdf

Total de palabras: 13978

Total de caracteres: 75395



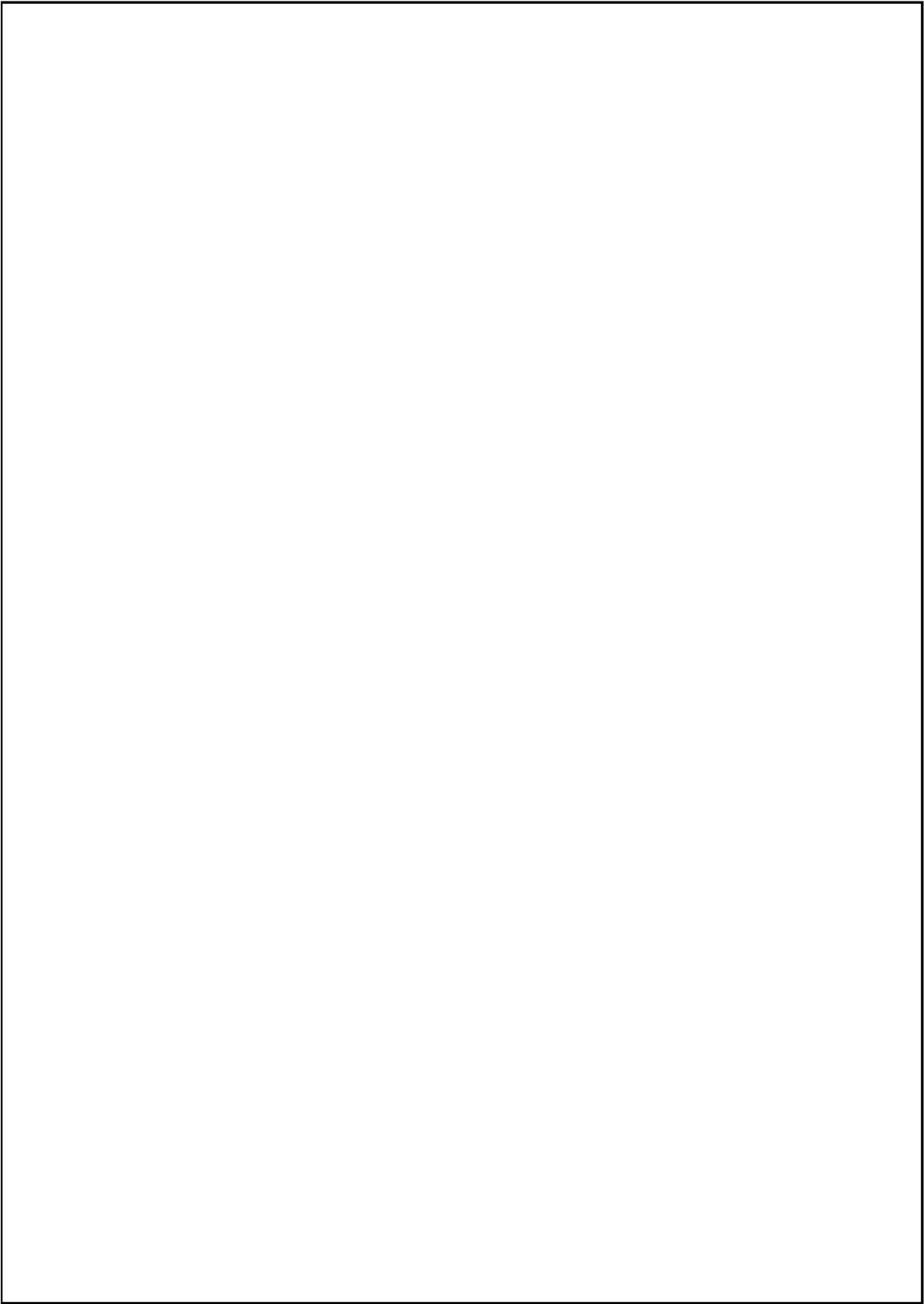
**The Evolution of the Corporate Social Responsibility and the
Socially Responsible Investment Concepts. Creation of a
Socially Responsible Stock Portfolio**

Master Thesis.

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Madrid, July 10th, 2018



Summary

Corporate Social Responsibility has been gaining importance as different historical events occur, important events such as the economic crisis of 2008 have caused a loss of confidence from the investor in the traditional business activities that do not contribute with any extra value to the society and environment.

Therefore, a new thought of socially responsible investment has been developed. This new trend of investment suggests adding several additional criteria to those already desired by traditional investors, maximize return for a certain level of risk.

Within this paper, we present a descriptive analysis of the evolution of Corporate Social Responsibility, its practical application and theoretical development during history, as well as the development and understanding of the Socially Responsible Investment.

Is the investor gaining an extra return by investing in a socially responsible portfolio? This question will be answered through the construction of a socially responsible portfolio and its comparison with the same portfolio but equally-weighted, without applying any socially responsible criteria.

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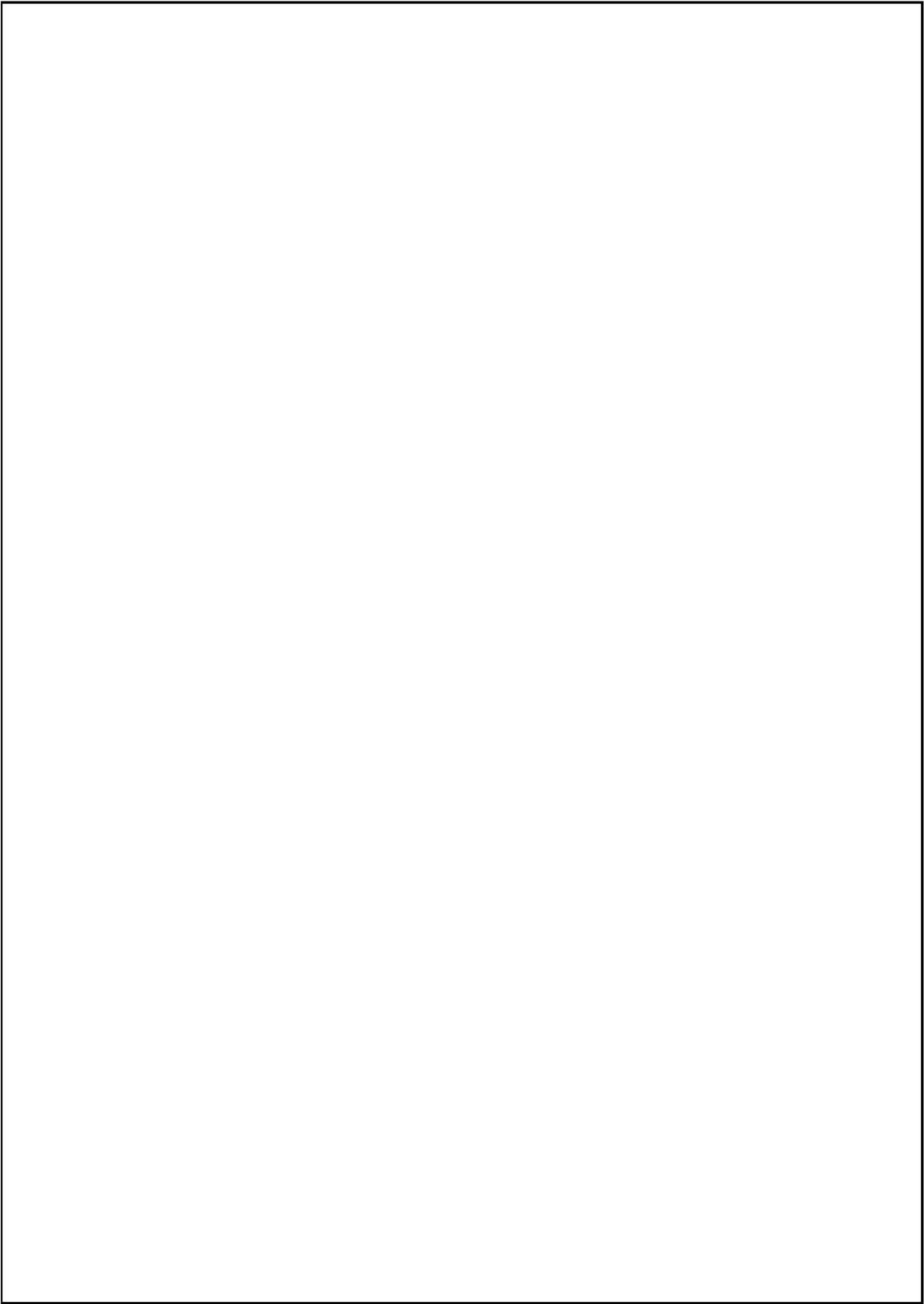
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Acronyms

CERES	Coalition for Environmentally Responsible Economies
CED	Committee for Economic Development
CSR	Corporate Social Responsibility
ESG	Environmental Social and Governance
GRI	Global Reporting Initiative
OECD	Organisation for Economic Co-operation and Development
SRI	Socially Responsible Investment
UNEP	United Nations Environment Program



Chapter 1. Introduction

Corporate Social Responsibility (CSR) is one of the most revolutionary concepts developed around business activities recently. CRS includes all the initiatives that a company implements to take responsibility for the effects that its activities have on the environment and social welfare. CRS is a new way of managing a company and making decisions, and its implementation constitutes one of the main contributions that a company can give back to the society.

The CSR theoretical framework has been developed by several authors in recent years. In addition, international organizations have developed guidelines to show companies how to conduct social, environmental and good corporate governance practices. The guidelines provided by these organizations have been considered the model on which the companies have to base their social policies. Due to the development of the concept of the CSR and its establishment among the different sectors of the economy new ways of investing have appeared, those investments are recognized as Socially Responsible Investments.

Socially Responsible Investment (SRI) is one of the most analysed concepts related to Corporate Social Responsibility. SRI is an investment specialty that takes into account not only financial criteria but also environmental, social and corporate governance criteria in order to achieve long-term higher-than-average returns and also a positive social impact. Consequently, investors are seeking for new types of investments that provide an extra-value to them.

The investment on funds, bonds, shares and other asset classes has derived during last years to develop a new flow of investment focused on providing an added value looked by the investors that do not only take into account the financial rewarding of an investment but also to accomplish some extra financial criteria.

A high number of new assets has been developed to satisfy this type of investors. Examples of these assets are “green bonds” or funds that establish in their descriptions social and environmental values.

Many organizations provide their own criteria of SRI and have designed tools to evaluate the performance of different companies and mutual funds. The usual measure provides a score to differentiate those socially responsible investments from those which are not contributing to the society or to the environment.

The final goal of this project consists on developing a portfolio of shares that includes companies considered as socially responsible companies by the Monitor of Corporate Reputation (Merco—Monitor Empresarial de Reputación Corporativa), one of the leading monitors in the world that evaluate corporate reputation since 2000.

1.1. Objectives

This main goal of this Master thesis is the design of a social responsible stock portfolio that will include the companies rated in Merco. The weight of the companies on the portfolio will depend on the score obtained on this monitor.

We will finally compare the return of this portfolio with the return of an equally-weighted portfolio of the same stocks.

To address this goal, firstly, we will analyse the regulatory framework of CSR, and, secondly, we will introduce the Socially Responsible Investments (SRI) concept as part of the CSR.

1.2. Structure and Methodology

The methodology followed in this project is twofold: descriptive and empirical.

We have structured this paper in five chapter.

In Chapter 1, we define our goals and expose our methodology and the structure of the paper.

In Chapter 2, we describe the concept of Corporate Social Responsibility (CSR), its history and evolution. We also explain the regulatory framework developed by international organizations and the main theories related to this concept.

In Chapter 3, we describe the concept of Social Responsible Investment (SRI), and the main SRI investment strategies.

In Chapter 4, we apply one of the SRI strategies to develop a socially responsible portfolio. The portfolio will be created based on the MERCO analysis. We will then compare the returns of this portfolio with an equally-weighted portfolio to conclude whether the use of RI criteria does create or does not create shareholders' value.

In Chapter 5, we show our main conclusions.

Chapter 2. Corporate Social Responsibility

2.1. History and Concept

Corporate Social Responsibility (CSR) has been the topic of many studies, in which different arguments have been confronted. CSR is an evolving concept, so it is important to know and analyse the evolution of the concept from the historical and academical point of view.

Bowen in 1950 described and provided the first a clear definition of the Corporate Social Responsibility, Bowen (1950) referred to the CRS as “The obligations of businessmen to pursue their policies, to make their decisions or to follow lines of action which are desirable in terms of the objectives and values of society”.

From 1950 to 1960 other authors such as Frederick (1960) also provided a definition considering the Bowen’s concept and referring to the Corporate Social Responsibility as the business activity that provide an extra value to the society.

The concept experienced a rapid development from the 1960s to 1970s due to the increasing the concern about the social problems, especially among the workers. Labour rights, consumer protection, and environmental preservation were some of the social movements that produce a significant development of the concept during this stage.

This period was characterized by the incorporation several policies that regulates the labour issues emerged during this period due to the wave of protests carried out by the workers of the industrial companies to ask for better labour conditions.

Davis (1973) and Johnson (1971) argued that is the company’s responsibility to undertake action in favour of the different stakeholders of the companies (employees, suppliers, clients...). Since then a new theory about the CSR involving the stakeholders started to be developed.

The development of the concept during this period was very important to understand how the concept establishes nowadays in our society but there were authors who disagree with the construction of a more socially company development. Friedman

(1962) who state that the first objective of the companies was not the incorporation of socially responsible policies into their activities; the main objective of the companies was to maximize the value of the shareholders (Friedman, 1962), this opinion was as a response to the CED in 1971.

Carroll (1979) provided a more developed description about the CSR in which established that the CSR is a matter concerning corporate responsibilities, social issues of businesses and corporate actions. Carroll constructed a theory based on a three-dimensional model involving the responsibilities that the company has in terms of economic, legal, ethical and philanthropy responsibilities, the attitude by which the companies react to some of the problems that arise during the managing of socially responsible policies and the social issues that the company is actively involved such as labour standards, human rights or the environment protection.

The model described by Carroll was taken as the reference model when establishing a CSR strategy to be integrated within the firm. The period from the 1980s to 1990s was mainly a revision of the former literature and the models developed by the different researchers. The four-dimensional model developed by Carroll was fully revised by other authors such as Wartick and Cochran (1985). These authors contributed to Carroll's model by an extension that involved a further development of the principles of corporate responsibility, the adoption and description of different policies as response to the social issue management and the extension of the actions of the companies to the more modern social issues since the society is continuously evolving.

Freeman (1984) introduced the stakeholder theory which will be explained in the next section of the project.

Wood (1991) linked the concept based on Carroll's three-dimension model to three institutional levels. These three-dimensional levels referred to company behaviour and outcomes are legitimacy, public responsibility, institutional and managerial discretion.

In XXI century, the main objective has been the implementation of initiatives to follow and develop and integrate socially responsible policies within the organization.

Some of the guidelines were those provided by United Nations, the OECD, the European Commission in 2011 among others.

The substitution of the refinement of the CSR concept to the implementation of CSR initiatives is due to the intensified challenges that the firms face, the development at a fast pace of the globalization and the environmental concerning among other situations have provoked the development of initiatives and guidelines to follow to implement those initiatives in the core business of the companies and take those into account at the time of defining the corporate's strategy.

2.2. Corporate Social Responsibility Standards

There is not a regulatory framework that state that all companies must follow certain rules to accomplish with the Corporate Social Responsibility principles. There have been developed several voluntary regulations by supranational public or private institutions, such as the United Nations or the European Commission. These voluntary regulations or standards have been constructed as a response to the lack of regulation provided at a national level.

It is difficult to develop a single regulatory framework to be followed by companies because the social and environmental issues are treated indifferent ways depending on the criteria used and the companies' activities. Each company is free to adapt its policies to the different standards offered by the institutional corporations.

These standards are based on the social and environmental impact of the companies and are developed following a multi-stakeholder codes and initiatives in order to adequate voluntary actions to report the companies' CSR policies.

These guidelines that involved areas such as:

- Ethics and good governance
- Environmental issues
- Community

- Workplace
- Markets
- Human Right

When we make reference to the multi-stakeholder code, we include the different initiatives carried out by different institutions in order to improve the social, environmental and corporate governance policies and performance. The concept of multi-stakeholder initiative refers to those groups and factors that a company affect with the development of its activities and thus, the company has to conduct policies in order to preserve their rights and to protect them by performing activities directly to provide an extra value out of their business activities.

The different standards developed around the multi-stakeholder concept have different approaches, regarding the monitoring and reporting of CRS policies; Some of them affects the performance and impact or the CSR actions.

The function and the consequences of the initiatives have performed a key role at the time of promoting the correct implementation and consequent reporting of all the actions and policies that a company perform within a CSR framework. The development of the initiatives has contributed to the extension of the application of CRS concept and policies within companies.

Some of these standards that have been chosen in order to explain how they work and to show their importance at the time of developing a CSR strategy:

- Global Reporting Initiative (GRI)
- International Organization for Standardization: ISO 2600
- Institute for Social and Ethical Accountability: AA 1000

2.2.1. Global Reporting Initiative (GRI)

GRI is an independent organization with the main goal of improving the rigour and the quality of the sustainable corporate reports, including environmental, social and economic aspects. The organization is a collaboration of many other institutions such as

United Nations Environment Program (UNEP) or the Coalition for Environmentally Responsible Economies (CERES) among others.

The GRI Sustainability reporting Standards were the first standard released and the objective of the standard are to develop corporate reports and establish some guidelines to follow in order to create a homogenous report, including economic social an environmental aspect, with the purpose of paying attention to these topics previously mentioned.

The guidelines provide by the international institutions involve the general content at the time of elaborating a sustainability report and it also develops some points to take into consideration depending on the sector. It is obvious that the GRI guidelines are open to different interpretations depending on the sector and the activity that the company develops, therefore it integrates some guidelines to specific sectors.

2.2.2. International Organisation for Standardization: ISO 26000

ISO 26000 is a voluntary rule for all public and private companies that incorporate some recommendation to follow.

It consists in recommendations about principles and the main issues to consider, background, trends and characteristics about the social responsibility, practices in relation to social responsibility, integration, implementation and promotion of a social responsible behaviour with the whole organization throughout their its policies and practices.

This rule is very useful to the contribution to carry out a stainable development, and its objective is to encourage the legal fulfilment, recognising that thee track the law is a main aspect to consider in whatever organization and one of the gaols of the law is to carry out activities that involve a social responsiveness.

This guideline covers 7 principal aspects:

1. Corporate governance

2. Human rights
3. Relations and work conditions
4. Environmental issues
5. Practices to fulfil with the legislation
6. Consumers and communities
7. Regional development

2.2.3. Institute for Social and Ethical Accountability AA1000

The AA1000 series of standards are principles based on standard and frameworks that covers all the aspects that have relation with the public report of accountability and the financial result of a company

It implies a reference framework to understand and improve the ethic function and a tool to be judge by third parties.

This is based on 3 different kinds of principles:

1. Rule based on stakeholders, how is the organization behaviour with the stakeholders.
2. Accountability principles, these principles involve the responsibility of carrying out aspects in relation with transparency and assumptions of responsiveness over the impacts of its own policies, decision, activities and products associated with the organization
3. Ensuring Sustainability, it establishes the requirement to ensure a sustainable development.

The AA1000 rule has a main goal, to reflect and transmit the importance of accountability, justified and explain the acts and omissions to stakeholders. In this way it defines that the process of being transparent can be accomplish by following three rules:

1. Responsibility over acts and omissions
2. Accountability
3. Obligation on follow the law

2.3. Theoretical Models

The current developments that took place in our society in the last years that have sifted the businesses strategies into a model in which the formation of sustainable relationships have a greater importance.

The current society has acquired a more pluralistic view where many stakeholders represent all the social sectors, consumers, employees, suppliers and others that are considering developing our strategy (Freeman, 1984).

The starting point to carry out a good corporate responsibility has varied during the time where different theories have considered, on the one hand the classic model, or the one referred to shareholder or the socioeconomic model or “Stakeholder approach”.

The theory that is currently using to implement strategically a Corporate Social Responsibility is the socioeconomic one or stakeholders’ theory.

The company must attend the shareholders desires but also must take into consideration other groups in our society that are directly or indirectly affected by the company’s activity and its goals (Freeman, 1988)

2.3.1. Socioeconomic Theory or Stakeholders Theory

Freeman (1984) published, “Strategic Management: A stakeholder Approach”, mainly covering the idea that when a company is involved in a more complex environment have goals that affect a higher quantity of stakeholders.

A new explication model about the social responsibility was born, it states that the companies contribute to the wellbeing of the society and their goals go further away from the goal of maximizing the profits in the short run.

The CSR is a concept that states that the companies create value to their shareholders by its operating activities through the correct management of relation with the different stakeholders. It is a new way of understanding the company against the

classical model of shareholders where the main goal of the firm is to maximize their value without considering the external agents.

The classical model based on the theory of Friedman (1970) “Company focus on profits and shareholders”, is implicit in this new approach but it is also implicit the attendance to all the stakeholders and it does not seek only in the maximizing of the benefits in the short run.

On the other hand, it is important to mention that the socioeconomic model and the classical one agrees in the fact that the first responsibility of the firm is to survive, and this is accomplished by focusing its attention to profit making.

Summarizing the model in briefly, the company must set economic and social goals, not the economic ones are more important than the social goals but at the end the company have to consider that some social activities can lead to continuing losses.

Termes (1995) define the objective as a bi-dimensional objective “create wealth to all the participant in the firm and prove a trustee service to the society where it is based”

The modern researches have suggested that the company, as institutions controls a big part of the resources of the society and this way it has to include the social aspects in the strategic process of making decisions (Menon,1997).

Conducting a strategy in this foundation will construct a bond with the society establishing a unique corporate image, contributing to solve problems (Meno,1997)

The development of this model and the integration of this one strategic process of the company is linked to many factors such as the privatization of the economy, technology development or regulatory changes.

2.3.2. Carroll’s model of “performance”

One of the most famous researchers in the socioeconomic field of research is Carroll (1979), designed a tool that permits the integration of all the dimensions involved inside the CSR concept.

The model is called Organizational Social Performance Model that is based on three dimensions:

1. The attitude of the company to the Corporate social responsibility
2. Levels of responsibility assumed by the company
3. Social activities involved

The first dimension, the attitude of the company to the Corporate Social Responsibility, collects the different theories that an organization can adopt when it faced to the corporate social responsibility and how it will respond to the social matters.

These theories are:

1. The reactive theory that implies that there is some external factor that force companies to take some action to improve its social results.
2. The defensive theory that implies a closer relation of the company to the Corporate responsibility concepts and social actions due to the external pressures that the company perceive
3. The accommodative theory is the one adopted by companies that decide to act in the corporate responsibility field because the company thinks that the actions that imply to follow this corporate social responsibility are correct and it does not analyse the results or the consequences of its actions, it carries out this kind of actions from a voluntaries way of doing it prior to being forced to carrying them out.
4. The last theory to be considered is the proactive theory that tries to develop strategies in the corporate social responsibility field to be innovative, integrating social policies, good practices in general in order to anticipate the integration of this practices as corporate social responsibility practices in the society.

The second dimension of the model refers to the responsibility that the company face from the operating point of view as an organization.

After providing a set of dimensions and all the aspects that these imply, Carrol (1979) state a four-definition concept of the corporate social responsibility that intends to

place the legal and economic expectations linking them with the highest number of social worries.

It includes four kinds of responsibility and distinguish the following aspects:

1. **Economic responsibility:** The business corporation is the economic unit in charge of produce all the goods and services that the society requires, and the corporations includes these goods and services at a fair price. This constitutes a responsibility required by the society.

2. **Legal Responsibility:** This responsibility means the fulfilment of all the regulations and the law, this responsible performance permits people to allow companies to assume this production process. It has been created rules and regulations in which a company operate.

3. **Ethic responsibility:** There are the activities and behaviours expected to perform by a company, is the most difficult area in which the company has to deal with, people expect to achieve the result for this ethics responsibilities.

4. **Discretionary responsibility, voluntary or philanthropic:** It consists on the decisions assuming responsibility just from the desire of doing a voluntary contribution to some social problems. It is a desirable responsibility of the society.

To sum up the all these responsibilities mentioned before are (the legal, economic, ethical and discretionary expectations of the society according to the companies in at a given point in time.

2.3.3. Quazy & O'Brien's bidimensional model

Quazy&O'Brien (2000) adapted the perspective about the Corporate social responsibility in a two-dimension framework.

The first dimension is the area of the social responsibility and the second is the area related to the results of the social commitment of the business.

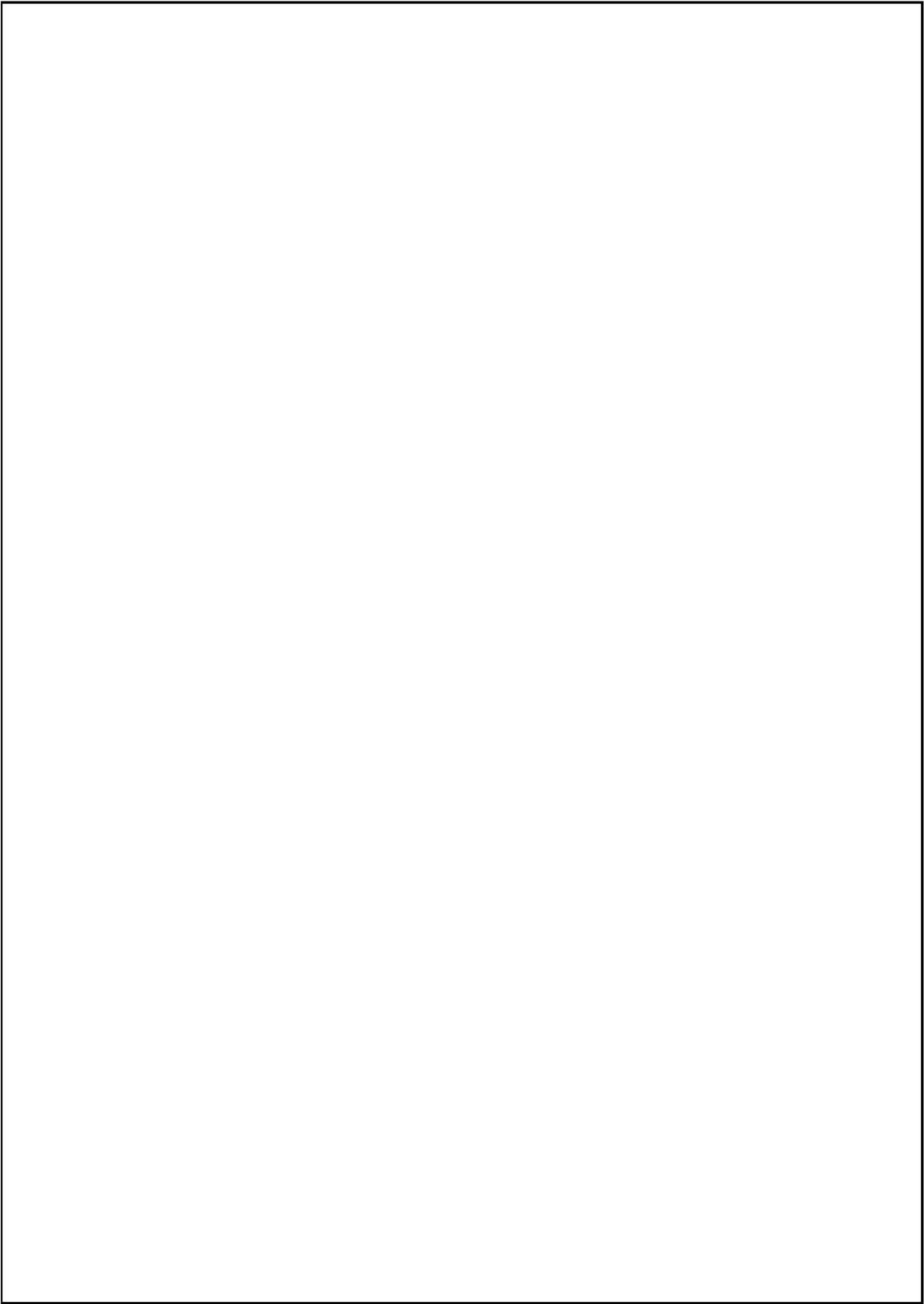
Based on these dimensions emerge a corporate social responsibility model represented graphically by two cartesian axis.

On the one hand, a reduce perspective to a more opened perspective of the social responsibility. One end of the axis represents those companies focus on maximizing the profits under the regulations, by contrast with the other part of the axis that represents the companies that conceive the social responsibility in a broader way, it goes further from the regulation and the main goals are the environmental protection, community development, resources efficiency and philanthropy

On the other hand, the vertical axis illustrates two end concepts when we talk about the consequences of the social activity. This axis has two different parts the one referred to the expenses of the economic implication and the possible profits achieved by acquiring a social responsibility strategy.

As a result of the creation of the graphic Quazy&O'Brien (2000) identify four main approaches:

1. **Classic approach:** It is the primary perspective of the corporate social responsibility. Companies pretend the objective of profit maximization and consider that the social implication generates a net cost and no real benefit.
2. **Socioeconomic approach:** It determines that acquiring a social responsibility the company can have a net profit linked directly with a cost saving model, a less legislation costs for instance. It actually implies the development a multitask function, profit maximization and attend to social demands.
3. **Philanthropic approach:** It is a broad perspective of the concept of corporate social responsibility, it explains the disposal of the companies to do donations, without considering that it represents a net cost in their accounts, this attitude can be related to an ethical or altruist responsibility.
4. **Modern approach:** This modern approach entails a wide relation with the society and the profit abstention in the long and short run as a result of the social corporative implication.



Chapter 3. Socially Responsible Investment

3.1. Concept and evolution

During the last decade, a new trend has experimented a huge increase among the different international investors, the Socially Responsible Investment. This interest appeared due to an increase in the social and environmental concerns and has evolved until becoming a more complex concept.

The Socially Responsible Investment (SRI) is a modern investment philosophy whose particularity is to add to the traditional financial variables (ie. return and the risk) extra-financial variables such as the ESG factors, environmental, social and governance impact with the aim to contribute to a more sustainable economy. SRI was introduced as a concept in the US during the 70's and expanded through the UK in the 80's.

One major fact that contributed to the SRI development was the legislation, (US SIF, 2010), many of the pension funds that were at the moment in the United States were forced by the legislation to invest a certain percentage of their capital in ethical/conventional funds. During the last few years, a new category has been added to the concept of SRI, the corporate governance. These considerations are included in the same concept and are known as Environmental Social and Governance (ESG) criteria.

Before starting to develop the ESG criteria and show the importance of the concept is important to give a clear definition of what the society and the different institutions understand by SRI. According to the report of Eurosif (2016), the ISR can be defined as "Sustainable and Responsible Investment (SRI) is a long-term oriented investment approach, which integrates ESG factors in the research, analysis and selection process of securities within an investment portfolio. It combines fundamental analysis and engagement with an evaluation of ESG factors in order to better capture long-term returns for investors, and to benefit society by influencing the behaviour of companies".

Cheah et al., (2011) or Belghitar et al (2014) have conducted studies about the incorporation of specific socially responsible criteria in order to choose the investment universe. They have specified that if the investor want to include these criteria in the

portfolio formation he would be penalise and the investor probably even pay a penalty, regarding the return of the portfolio, to include ESG criteria.

Therefore, the question proposed in this paper is whether the creation of a stock portfolio within specific social responsible criteria the investor will perform or not as well as the equally-weighted portfolio, that why we compare the portfolio constructed through socially responsible criteria with the same portfolio equally weighted without any kind of distinctions or preference among the different companies.

We will perform an analysis of the portfolio construction in the following chapter, It is important to point out a clarification, the distinction between the SRI with the philanthropy investment: philanthropy investments consist on donning part of the return obtained but it is not characterized by following certain criteria and invest directly in those companies of funds which met them.

The philanthropy promotes the social action, but it does not promote necessarily the Corporate Social Responsibility and the SRI, and it does not include extra-financial criteria in their investment policies. The Economic factor is the difference between the SRI and an activity merely altruist. The ESG criteria are the following:

1. Environmental
 - a. Waste Management
 - b. Existence of environmental policies
 - c. Environmental objectives
 - d. Elaboration of an environmental report
2. Social Responsibility
 - a. Dialogue with stakeholders
 - b. Development of human capital
 - c. Knowledge management
 - d. Indicator of labour practices
 - e. Social report
3. Corporate Governance
 - a. Investor Relationship
 - b. Shareholders rights

c. Audit and internal controls

This are some of the ESG criteria included at the time of carrying out a social and responsible investments. In the following graph is illustrated some of the definitions provided by some relevant authors in the field.

3.2. Main drivers of the SRI

Although SRI is still a not well-known concept, its appearance occurred many decades ago.

The lately evolution of the concept and its appearance is linked to the several frauds and scandals of many of the big companies across the world which have forced population to ask for companies more transparent, responsible, sustainable and to carry out new sustainable strategies in order to ensure a better behaviour against the population and the environment.

The drivers that have encouraged the SRI to become more popular and to be taken into account by most of the companies are those that were stated in the report “Inversión Responsable Guía para el Sector de Private Equity en España” (PWC,2012).

a. The **investors’ demand** is one of the main drivers. During the last year, the effect of investing in a more responsible and sustainable way have affected the commercial activity and the reputation of the companies. In this sense, it has increased the number of fund managers, investment analyst that have taken into account the importance of the financial markets of social responsibility, sustainability and corporate governance of the companies has drivers to manage the risk and to look for investment in the medium and long run. One important factor to take into consideration is the Principles of the Responsible Investment of United Nations that have encouraged investors to demand evidence that this kind of actions is effective.

b. **Image** is another important driver that has to push the SRI to a more important concept in our society. The identification and the management of the ESG criteria have contributed to avoiding problems such as an environmental impact or not following and respecting the labour rights that can conclude into a serious reputation problem difficult

to be restored. The companies have incorporated into their strategies social and environmental policies that contribute to preserving the reputation and at the same time attracting investors and is also a way of managing risk. Apart from attracting new investors, these policies can have a high impact in the reputation of the company and therefore in their benefits and can anticipate futures regulatory frameworks of corporate governance or environmental and social impacts

c. **Regulation** is another factor that has influenced in the development of these actions previously mentioned, regulation has forced companies that were low developed in this field to put more attention and follow the trend despite the voluntary regulation developed within the CSR, more and more investors and institutions seek for the fulfilment of this voluntary regulation.

3.3. Incorporation of the Social Responsibility return to the Portfolio Theories.

The theory of the Efficient Portfolio proposed by Markovitz in 1952 asses the existence or not of a relationship between risk and return. Diversification between different asset classes allow a risk reduction and better returns.

The development of Markovitz theory is based on some established criteria, the rational behaviour of investors, the aversion to the risk and the desire of maximizing the return within a time horizon previously defined. It means that investors will choose depending on the criteria the most efficient portfolio within all the different possible portfolio combinations, as the Markovitz theory states. The efficient portfolios described by Markovitz tries to maximize the expected returns and minimize the risk measured by the variance of the portfolio.

The essence of the portfolio analysis is based on the fact that depending on the characteristics of each investor, the portfolio will contain those assets that on the one hand, minimize the risk for a given return, and maximize the return for a given risk.

The statement previously mentioned is the first step in which the SRI differs. The SRI objectives are based in a social, ethical or environmental. Jointly with the return

expected from the portfolio is added to that social return demanded by the investor. This is an opposed statement to the Markovitz or the Capital Asset Pricing Model essence or maximization of the investor criteria in terms of wealth.

The problem arises at the moment the social return is included in the financial model. The social investment has characteristics that permits the investor to include his personal value and social matters within his financial investment objectives.

3.3.1. Strategies of the ISR

The yearly report Eurosif in 2012 “European SRI Study” conduct a set of investment processes that are referred in the study as different strategies of conducting a socially responsible investment (SRI).

The strategies are followed to construct the portfolio of funds, bonds, stock or other responsible asset classes and companies according to some specific criteria detailed in the strategy that will be described in this section.

These strategies are considered in the studies such as the “Core SRI”. The different strategies can be divided into two groups: negative screening and positive screening approaches.

The differences between the negative and the positive screening are those that take into consideration the company or the asset class. Hancock (2005) described the positive screening as the funds that incorporate social responsibility at the time off measuring and evaluating the financial risk.

The negative screening consists on excluding that industries, sectors or companies that are not “ethical”. Those industries do not provide a social benefit regarding their business activities such as the tobacco industries or alcohol industry.

These strategies developed by Eurosif (2016) are:

- Exclusion from the investment universe
- Norm-based screening

- Best-in-class investment selection
- Sustainability themed investment
- ESG integration
- Engagement and voting on sustainability matters
- Impact investing

1. Exclusion from the Investment Universe

The study of the Eurosif (2012) defined this strategy as “An approach that excludes specific investments or classes of investment from the investible universe such as companies, sectors, or countries”.

This strategy that is a negative screening strategy because the factors that the strategy follows are excluding factors. So, following them the investment universe of asset classes and companies is reduced.

The criteria are followed in order to exclude one company from the investment universe of an organization. These organizations try to align the policies of the fund to the ASG criteria addressed and defined by each organization.

According the study conducted by Spainsif (2016), this strategy is the one most followed in Spain regarding the Socially Responsible Investments.

2. Norm-Based Screening

This type of strategy is conducted by a negative screening. This strategy consists on taking into consideration international policies social policies, environmental, human rights policies or labour rights.

At the time of conducting the analysis, those companies that do not follow the norm based on the statement of the organization or those that the investor follows will be excluded from the possible companies or asset classes of the investment universe of the investor.

These are norms developed by international organizations such as the OECD, United Nations or other organizations that have developed standards and accepted policies of the SRI.

This strategy is considered to be a further step from the strategy based on the simple exclusion mentioned in before.

3. Best-in-Class Investment Selection

The strategy called best-in-class, also called best in the sector by other authors, is the strategy followed by investors and organization to look for the best performed in one sectors.

The best-in-class strategy is an example of the positive screening approach because it tries to reward the companies that are the best in their sector regarding some ESG criteria previously addressed.

Michelson et al. (2004) clarify that following these strategies, investors may consider that a company that is the most socially responsible within sectors carry out a non-ethical business activity not ethical such as mining or a company that produce alcoholic drinks. In this case investors will reward a company just because of the comparison of the company within the sector.

The investor address ESG criteria to the characteristics of the social responsible portfolio that is constructing.

Another criteria to implement the best-in-class strategy is to base our stock picking on the information proportioned by a stock index. One of the advantages of replicating a stock index is that it permits the implementation of a passive investment strategy and rebalance the portfolio following the criteria based before the stock picking.

On the other hand, although the replication of an index is less expensive, and it implies a lower effort has a disadvantage. This disadvantage is that the investor loses the capacity of stablishing his own ESG criteria and loses the capacity to allocate weights.

The third possibility is to focus our investment in the rating provided by rating organizations that establish a valuation of each of the companies involved in the analysis according to certain criteria previously established. This rating agencies value investment funds as well as companies.

4. Sustainability Themed Investment

This strategy invests in companies or funds related to a specific sector within some defined characteristics such as utilities, real state or other. In this case the strategy is focused on Socially Responsible Investments. The topic that relates this category is the sustainability.

The most developed and popular investment within this strategy is the investment in investment funds. These funds follow a sustainability strategy of stock picking in their selection and normally, are rated by some prestigious agency giving a certain rate or classification such as the investment funds classified as environmental, social and government criteria (ESG funds).

5. ESG Integration

This strategy consists on including in the analysis performed the portfolio managers of an extra-financial analysis to construct the portfolio.

The simplest approach to follow this strategy is to implement the stock picking based on the financial criteria established by the organization and after, the organization carrying out another analysis to look for and to exclude those companies that do not follow the ESG criteria established and followed by the organization.

This strategy is similar to the Best-in-Class strategy but the difference between both strategies is that the ESG integration strategy based the stock picking on the financial analysis and extra-financial analysis while the best-in-class strategy is based just on the extra-financial analysis.

6. Engagement and voting on sustainability matters

The strategy of engagement and voting is defined by the Eurosif (2012) such as “Engagement activities and active ownership through voting of shares and engagement with companies on ESG matters. This is a long-term process, seeking to influence behaviour or increase disclosure”.

The strategy involves the participation of the investor into the investment strategies and decisions in order to established new investment criteria. The company, in many occasions, change certain activities and behaviours to satisfy the desires and request of the shareholders of the company, in this way the company increase the loyalty of its investors.

The investors maintain an active dialog with the company and those can influence in the activity and portfolio investment of the company.

7. Impact Investing

It can be defined by the investments made with the purpose of generate a social or environmental impact aligned with the financial return expected. It is considered as an emerging asset class and this explains the lack of information and the low quantity of research related to impact investing.

All the studies coincide in that the social or environment impact must be measurable.

The different investments regarding this strategy and stated by the Spainsif study in 2016 are:

1. Social venture capital
2. Crowdfunding
3. Green bonds and social bonds
4. Social impact bonds

The description of the different strategies to follow when constructing a socially investment portfolio will be very useful to develop our strategy of portfolio creation in one of them.

3.3.2. Demographic Characteristics of the Social Responsible Investor

The financial literature has developed several investigations with the aim of defining the social investors profile. These investigations have been done by many authors whose investigations have been chosen as a theoretical model in order to establish a uniform profile definition.

Rosen et al. (1991), Schueth (2003) are some of the authors that have conducted investigations of the social responsible profile investors. Most of the authors focus the analysis in the comparison between the conventional investor and the socially responsible.

There are many opinions about the profile of the social responsible investor, Rosen et al (1991) give some characteristics such as the social responsible investor is usually a young person with high levels of education. Tippet and Leung (2001) add some other characteristics related with the investments, the investment portfolio it is usually smaller and less diversified than the portfolios of the conventional investor.

The results obtained, and the differences found in terms of attitude, behaviour, believes, and other not subjective differences are important to take them into account at the time of making an approach of the profile of the social responsible investors.

The results obtained indicates that the socially responsible investors behave in a different way than the conventional investors and this fact has important implications from the theoretical point of view but also from the practical point of view of the investments decisions.

Chapter 4. The construction of a SRI portfolio.

4.1. Selection Criteria

In this section, we will describe the criteria used to select our portfolio. The criteria used are based on the “Análisis Merco”. This analysis is conducted yearly, and it describes many different criteria regarding the social responsibility, the reputation of the company and the brand among others and provides a scoring in each of the categories.

In order to select the companies that are going to form the social and responsible portfolio, I am going to focus on the analysis “Merco Responsabilidad y Gobierno Corporativo”.

The monitor performs a questionnaire, in which the monitor evaluates many different competences that are considered important in order to identify a company as a social and responsible company.

Each year the monitor provides a ranking of the most responsible companies. The maximum score for the first company in the ranking and, therefore, the most responsible one according to the criteria described by the institution, is 10.000 points.

The ranking has been elaborated since 2011. In 2011 the analysis only ranked 50 companies, but more companies were incorporated, reaching 100 companies ranked in 2013.

In order to construct a portfolio with a stable number of companies and more uniform along the time, we have selected the 15 companies of the IBEX 35 were included in the analysis in 2011 without adding any at the time the monitor was adding more. The analysis performed analysis of this companies from 2011 to 2017 from the point of view of the points given and its position in the ranking of the fifteen companies.

The “Monitor Empresarial de Reputación Corporativa”, MERCO, is reference tool in order to measure the corporate reputation of the companies that operate in Spain, from the public point of view and the point of view off the organizations. MERCO is one of the most important and recognized monitors of analysis and research in Spain.

The analysis is a process based on different stages that have the goal of collecting the different data from different sources of information. The result is an index that constructs a ranking published annually.

The different process from which the information is collected is the following.

- Director questionnaire
- Expert evaluation
- Direct evaluation
- Merco Consumption
- Merco Talent

4.2. Construction of the portfolio

As it has been mentioned in the previous section the criteria chosen in order to construct the socially responsible portfolio is the criteria established by the analysis MERCO. Before explaining and develop the model is important to highlight the objectives that the empirical study is looking for.

The objective is to design a socially responsible portfolio based on some certain criteria and compare to an equally weighted portfolio of the same stocks in order to compare and analyses that if following certain socially responsible criteria the investor could win an extra return. The study is based on historical prices and the return of each of the companies.

There are numerous criteria to follow to construct the portfolio and to conduct the analysis. Much international public and private organizations develop rankings based on certain criteria to evaluate the effort of the companies to carry out their normal business activity considering policies that are socially responsible.

The time horizon of the portfolio analysis is 6 years, from 2011 to 2017. The fact that drives this decision is because the analysis MERCO is quite new in terms of social responsibility and the first analysis conducted was in 2011 and the last one in 2018.

The companies that have been chosen are those companies that appeared in the first analysis conducted by MERCO in 2011 that were included in the IBEX35. The analysis MERCO established a score for each of the companies depending on the criteria mentioned in the previous section of the project.

The following list illustrates the companies chosen and the sector where these companies operate.

Table 1. Portfolio Companies

Companies	Sector
SANTANDER BBVA CAIXABANK MAPFRE	Financial Services
REPSOL IBERDROLA ENDESA GAS NATURAL	Oil and Energy
INDITEX	Consumer goods
TELEFONICA INDRA	Technology and telecom
FERROVIAL ABERTIS ACCIONA	Construction and Infrastructure

4.3. Portfolio Development

In the following sections we will describe how the responsible portfolio has been created and the formulas used in order to get the return, the risk of the portfolio and the Sharpe Ratio.

Before explaining the risk and return obtention, it is important to describe the weights that each company is going to have in the portfolio.

As we have mentioned before, MERCO establishes a score for each company depending on certain criteria and this score is what is going to condition the position in the ranking. The portfolio will be rebalanced each year according to the new analysis released by MERCO.

Each year the weights will be calculated by dividing the total score of the portfolio this year by the score of each of the companies.

Equation 2. Portfolio Companies

$$w = \frac{Score}{\sum Score}$$

In this way each company will have its own score based on the result of the analysis, rewarding those companies whose score is higher.

The calculation of the weights of each of the portfolio will be the main difference among them, regarding the calculation procedures. The equally-weighted portfolio in contrast to the socially responsible portfolio, will be calculated by giving the same weights to all the companies than are in our portfolio.

The “Annex 1” illustrates the different scores for each year as well as the weights and the ranking of the companies.

The portfolio is rebalanced each year due to the new MERCO analysis and without changing any of the companies that were included in 2011 in order to make the portfolio comparison more stable and homogeneous.

The following step in the portfolio construction is to get the historical prices of each of the stocks, from 2011 to 2017. As each year the portfolio is rebalanced, each year is going to be analysed in dependently way from the other years. This is the measure chosen in order to perform a comparison on a yearly basis.

The analysis will consist on comparing the results obtained by the Socially Responsible portfolio and the Equally Weighted Portfolio.

Our portfolio has a specific consideration that is important when explaining it. It is assumed that the portfolio is maintained during the whole year, maintaining the same weights for all the stock the complete year.

Considering the previous assumption, the return will be calculated as the difference in price between the first price analyzed within the year and the last one considering the difference the return obtained by the investor.

Equation 3. Return Calculation

$$R = \left(\frac{P_n}{P_1}\right) - 1$$

The equation illustrates the calculation of the return of each company within a one-year period, being R the yearly return, P_n the price at the end of the period and P_1 the first price of the period.

Another important variable that considered to be a differentiate variable to compare between both portfolio is the standard deviation or the risk of the portfolio. The standard deviation is measured by the square root of the variance of the portfolio.

In this case as it is modeled in excel we are going to use the function DESVEST to get the standard deviation of each company within a one-year period. The standard deviation will be calculated over the daily returns of the portfolio, illustrated in the following formula.

Equation 4. Daily Portfolio Return Calculation

$$Rr = \left(\frac{P_1}{P_{n-1}} \right) - 1$$

The daily returns of the stock price of each of the companies is calculated in the same way as it has been done to calculate the return of the company within a year, the unique difference is that it is calculate daily, so the return is calculated as the difference between one day and the previous one.

When we calculate the volatility in terms of the daily returns of the company is important to consider that this volatility is based on a daily based and we need to annualize it by multiplying it by the square root of 250, the days at which the stock market is operating the variation in prices occur.

Equation 5. Annual Standard Deviation

$$Annual (\sigma) = Daily (\sigma) \times \sqrt{250}$$

In the equation σ , sigma, represents the volatility of the returns performance previously calculated of the company.

4.4. Portfolio Analysis

In this section we will analyse the different results obtained by the model created to construct the portfolio. Prior to the explanation of the results in important to highlight how the results have been calculated. There are two different variables to conduct the analysis.

The first variable is the return of the portfolio that has been calculated multiplying the weights of each company in one year by the return of the company that year. The calculation of the return is illustrated in the following equation.

Equation 6. Portfolio Return

$$R_{year} = \sum (W_i^j \times R_i^j)$$

R_{year} is the return obtained by the combination of all the yearly returns of each company, W_i^j , it represents the weight of each company (j) in one specific year (i), R_i^j , it represents the yearly return of one company (j) in one specific year (i)

The risk described by the standard deviation of the portfolio is the square root of the variance, and the variance will be calculated through the construction of 3 matrixes, a correlation matrix between the returns of the different companies involve in the portfolio, an intermediate matrix construct by the multiplication of the standard deviation previously obtained of each of the companies annualized and a covariance matrix elaborated based on the intermediate matrix and the correlation matrix.

Table 7. Results

	Socially Repsonsible portfolio		Equally-Weighted Portfolio	
	Return	Risk	Return	Risk
2011	-4,80%	14,21%	-0,42%	14,14%
2012	-4,32%	15,57%	-3%	15,61%
2013	20,54%	12,09%	21,42%	12,05%
2014	1,34%	11,85%	0,56%	12,27%
2015	-3,28%	6,14%	-2,35%	5,84%
2016	4,57%	13,50%	4,20%	13,34%
2017	5,60%	8,89%	5,93%	8,88%

To perform the analysis, we are going to compare both portfolios, socially responsible weighted portfolio and the equally weighted portfolio. The result is presented on a yearly basis which help to compare both portfolios within the same period.

2011

In 2011 the financial markets were affected by a permanent uncertainty about the capacity of the developed economies to consolidate the economy's recovery from the financial crisis. Three years after the beginning of the financial crisis the banks and the economies of the world were affected by though consequences.

The results of the Spanish listed companies reflected a deterioration and cannot be possible to consolidate the recovery started in 2010. Companies continued largely leveraged and the difficulties among them were increasing. Somehow the macroeconomic framework of the world and especially Spain which was heavily hit by the economic crisis have influenced in the evolution of both portfolios.

Both portfolios have achieved a negative return during this year. Particularly the socially responsible portfolio with a -4,80% of return in contrast to the low, although a negative return of the portfolio equally weighted of 0,42%. One of the reasons that explain the difference is the weight given to companies that not achieve good result during 2011.

Regarding the volatility, both portfolios have a high volatility and following the same path as the return, the socially responsible portfolio has achieved a higher volatility than the equally-weighted portfolio, 14,21% and 14,14% respectively.

2012

The economies around the world were suffering the consequence of the economic crisis. The process of recover become more and more difficult between the economies but especially among Europeans economies such as Spain or Italy.

These countries needed a reduction of the leverage in the public and private sectors and the process of reducing the leverage appeared to be a difficult and long process. In the case of Spain, the recovery was not as good as it was in other countries in Europe.

Spain asked for financial aid to the EU authorities to recapitalise the financial system for amount of €100bn, although finally €50bn were used. In August 2012, ECB announced a program to acquire sovereign debt.

The results of the listed companies were not good and the IBEX 35 fell about a 30% during the year and the results of the listed companies in Spain suffered the consequences of the economic crisis.

Both portfolios suffered again of a negative result at the end of the year. Compared with the previous years the socially responsible portfolio behaves in the same way as achieving a return of -4,32%. On the other hand, the equally weighted portfolio suffered a decrease in the return achieving a -3% of return, however, it got a higher return than the socially responsible portfolio. Regarding volatility, both portfolios increase in volatility achieving rates of 15%.

2013

The effects of the policies and the intervention of the Central Banks in the financial markets of the developed countries begin to have a positive impact. Europe began to show signs of recovery and especially Spain. Spain was one of the countries with the highest positive forecast in terms of growth and recovery for the following years, the public and private debt was reduced considerably and the risk premium against Germany was reduced to 4%.

All this prospects and events had a high impact on the behavior of the investors and on the behavior of the financial market. The recovery of the Spanish banking sector was one of the key factors to the success and recovery of the benefit of the listed companies in the Spanish financial market aligned with the increase in foreign investment.

This recovery is translated into both portfolios in terms of returns and volatility. The effect of the intervention of the European Central Bank within the Spanish market is a factor to bear in mind at the time of analysing both portfolios.

The socially responsible portfolio earns a positive return of 20,54% and the equally weighted portfolio a 21,42%, the volatility compared to the previous years have been reduced considerably achieving both portfolio a rate of 12%. The equally weighted portfolio has obtained better results than the socially responsible portfolio in terms of return and volatility.

2014

Due to the expansive measure implemented by the European Central Bank, the European financial markets improved considerably and guarantee a stability within the Eurozone.

The Spanish public debt was reduced considerably, and the leverage of the private sector reduces its levels as well. The prospects of the Spanish economy are improving year by year and the confidence in the financial system increased. All these measures helped to reduce the high levels of the volatility of the market over the last years.

These improvements have notably felt in both portfolios in terms of stability and constant rates of return and prices. The socially responsible return as the table illustrates have had a better performance in terms of return and volatility compared to the equally weighted portfolio, 1.34% and 0.56% of return respectively. Regarding volatility, it is during this year the first time both portfolios registered different levels of volatility, 11.85%, and 12.27% respectively.

2015

2015 was characterized by a normalization of the financial markets and it helped to reduce the volatility in prices, as it can be seen in the volatility of both portfolios, almost half of the volatility than in 2014. The highest stability of the markets helped to see the differences between the different economies and their development.

In contrast to the good news of the good news regarding the recovery of the Spanish economy both portfolio achieved a negative return. The equally weighted portfolio obtained a lower, but negative return, in comparison with the socially responsible portfolio a 1% better approximately.

The volatility was considerably less than in 2014 as it was mentioned before, the socially responsible portfolio achieved a 6.14% of volatility while the equally weighted portfolio achieved a lower rate of volatility, 5.84%

2016

During this year the financial markets were influenced by some events such as the Brexit or the election of Trump as president of the United States, but the recovery and positive evolution of the developed economies was totally a fact something that has not avoided the recovery of the rates of return of the both portfolios.

Considering the relationship between risk and return of the portfolio we can affirm that it has been consistent during the year and at the end of the year the socially responsible portfolio achieved a higher return compared to the return obtained by the equally weighted portfolio, 4.57% and 4.20% respectively but as I mentioned the results were aligned with the higher volatility of the socially responsible portfolio, 13.50% against 13.34% of volatility of the equally weighted portfolio.

2017

2017 has been considered one of the best years in terms of stability and recovery of the last 10 years. The Central Banks have reduced the expansionary policy conducted during the last years and the market started, although it is still somehow tapped, to develop more freely.

The Spanish economies have received good prospects from the Monetary International Fund and the OECD that have helped to push forward a consolidated recovery. The listed Spanish companies have performed good years in terms of EBITDA and Net Result which have been translated to an increase in the attractiveness of the Spanish market.

In this year both portfolios have performed a good return and volatility levels compared to 2016 levels. The equally weighted portfolio has achieved a better result in regarding both variables, 5.93% of return and 8.88% of volatility, while the socially responsible portfolio has achieved a 5.60% of return and an 8.89% of volatility.

The following graph illustrates the evolution of both portfolio based on 2011 and adding the returns obtained each year.

Table 8. Results (2011:100)

	2011	2012	2013	2014	2015	2016	2017
Socially Responsible Portfolio	100,00	113,52	136,84	136,84	132,35	138,40	146,15
Equally-Weighted Portfolio	100,00	114,13	138,58	139,36	136,08	141,80	150,21

As we can see in the Table 9 the equally-weighted portfolio has performed better during the period of the analysis compared to the socially responsible portfolio.

The investor of the socially responsible portfolio has been penalized by 3,482% of return in comparison with the equally weighted portfolio, which means that if the investor would have the desire of invest rewarding the companies that are more socially responsible the investor would lose a 3.482% of return.

As a way of concluding the analysis of our portfolio we have performed an analysis base on the Sharpe Ratio of both portfolios. Before starting commenting the result is important to clarified what the Sharpe ratio is and what is it measuring.

The Sharpe Ratio is a ratio used to calculate the excess return that an investor receives in comparison with the risk-free asset chosen for a certain level of volatility, it is a risk-adjusted return comparison between the portfolio created versus a benchmark previously defined. The comparison with the risk-free asset is a way of knowing if the investors is being compensate in benefit from taking an additional risk to the risk-free asset.

Traditionally the risk-free asset chosen for conducting the analysis is the government 10-year bond and thus the risk-free asset selected in this paper is the Spanish 10-year government bond as our portfolio is formed by Spanish companies, so they are conditioned to the stability and performance of the Spanish government bond.

The Sharpe ratio is calculated based on the following equation:

Equation 9. Sharpe Ratio

$$SR = (R_{pf} - R_{rf})/\sigma_{pf}$$

The equation illustrates the Sharpe Ratio calculation, where R_{pf} is the annual return of the portfolio, R_{rf} corresponds to the return of the risk-free asset in this case the annual return of the 10-year Government Bond and σ_{pf} is the annual volatility of the portfolio.

As the portfolio is rebalanced each year, the Sharpe Ratio will be calculated on a yearly basis. In the calculation of the Sharpe Ratio involve the previously calculated returns of each portfolio and the annual return of the risk-free asset.

Table 11 illustrates the different Sharpe Ratios. The sharp ratio on a yearly basis of the Socially Responsible Portfolio and the Equally-Weighted Portfolio.

Table 10. Sharpe Ratio Results

	Sharpe Ratio	
	Socially Responsible Portfolio	Equally-Weighted Portfolio
2017	0.46	0.49
2016	0.36	0.32
2015	-0.56	-0.46
2014	-0.14	-0.23
2013	1.81	1.91
2012	-1.14	-0.99
2011	-1.15	-0.66

The results illustrate a similar Sharpe Ratio of each portfolio during the time horizon considered in the portfolio. During 2011,2012,2014 and 2015 both portfolios have achieved a negative Sharpe ratio due to the volatility of the market during these years and the macroeconomic situation of the market explained during the results of the portfolio previously shown, both portfolio achieved a worse return in comparison with the risk-free asset during these 4 years.

The rest of the years analyzed both portfolio achieved a higher return than the risk-free asset. The highest Sharpe Ratio is found in 2013 for the Socially Responsible Portfolio and the Equally-Weighted Portfolio, 1.81 and 1.91 respectively.

The difference in this period between the two portfolios regarding the Sharpe Ratio is due to the higher return and lower volatility of the Equally-Weighted portfolio in contrast to the Socially Responsible portfolio.

Summarizing the results obtained, we can conclude that both portfolios have achieved a similar Sharpe Ratio due to the low differences in return and risk during the time period analyzed and the differences between both ratios are due to the better or the worse performance within the period of both portfolios. In overall the Equally-Weighted portfolio have achieved a higher ratio than the Socially Responsible Portfolio consistent with the highest return of this portfolio over the Socially Responsible Portfolio during the whole period as it was stated in the Table 9.

The findings obtained with the analysis illustrate that the Equally-Weighted portfolio, or the portfolio that has not taken into account any kind of environmental, social or governance criteria in order to be weighted have got a higher return than the one constructed based on these criteria for a lower volatility.

More sophisticated empirical analysis can be performed to illustrate the differences between a traditional equally-weighted portfolio and a socially responsible portfolio or just the comparison of the performance of whatever asset class that follow ESG criteria and those that do not follow any socially responsible criteria.

Chapter 5. Conclusions

During last years, the need for companies to contribute with an extra value to society through practices considered as socially responsible has grown. We refer to the concept of Corporate Social Responsibility, a concept that has increased in popularity, but it is not a new concept. It has been developed during the last century it was originated many years ago.

The concept was developed by several researchers through different theories h justifying the appearance of this way of understanding business, complementary to the traditional business.

Quazi & O'Brien, D. (2000), Freeman (1984) or Carroll (1979) have been the promoters of the most known theories on Corporate Social Responsibility. In order to highlight one of the theories as the theoretical basis for developing a Corporate Social Responsibility, we choose has been the theory developed by Freeman (1984) with the Stakeholder approach.

Following the structure of the project and the events based on the development of a Corporate Social Responsibility framework, we would highlight the work carried out by international organizations on CSR. There are many international organizations that have described and developed studies and guidelines to involve companies in the development and adoption of socially responsible policies.

One of the difficulties of Corporate Social Responsibility is its measurement and in order to help to solve these problems, standards and optional guidelines have been developed. Companies can use them when reporting to the different stakeholders the social and environmental policies that the companies have taken.

The development and the increase in popularity of the concept of Corporate Social Responsibility have influenced the behavioral of the investors and the financial markets, to the extent that several strategies that are implemented by the different portfolio managers have been developed in the effort of dealing with the demand of the investors and perform an asset picking adjusted with the investors' specifications.

The influence of the Corporate Social Responsibility on the development of a new investment universe has been translated into the origination of a new concept of investment, the Social Responsible Investments.

With this new trend, a new investor profile has been developed, that is more sophisticated. The socially responsible investor does not pretend just to invest with the aim of getting the highest return at the minimum risk, it is capable to sacrifice some of the return or to increase the risk of their investment. In order to comply with social criteria, the investor wants to have the security that his investments respect previously defined standards that fulfill with corporate social responsibility criteria of the investments and get sure that these investments provide an extra-value to the society or to the environment.

The criteria chosen by the investor in order to perform the stock picking make reference to the well-known criteria called ESG that have been implemented in many funds in order to classify those investments as socially responsible.

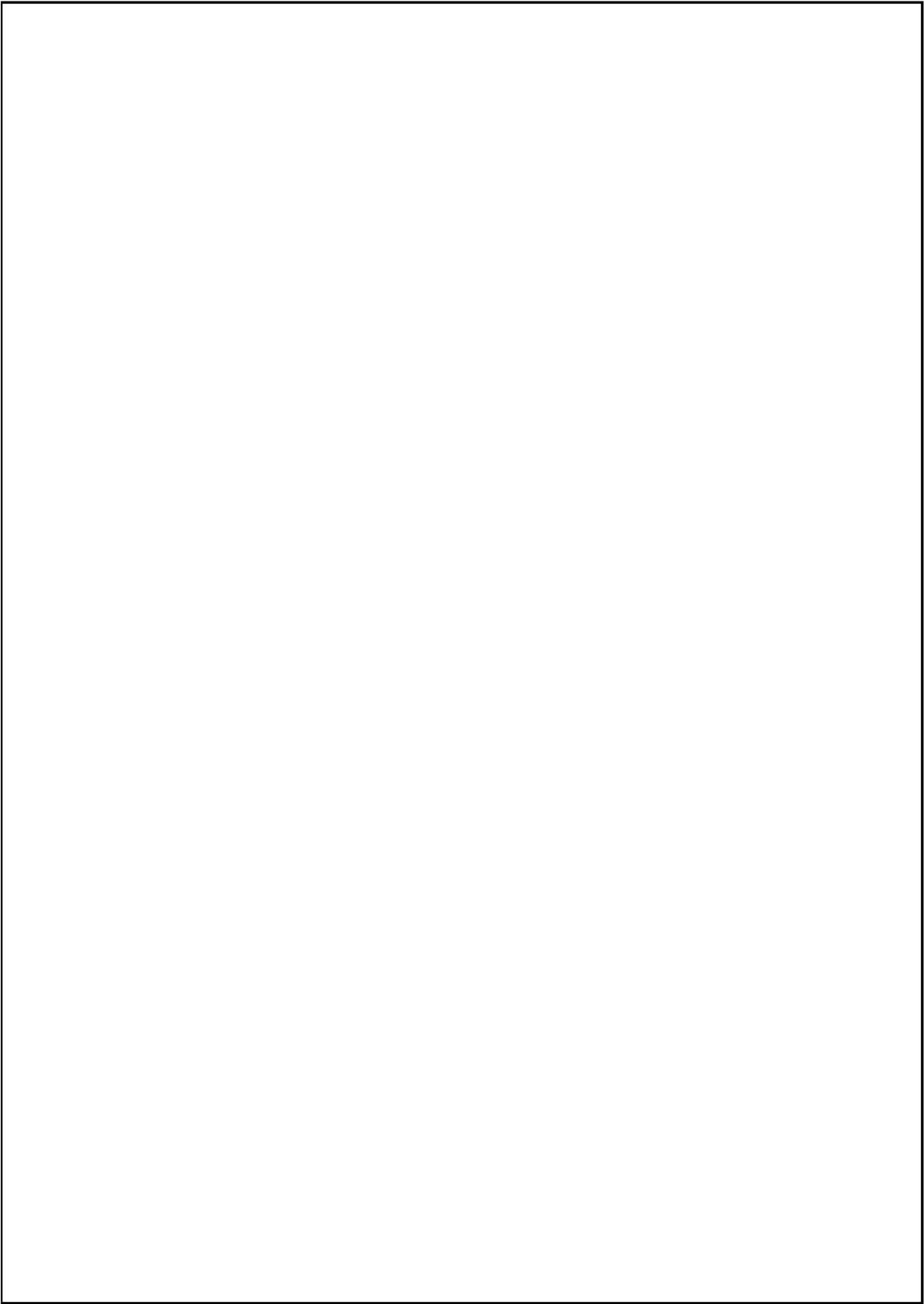
Just like in the case of the development of the Corporate Social Responsibility concept, there are many international organizations that have carried out reports and analysis about the situation and the evolution of the Socially Responsible Investment within different countries. The used in this Project is the Eurosif constitute the base for the development of the different strategies explained that the portfolio managers perform at the time of selection the investments

The possibilities of constructing a responsible portfolio are varied. Consequently, is important to establish some criteria to follow in order to construct the portfolio. The criteria followed in this Project is an example of the different criteria that can be followed in order to illustrate if the socially responsible investor earn an extra return giving more weight to those companies that perform in better socially responsible policies.

As we can see in the results, the socially responsible investor has loss an 3.4% of return in comparison to the portfolio equally weighted which in this case means that the investor will sacrifice some of the return by investing in a socially responsible portfolio.

The empirical study used data from 2011 to 2017. The situation of the financial markets has not been stable during this period due to the financial crisis and the intervention of the central banks in the financial markets. This intervention can be seen at the time of analyzing the unstable return and volatility in the market.

To sum up, the socially responsible universe is broad and exists an extensive range of possibilities to perform an empirical study such as the one conducted, but what is important to bear in mind is that the Socially Responsible Investment is in a continuous evolution and will gain in importance during the following years, more product will be available to the portfolio managers and to the unprofessional investors.



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Annexes

Annex 1. Weights, ranking and scores

	2011			2012		
	Score	Ranking	Weight	Score	Ranking	Weight
TELEFONICA	7851	3	9,2335%	7546	5	8,1011%
SANTANDER	6970	4	8,1974%	7017	6	7,5332%
INDITEX	6569	5	7,7258%	8339	3	8,9524%
REPSOL	6087	6	7,1589%	7873	4	8,4521%
BBVA	5780	7	6,7978%	6916	7	7,4247%
ACCIONA	5697	8	6,7002%	6309	8	6,7731%
ENDESA	5317	9	6,2533%	5814	9	6,2417%
GAS						
NATURAL	4901	10	5,7641%	5172	10	5,5525%
MAPFRE	4403	11	5,1784%	5029	11	5,3989%
INDRA	4195	12	4,9337%	4843	12	5,1993%
FERROVIAL	4049	13	4,7620%	4608	13	4,9470%
ABERTIS	3959	14	4,6562%	4279	14	4,5938%
CAIXABANK	10000	1	11,7610%	10000	1	10,7356%
IBERDROLA	9249	2	10,8777%	9403	2	10,0947%

	2013			2014		
	Score	Ranking	Weight	Score	Ranking	Weight
	6672	5	7,3456%	7551	5	7,6050%
	6590	6	7,2553%	6849	8	7,3528%
	10000	1	11,0096%	10000	1	10,7356%
	7501	4	8,2583%	8392	4	9,0093%
	6346	7	6,9867%	7450	6	7,9980%
	6187	8	6,8116%	6936	7	7,4452%
	6135	9	6,7544%	5834	11	6,2632%
	5296	10	5,8307%	6293	10	6,7559%
	5065	11	5,5764%	6325	9	6,7903%
	4816	12	5,3022%	5718	12	6,1386%
	4614	13	5,0798%	5173	13	5,5535%
	4274	14	4,7055%	5001	14	5,3689%
	8195	3	9,0223%	8500	3	9,1253%
	9139	2	10,0617%	9268	2	9,9498%

2015			2016		
Score	Ranking	Weight	Score	Ranking	Weight
8063	5	8,0058%	7533	7	7,5725%
7180	8	7,1291%	7148	8	7,1854%
9236	1	9,1705%	8652	2	8,6973%
8322	4	8,2630%	7635	6	7,6750%
7600	6	7,5461%	7958	5	7,9997%
6912	9	6,8630%	6873	10	6,9090%
5551	13	5,5116%	5382	12	5,4102%
6446	10	6,4003%	6894	9	6,9301%
7515	7	7,4617%	8170	3	8,2128%
5582	12	5,5424%	5342	13	5,3700%
5184	14	5,1472%	4910	14	4,9357%
5945	11	5,9029%	6066	11	6,0978%
8717	2	8,6552%	8759	1	8,8049%
8461	3	8,4010%	8157	4	8,1997%

2017		
Score	Ranking	Weight
7702	7	7,5152%
7669	8	7,4830%
9231	1	9,0072%
7936	6	7,7436%
8271	4	8,0704%
6957	9	6,7883%
5284	13	5,1559%
6941	10	6,7727%
8459	3	8,2539%
5879	12	5,7364%
5212	14	5,0856%
6171	11	6,0214%
8654	2	8,4442%
8119	5	7,9221%

Annex 2. Matrixes

Correlation Matrix	TELEFONICA	SANTANDER	INDITEX	REPSOL	BBVA	ACCIONA	ENDESA	GAS NATURAL	MAPFRE	INDRA	FERROVIAL	ABERTIS	CAIXABANK	IBERDROLA
TELEFONICA	1.00	-0.64	0.45	-0.53	0.65	0.41	0.42	0.43	0.46	0.35	0.41	0.17	0.53	0.49
SANTANDER	-0.64	1.00	-0.41	0.56	-0.80	-0.26	-0.08	-0.25	-0.62	-0.31	-0.31	-0.13	-0.77	-0.31
INDITEX	0.45	-0.41	1.00	-0.30	0.42	0.33	0.39	0.35	0.29	0.18	0.35	0.10	0.38	0.45
REPSOL	-0.53	0.56	-0.30	1.00	-0.46	-0.24	-0.27	-0.40	-0.20	-0.24	-0.05	-0.05	-0.47	-0.31
BBVA	0.65	-0.80	0.42	-0.46	1.00	0.12	0.12	0.23	0.22	0.17	0.08	0.17	0.21	0.18
ACCIONA	0.41	-0.26	0.33	-0.24	0.12	1.00	0.03	0.44	0.16	0.08	0.41	0.07	0.28	0.48
ENDESA	0.42	-0.08	0.39	-0.27	0.12	0.03	1.00	0.52	0.18	0.21	0.41	0.12	0.25	0.62
GAS NATURAL	0.43	-0.25	0.35	-0.40	0.23	0.44	0.52	1.00	-0.03	0.37	0.37	0.18	0.35	0.61
MAPFRE	0.46	-0.62	0.29	-0.20	0.22	0.16	0.18	-0.03	1.00	0.23	0.31	0.10	0.53	0.22
INDRA	0.35	-0.31	0.18	-0.24	0.17	0.08	0.21	0.37	0.23	1.00	0.22	0.08	0.18	0.25
FERROVIAL	0.41	-0.35	0.35	-0.05	0.08	0.41	0.41	0.37	0.31	0.22	1.00	0.23	0.29	0.41
ABERTIS	0.17	-0.13	0.10	-0.05	0.17	0.07	0.12	0.18	0.10	0.08	0.23	1.00	0.03	0.14
CAIXABANK	0.53	-0.77	0.38	-0.47	0.21	0.28	0.25	0.35	0.53	0.18	0.29	0.03	1.00	0.26
IBERDROLA	0.49	-0.31	0.45	-0.31	0.18	0.48	0.62	0.61	0.22	0.25	0.41	0.14	0.26	1.00

Intermediate Matrix	TELEFONICA	SANTANDER	INDITEX	REPSOL	BBVA	ACCIONA	ENDESA	GAS NATURAL	MAPFRE	INDRA	FERROVIAL	ABERTIS	CAIXABANK	IBERDROLA
TELEFONICA	0.092801	0.117260	0.085584	0.128363	0.122811	0.123658	0.089537	0.096011	0.130042	0.115607	0.085383	0.077667	0.107279	0.111947
SANTANDER	0.117260	0.000504	0.014426	-0.008151	0.000557	0.123658	0.000757	0.000041	-0.001654	0.000190	0.004207	-0.000347	-0.006853	-0.003476
INDITEX	0.085584	0.014426	0.078929	0.118381	0.113260	0.114042	0.082575	0.088544	0.119929	0.106617	0.078744	0.078744	0.098936	0.103241
REPSOL	0.128363	-0.008151	0.118381	0.177554	0.169873	0.171046	0.118492	0.127935	0.172094	0.154048	0.112994	0.102782	0.148390	0.148148
BBVA	0.122811	0.000557	0.113260	0.169873	0.162525	0.163646	0.119310	0.127935	0.173282	0.154048	0.113774	0.103492	0.142950	0.149170
ACCIONA	0.123658	-0.003932	0.114042	0.171046	0.163646	0.164776	0.127935	0.127935	0.173282	0.154048	0.111542	0.074935	0.103506	0.108010
ENDESA	0.089537	0.000757	0.082575	0.123849	0.118492	0.119310	0.086389	0.092634	0.125469	0.111542	0.082381	0.074935	0.103506	0.108010
GAS NATURAL	0.096011	0.000041	0.088544	0.132803	0.127058	0.127935	0.092634	0.099331	0.134539	0.119606	0.088337	0.080353	0.110989	0.115819
MAPFRE	0.130042	-0.001654	0.119929	0.179875	0.172094	0.173282	0.125469	0.134539	0.182227	0.162000	0.119648	0.108834	0.150330	0.156871
INDRA	0.115607	0.000190	0.106617	0.159910	0.152992	0.154048	0.111542	0.119606	0.162000	0.144019	0.106367	0.096754	0.133644	0.139458
FERROVIAL	0.085383	0.004207	0.078744	0.118103	0.112994	0.113774	0.082381	0.088337	0.119648	0.106367	0.144019	0.106367	0.096754	0.133644
ABERTIS	0.077667	-0.000347	0.071627	0.107430	0.102782	0.103492	0.074935	0.080353	0.108834	0.096754	0.106367	0.065001	0.089784	0.093690
CAIXABANK	0.107279	-0.006853	0.098936	0.148390	0.141971	0.142950	0.103506	0.110989	0.150330	0.133644	0.096754	0.089784	0.124016	0.129412
IBERDROLA	0.111947	-0.003476	0.103241	0.154846	0.148148	0.149170	0.108010	0.115819	0.156871	0.139458	0.133644	0.093690	0.129412	0.135042

Covariance Matrix	TELEFONICA	SANTANDER	INDITEX	REPSOL	BBVA	ACCIONA	ENDESA	GAS NATURAL	MAPFRE	INDRA	FERROVIAL	ABERTIS	CAIXABANK	IBERDROLA
TELEFONICA	0.0928	-0.0755	0.0384	-0.0676	0.0773	0.0511	0.0377	0.0417	0.0601	0.0405	0.0350	0.0133	0.0564	0.0554
SANTANDER	-0.0755	0.0005	-0.0059	-0.0045	-0.0034	-0.0318	-0.0001	0.0000	0.0010	-0.0001	-0.0013	0.0000	0.0053	0.0011
INDITEX	0.0384	-0.0059	0.0789	-0.0351	0.0481	0.0375	0.0325	0.0307	0.0343	0.0190	0.0275	0.0076	0.0380	0.0460
REPSOL	-0.0676	-0.0045	-0.0351	0.1776	-0.0784	-0.0410	-0.0324	-0.0506	-0.0345	-0.0370	-0.0052	-0.0047	-0.0696	-0.0463
BBVA	0.0773	-0.0004	0.0481	-0.0784	0.1625	0.0192	0.0141	0.0299	0.0380	0.0261	0.0094	0.0174	0.0304	0.0270
ACCIONA	0.0511	0.0010	0.0375	-0.0410	0.0192	0.1648	0.0042	0.0564	0.0285	0.0118	0.0463	0.0049	0.0291	0.0513
ENDESA	0.0377	-0.0001	0.0325	-0.0338	0.0140	0.0039	0.0864	0.0486	0.0225	0.0238	0.0337	0.0089	0.0255	0.0669
GAS NATURAL	0.0417	0.0000	0.0307	-0.0525	0.0297	0.0564	0.0486	0.0993	-0.0045	0.0440	0.0325	0.0148	0.0385	0.0707
MAPFRE	0.0601	0.0010	0.0343	-0.0360	0.0378	0.0285	0.0225	-0.0045	0.1822	0.0380	0.0375	0.0107	0.0792	0.0342
INDRA	0.0405	-0.0001	0.0190	-0.0384	0.0250	0.0118	0.0238	0.0440	0.0380	0.1440	0.0230	0.0075	0.0237	0.0355
FERROVIAL	0.0350	-0.0015	0.0275	-0.0054	0.0094	0.0472	0.0337	0.0325	0.0375	0.0230	0.1440	0.0240	0.0285	0.0554
ABERTIS	0.0133	0.0000	0.0069	-0.0049	0.0173	0.0068	0.0089	0.0148	0.0107	0.0075	0.0240	0.0650	0.0028	0.0130
CAIXABANK	0.0564	0.0053	0.0380	-0.0696	0.0332	0.0402	0.0255	0.0385	0.0792	0.0237	0.0285	0.0028	0.1240	0.0337
IBERDROLA	0.0554	0.0011	0.0460	-0.0484	0.0258	0.0709	0.0669	0.0707	0.0342	0.0355	0.0554	0.0130	0.0337	0.1350