University of Nottingham

# DISARMING THE VALUE KILLERS: CSR VIEWED THROUGH A SHARP RISK MANAGEMENT LENS

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## ABSTRACT

Why should rational, profit maximizing managers invest in managing CSR related risks? In this study, I propose a comprehensive framework for viewing CSR through a new risk management lens; a lens which would allow both managers and mainstream investors to reconsider the endless debate of the impact of CSR on the financial performance of the firm from another perspective. The main objective of this paper is to provide an insight on the shift in the risk management mindset with the recent development in Enterprise Risk Management (ERM). This relatively new notion provides a stronger ground for integrating CSR issues at the heart of the business risk model since it consider risks from a broader perspective. A perspective which allows for consideration for all types of risks including emerging CSR related risks. With ERM at the central stage, I develop a theoretical framework which would allow CSR and risks to converge. This framework is composed of 4 distinct constructs: Stakeholders' vulnerability assessment, corporate governance, communication, and financial performance.

But why should managers invest resources and time to consider building an efficient ERM system? To answer this question, I use an event study methodology to explore the effect of CSR related negative events on abnormal stock returns surrounding a sample drawn from the FTSE 100 companies listed between 2007 and 2011. Privilege access to Vigeo methodology allows for linking the CSR event type with a distinct risk category. The results indicate strong support for the idea that negative CSR related risks have an impact on shareholders' value. The study suggests that reputation and legal risks are significant value killers, since these risks have materialized in tangible forms leading to significant negative abnormal returns.

## ACKNOWLEDGEMENT

I would like to express my profound gratitude to Dr. Wendy Chappell for her support and guidance with which I was able to bridge two distinct fields: CSR and Risk Management. Through her recommendations on the framework building strategy, I was able to structure complex concepts from four different fields and assemble them together like a puzzle. Furthermore, I thank Vigeo for providing privileged access to Vigeo's methodology database, and for giving me the opportunity to expand my horizon at the University of Nottingham. I am looking forward to transfer the new skills and knowledge I have accumulated throughout the academic year back to the company. I am also quite keen and passionate about this topic and I have strong ambitions to continue to investigate this relationship further during my upcoming professional years.

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# INTRODUCTION

*"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change" Charles Darwin*

## 1.1 Background

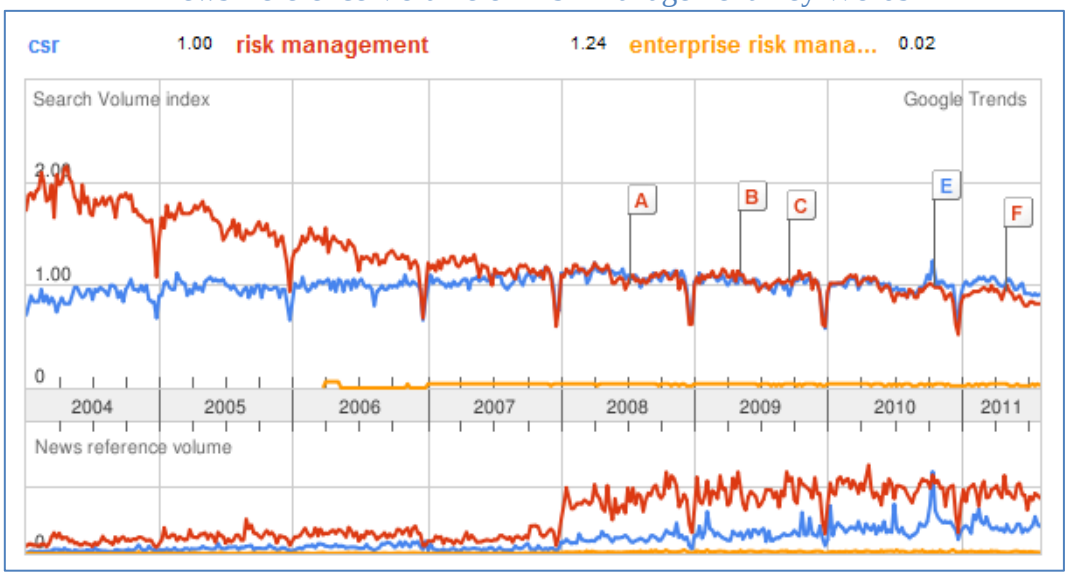
In today's world global economy, corporations are facing new challenges which are becoming inevitable with the changing environment landscape including political events, new market developments, technological advancement, environmental hazards, and demanding stakeholders' expectations. Corporations face perplexing issues across the global economy which can jeopardize their existence. A study made by Shell in 1980s suggested that the average corporate survival rate for large companies was only about half as long as that of human being (Tidd et al., 2005). Indeed, as large as they could be, corporations are very fragile. The average life of an S&P 500 firm is between 10 to 15 years. Of the top 12 corporations which made up the Dow Jones Index in 1900, only one has survived today: General Electric (Forster & Kaplan, 2002). Pressures on firms have grown continuously and have been fuelled by uncertainty about the changing business environment with the predictable result that businesses life expectancy is reduced further.

Companies are exposed to a variety of factors that can be detrimental to their survival as evidenced by many corporate events reported in the press including major corporate scandals like Enron, Parmalat, and WorldCom. These kinds of scandals still unfold themselves as evidenced by Société General trading loss in 2008, BP's oil spill in 2010, and more recently News Corp hacking scandal in 2011. It seems that every year, a global company is brought to its knees by unexpected events of different nature. Any factor affecting the business' performance can be classified as a source of risk, and when this effect is both uncertain and significant in its impact on the company's performance, the risk arises (Chapman & Ward, 1997).

Although risk management is not a new feature for business, it is currently treated at the top level of the corporate agenda. In the 2009 Annual Corporate Director survey, Pricewaterhouse Coopers measured the opinions of more than 1,000 directors serving on the boards of the top 2,000 publicly traded companies (by revenue) and covers relevant issues as the economic crisis and expectations on regulatory changes due to the crisis. When asked what kept them awake at night, about 60 per cent of the board members responded, "unknown risks." To add, the 2010 Annual Corporate Director survey highlights that 56 per cent of board members emphasised that they invest much more time and focus on risk management than in the past (PricewaterhouseCoopers, 2010).

Risk management discussions were never of this magnitude before, either among academics, policymakers, lawmakers or practitioners (Daelen & Elst, 2010). Figure 1 shows the number of times the key word 'risk management', appeared in internet news stories by volume. A sharp spike in the volume of news stories related to risk management is highlighted by the end of 2007. It seems clear, that the notion of risk management grew in importance with the 2007 financial crisis.

FIGURE 1
Trend Analysis of Search Volume index and
News Reference Volume of Risk Management Key Words




***Source:*** Produced using Google trends: http://www.google.com/trends

Because the nature of risk shifts along with changes in a firm's external environment landscape, risk is never stable, and therefore challenging to manage (Coleman, 1999). Consequently, it is imperative to monitor and manage emerging risks that are material from the point of view of the achievement of the strategic objectives of the enterprise (Mikes 2005). Social and Environmental issues are emerging sources of risk. These issues can present risks directly, by presenting direct operating constraints, or indirectly for example, by seeding "social risk," or challenges by stakeholders to companies' business practices due to real or perceived impacts on social or environmental issues (Kytle & Ruggie, 2005).

Corporate risk management has become a very important topic which constitutes a new lens through which corporate strategy development can be perceived, since poor risk management may lead to economic failure, whereas good risk management practices can help corporations to excel in performance outcomes. An important trend is that crisis, are becoming more common, with growing impact on shareholder value. On June 2nd 2010, the White House announced that BP would be subject to a criminal investigation over the oil spilling out of the Deepwater Horizon rig. The company's share price, along with that of Halliburton, an oil-services company that is also implicated in the Gulf of Mexico spill, fell sharply on the news. This contrasts with the price of ExxonMobil's stock in the weeks following the Exxon Valdez spill in 1989 (The Economist, 2010).

Creatively managing risk is critical to maximizing shareholder value (Coleman, 2009). A drop in share price that results in restricted credit, impeded growth, and reduced competitiveness. Steep market drops affect a significant percentage of companies, impeding them with negative repercussions that can last for years. Over the last decade, almost half of the 1000 largest global companies suffered declines in share prices of more than 20 per cent over a one month period, relative to the Morgan Stanley Capital International (MSCI) World Index (Kambil & Mahindhar, 2005). By the end of 2003, approximately one quarter of these

companies had still not recovered their lost market value. Another one quarter took more than a year for their share prices to recover (Kambil & Mahindhar, 2005).

Overall, no individual company can be fully sustainable within an unsustainable economic system. Corporate Social Responsibility (CSR) requires companies to address the issues of economic, social, and environmental quality simultaneously. Managing for long-term success requires a full integration of the principles of sustainability into an organization's risk management processes (Yilmaz & Flouris, 2010).

**1.2 Research Focus**

A wide range of literature has been written about risk management and Corporate Social Responsibility; however, only few authors have addressed these two significant topics together. The relationship of CSR to risk management has been treated sporadically in the business and society literature (Husted, 2005). Overall, most of this very modest literature addresses the questions of how CSR can assist in managing or hedging risk. Theoretical (Godfrey, 2005) and empirical (Godfrey et al., 2009) research demonstrates that CSR can contribute to enhancing moral capital that insulates the firm from negative consequences in the event of future adverse shocks. Unfortunately these questions consider risk management and CSR as complementary tools that fit together but are still distinct (Boatright, 2011); they also fall short in defining risk. As (Loosemore, 1999:9) pointed out, “the risk management literature has been dominated by the search for improved strategies of prevention and anticipation. It is rare to see a strategic perspective of risk management.”

Risk management have been regarded as a primitive first stage in the development of CSR (Castelló & Lozano, 2009). That is, managing risk might lead corporations to adopt some elements of CSR, but this limited utilization falls short of what it means to be socially responsible. This argument has been reinforced by the IBM study ‘Attaining sustainable growth through corporate social responsibility’ which emphasises the idea that there is a need

to shift thinking from CSR as a cost or risk mitigation effort to CSR as a strategic goal that brings in new revenues (Pohle & Hittner, 2008). Unfortunately, research in this area seems to have largely ignored the advances within strategic management, which has moved to a more refined conception of the relationship of risk to management (Miller & Leiblein, 1996). "Risk management that is integrated across the company and linked with strategic planning is required not only to mitigate the potential downside inherent in any business strategy but also to fully capture the potential upside" (Kytle & Ruggie, 2005).

In the past 15 years, the field of risk management has undergone a significant transformation into a substantially new concept, known as enterprise risk management (ERM). The defining features of ERM are that risk is considered as a variation within the assets the company (Ching, 1997) and that risk is now treated in a comprehensive and integrated manner and is handled at the highest levels of a corporation. Because the risks that are now being managed in ERM include all the factors that can adversely affect the achievement of corporate objectives, including operations and reputation, the possibility exists for the first time to bring stakeholder interests and CSR issues into the corporate decision-making process by means of the management of risk (Sison, 2000). As Power (2003: 150) observes:

. . . risk and the organizational imperative to manage it appear, at least on the surface, to be able to internalize external interests and align them with corporate imperatives in a way that was previously impossible. Risk is the basis for corporations to process morality.

**1.3 Overall Research Aim and Individual Research Objectives**

My objective in this paper is to capture the full potential of the advances in risk management in integrating CSR risks, and highlight the importance in doing so through exploring their impacts on shareholder value. Through the process of exploring a wide range of concepts derived from various fields, while aligning them with the behavioural characteristics

observed within ERM systems, I hope to present a comprehensive framework which allows for effective integration of CSR at the heart of the business risk model. The following objectives have been identified of paramount importance in helping to achieve the aforementioned aim:

- Defining risk.
- Exploring the potential of advances in risk management (ERM) in integrating CSR risks.
- Developing a framework which ensures effective integration of CSR related risks at the heart of ERM system. This framework is based on the interaction of the following five constructs: ERM, stakeholder's vulnerability, corporate governance, risk communication, and financial performance.
- Investigating the materiality of CSR risks through conducting an event study assessing the impact of negative CSR related events on shareholder value using a sample dranw from the FTSE 100, and with privilege access to Vigeo risk methodology which allows to link between the events' types with their respective risk categories.

# LITERATURE REVIEW

## 2.1 Defining Risk

The origin of the word 'risk' is considered to be either the Arabic word 'risq' or the Latin word 'riscum'. On the one hand, the Arabic 'risq' can be defined as "anything that has been given to a person (by God) and from which he can draw profit" and has connotations of a favourable outcome. On the other hand, the Latin 'riscum', initially referred to the challenge that a barrier reef presents to a sailor and clearly has connotations of unfavourable events (Merna & Al-Thani, 2011). A Greek derivative of the Arabic word 'risq' was used in the twelfth century would appear to relate to chance of outcomes in general and has neither positive nor negative implications (Kedar, 1970). The Chinese symbol for risk, which dates back to ancient times, consists of two symbols: the first represents "danger" and the second "opportunity." These two symbols imply that risk is a strategic combination of vulnerability (i.e., danger) and opportunity (Aabo et al., 2005).

The study of relevant mainstream risk literature revealed that risk management is a complex moving landscape. To start with, there is no agreed definition of what risk management is. Rowe (1977) defines risk as the potential for unwanted negative consequences of an event activity whilst many authors define risk as a measure of the probability and the severity of adverse effects. Rescher (1983) strongly emphasise that risk is the probability of a negative outcome. Overall, a number of different, sometimes conflicting and complex meanings have been attributed to the word 'risk'. Some definitions are quite narrow and some relatively broad.

It is quite regrettable that a simple definition closely related to the Greek interpretation has not prevailed, an interpretation which avoids any connotation of a favourable or unfavourable outcome or the probability or size of the event. An expansive view of risk management acknowledges that the nature of risk reflects the fact that the future

holds great uncertainty. Risk management means the process of understanding the nature of uncertain future events and making constructive plans to mitigate them when they depict threats or to take advantage of them when they depict opportunities (Taplin, 2005). This definition therefore encompasses both upside and negative aspects of risk.

This holistic view takes risk management to the heart of a business's activities and makes it essential to the business strategy. Aligning risk management with upside risk can lead to competitive advantage for those organizations that have embedded strong risk management structures (Taplin & Schymyck, 2005). Porter (1980) attributes a firm's performance through its relative competitive advantage which is translated in accordance to the firm strategic decisions towards markets, competitors, customers, and suppliers. However, risk has been underestimated by Porter (1985:470) who defined risk as "a function of how poorly a strategy will perform if the wrong scenario occurs. Clearly, this definition considers risk as a threat and undermines the potential benefits associated with risk management in driving competitive advantage.

Unfortunately, to many organizations, "risk is only a four-letter word that they try insulate themselves from (Merna & Al-Thani, 2008). Indeed, an important weakness in risk management is that the theory and practice does not embrace the possibility that managing risks can lift returns (Coleman, 2009). Conventional management of risk is a reductionist process that makes loss prevention its core objective. According to Emmet J Vaughan (1997:30):

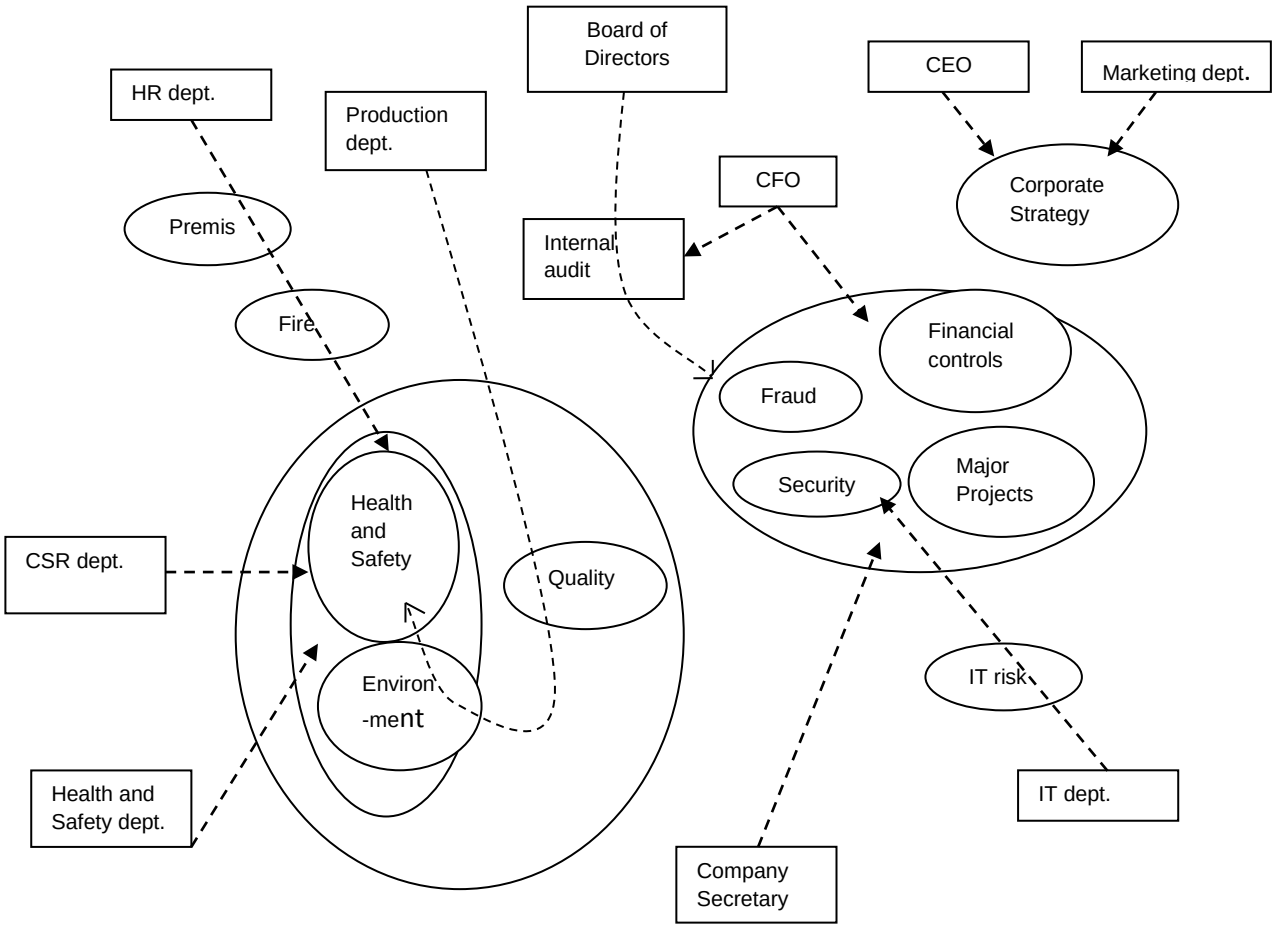
"Risk management is a scientific approach to dealing with pure risks [situations which involve only the possibilities of either loss or no loss] by anticipating possible accidental losses and designing and implementing procedures that minimize the occurrence of loss or the financial impact of losses that do occur"

## 2.2 Traditional Risk Management vs. Enterprise Risk Management

### 2.2.1 Traditional risk management

Traditional risk management assumes that successful risk management results from independent departments managing risk successfully (Brannan &Taylor, 2006). The separation of responsibilities can be a good thing since it hands responsibility to functional line management and identify the ownership of responsibilities. However, such approach may result in inefficient or inaccurate risk management as each department may have different definitions and treatments of risk (Ching, 1997). In other words, since different risks are managed in specialized units, this approach can prevent the business from seeing all risks together. To add, traditional risk management does not provide a holistic view of risks for the entire enterprise, and is unable to deal with emergent or combinatorial risk (Shaw, 2005), and cannot measure the effectiveness of the risk management. Only by looking at risks as a portfolio will a business be able to weight them and judge. The consequence of such perception of risks is to end up with a complex and confusing chart such as the one depicted in figure 2.

FIGURE 2
Traditional management responsibilities for risk




***Source:*** Adapted from Anderson & Schrøder 2010.

Another limiting assumption of the traditional management paradigm involves that financial risk dominates business studies. Managers assume that the primary risks they face are related to financial and product markets. They assess and manage financial risks in relation to economic returns. They also manage product-market risks that involve uncertainty about product demand caused by changing economic conditions, consumer preferences, market demographics, competitive pressures, and regulatory changes. They ignore the risks posed by technology, its location, its waste products, and its impact on the natural environment. This mind-set ignores the numerous ecological, technological, and health risks emanating from industrial hazards that I described previously. Industrial hazards also impose

risks due to the disruption of larger economic, social, political, and cultural systems. This narrow-minded discussion of risks in organizations predominates studies of organizations (March & Shapira 1989). Little attention has been paid to risks that have been imposed by organizations onto diverse stakeholders or the distribution of these risks among different sectors of society (Shrivastava 1995).

Because risk management was treated as a separate activity, with a separate performance cost and a separate reporting section, there is a tendency to view it as just that section of a program review, something that could be box up and dismiss (Accelerated Evolution Consulting, 2010). Overall, this approach to risk management is insufficient to mitigate intangible risks for the critical success of businesses within a changing environment.

### 2.2.2 The Emergence of Enterprise Risk Management

Over the past 15 years, the field of risk management has undergone significant change leading to the emergence of a new concept known as enterprise risk management (ERM). The key characteristic of this management system is that risk is treated in a broader perspective and is handled at the highest strategic level of the organization. According to COSO, 2004 "Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives." This definition can be broken down into the elements summarized in table 1.

TABLE 1
Breakdown Analysis of the COSO 2004 Definition of ERM

| | |
|---|---|
| **Process:** | A process is ongoing; it is something that has its own momentum but that must be supported by the decision makers in the firm and (if the process is useful) will become a part of the firm's culture. A |

| | |
|---|---|
| | process, however, is not merely a series of tasks, nor is it just a project (although it may be tested as a project). ERM can only become useful and successful if it is viewed as a process—a way of doing things—not just as a way to fix a problem (whether as a quick fix or a slow fix). |
| **Effected by an entity's board of directors, management, and other personnel:** | The people who make the decisions in a firm must be involved in ERM and must actively support the plan. In addition, there must be deep support and involvement from throughout the firm. Just as making a profit is "effected by an entity's board of directors, management and other personnel," so, too, is enterprise risk management. |
| **Applied in strategy setting and across the enterprise:** | Enterprise risk management is not a tactic—it is a strategy. As a strategy, it will have application throughout the firm and will be one of the key factors that points the firm in whatever direction its overall business planning intends for it to go. |
| **Designed to identify potential events that may affect the entity:** | A fundamental part of enterprise risk management is an analysis to determine the activities and drivers of activities that affect the firm. Such an analysis is not something one person can be told to complete before next Friday. (One person may indeed have that responsibility, but it will take information from throughout the firm to identify these events.) |

| | |
|---|---|
| **Manage risk to be within its risk appetite:** | The purpose of enterprise risk management is to put the firm into the position of actually managing, or controlling, its risk. The risk appetite in any firm, which is defined as the range of risk it can accept as what it will live with, is never going to be huge. Even a firm on the cutting edge would prefer to have as little risk as possible, but some activities will always be risky, and some risk may have to be accepted because its causes are difficult to identify. |
| **To provide reasonable assurance regarding the achievement of entity objectives:** | This is why a firm wants to control its risk—so it can focus on meeting the goals of its business plan. |

***Source:*** Adapted from Johnson & Swanson (2007)

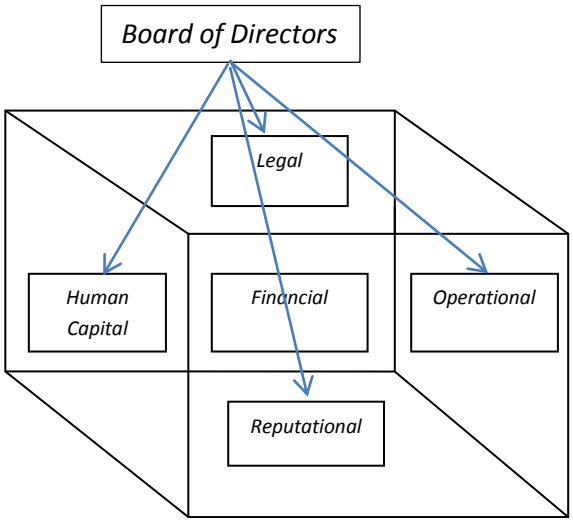
Overall, this definition encompasses that ERM is a strategic process that must be supported properly throughout the firm and that has the fundamental purpose of giving a firm the ability to control its risk while providing a reasonable assurance towards achieving business objectives.

ERM thrives on a different mindset compared to traditional risk management highlighted earlier. “ERM is a structured and disciplined approach: it aligns strategy, processes, people, technology and knowledge with the purpose of evaluating and managing the uncertainties the enterprises faces as it creates value” (DeLoach, 2000:xiii). This holistic approach of ERM which encompasses synergy represents a shift in the way of thinking about the risk management challenges. Accordingly, the notion ERM operates with a rather wide

scope. To add, apart from the measurable risk silos, ERM frameworks gradually expanded to incorporate non-quantifiable risks in addition to those that can be quantified (Mikes, 2005). Indeed ERM encompasses risks that cannot be readily quantified or aggregated. These non-quantifiable risks include, for example, the risks of strategic failure, environmental risks, reputational risks and operational risks that materialise only rarely. Recent development in risk management have emphasised the business challenges involving risk are not comparative static but dynamic. Because the nature and quantum of risk shift along with changes in a firm's market, technology, products, processes and locations, risk is never stable or under control, and hence challenging to manage (Coleman 1999). Therefore, it is imperative to monitor and manage emerging risks that are material from the point of view of the achievement of the strategic objectives of the enterprise (Mikes 2005).

At the heart of the ERM framework is the recognition that "risk is capital," and that the more traditional definitions of risk are inefficient, conceptually constricting (Ching 1997). The assertion that risk is capital strongly suggests that risks not only have classic downside potential, but also may exhibit upside or "profitable" characteristics. Therefore, if an organization can identify and manage its risks more effectively than its competition, then the organization may be able to exploit its risk management approach and realize a sustainable competitive advantage (Ching 1997). As shown in figure 3, the ERM framework deliberately changes the way in which risks and risk domains are characterized and viewed. Within the ERM framework, risks and risk domains are viewed as a larger space, eliminating the artificial barriers that have traditionally been used to identify and contain risks.

FIGURE 3:
ERM Framework




Some of the distinctive characteristics of the difference between ERM and traditional risk management are summarized in table 2.

TABLE 2
Traditional Risk Management vs. ERM

| **Traditional Risk Management** | **Enterprise Risk Management** |
|---|---|
| Focus on loss and costs and gaining protection from traditional risk transfer solutions. | Creation of competitive advantage and exploitation of natural hedges. |
| Different risks are managed in specialized units. | Different risks are integrated across the organization and managed centrally. |
| Risk management practices are loosely linked to strategic objectives. | Risk management practices are linked to strategic objectives incorporated in business plans. |
| Risk management perspective focus on financial market risks and insurable hazards. | Risk management perspective extends to operational and commercial exposure. |
| Risk management activities are practiced as an ad hoc check list exercise. | Risk management activities are incorporated into the core business processes. |
| Risk is defined as the probability of an identified adverse financial or operational even. | Risk is capital. |
| Partial or full risk transfer maximizes shareholder value. | There exists an "efficient frontier" upon which risk and reward is reflected in risk assumption and transfer decisions. |
| Traditional risk management methods are static | Enterprise Risk management methods are dynamic. |

***Source:*** Summarized from Anderson & Shroder, 2010; Coleman, 2009; and Ching, 1997.

## 2.3 Convergence of CSR and ERM Framework

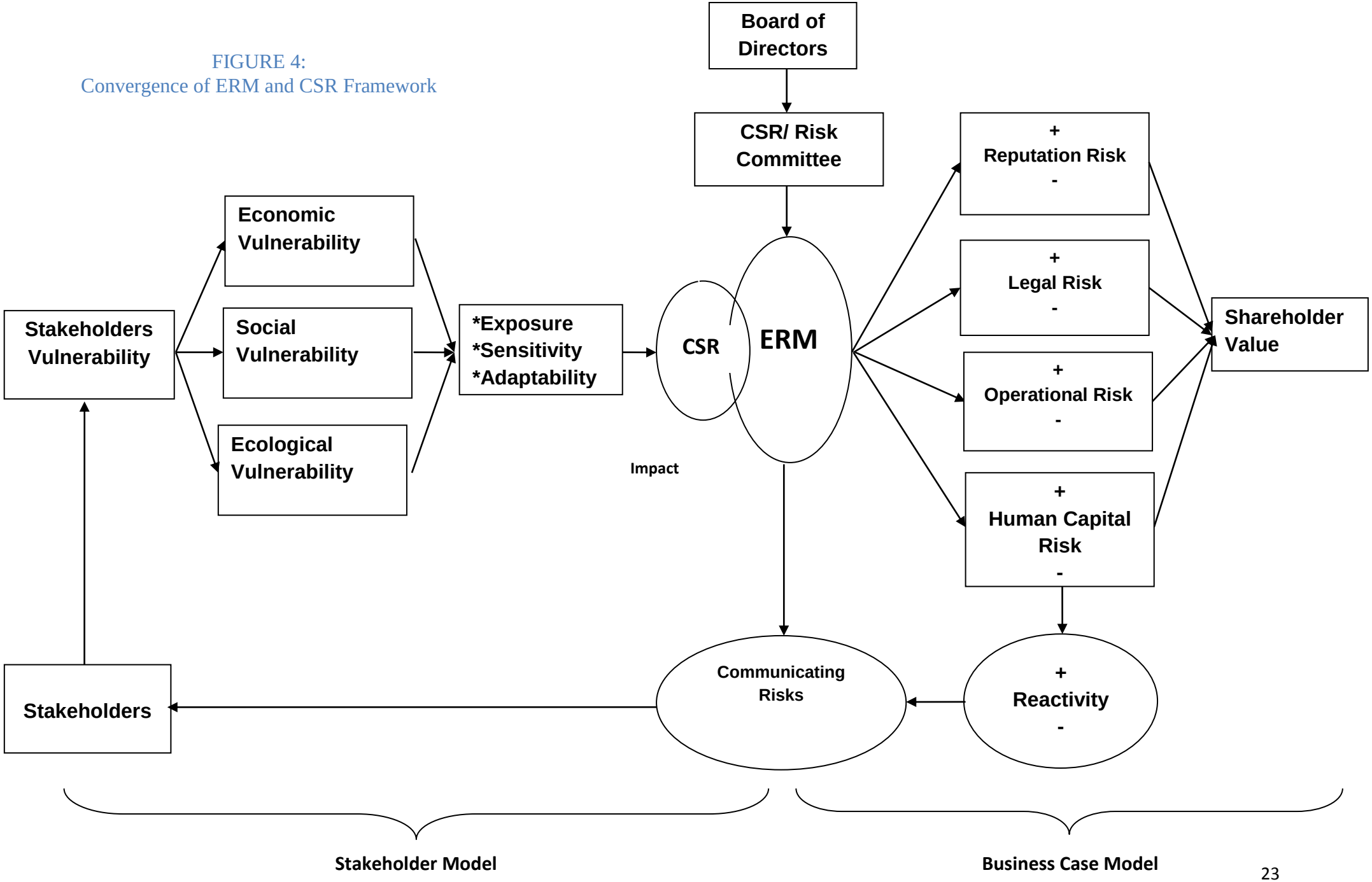
The various ERM frameworks do not establish a direct link between the company's risk management process and its strategy planning process. However, the key components of the risk management process and the strategic planning process are conducted in similar ways. Consequently, it should be relatively easy to incorporate CSR risk management analysis into the strategic planning process and modify the ERM frameworks accordingly (Coleman, 2009). This could ensure that CSR related concerns become an integral part of the corporate strategy framing and objectives setting processes.

However, the ERM frameworks propose a uniform structure across the organization to handle all risks, which is insufficient when the corporate risk landscapes are complex and unpredictable (Anderson & Shroder, 2010). A multifaceted risk landscape implies that the risk management process should be tailored to the specific risks that expose different parts of the organization, with some risks coordinated centrally, while others are handled decentrally and yet other risks are dealt with in combined central and decentralized approaches. Hence, corporate management should create an overview of the prevailing risk landscape, outline the contours of corporate exposures, identify interacting risks and handle them in a central risk management function. All the while, there must be sufficient flexibility in operational entities to foster risk awareness, enhance formal communication about weak risk signals and support initiatives for responsive actions (Coleman, 2009).

Any successful convergence between ERM and CSR requires not only that stakeholder interests be considered or served in some way but that the treatment of stakeholders be substantial enough and of the right kind to constitute stakeholder management in some robust sense. Thus, the mere involvement of stakeholders is not necessarily sufficient for the claim that CSR can be integrated into ERM model; it is therefore necessary to look more closely at how stakeholders are involved in ERM

(Boatright, 2011). With ERM at the central stage, the proposed framework that can allow CSR and ERM to converge is composed of 4 distinct constructs: Stakeholders' vulnerability assessment, corporate governance, communication, and financial performance (figure 4). In the following sections, I will explore each of these concepts along with their potential in making ERM systems able to embrace CSR issues from a risk management perspective.

FIGURE 4:
Convergence of ERM and CSR Framework



## 2.4 Stakeholder Vulnerability Framework

### 2.4.1 Stakeholders Definition

Freeman & Reed (1983) propose one broad and one narrow interpretation of the term stakeholder. The broad definition identifies "any identifiable group or individual who can affect the achievement of an organization's objectives" (Freeman & Reed, 1983: 91). In a narrow sense, the authors define a stakeholder as "any identifiable group or individual on which the organization is dependent for its continued survival" (Freeman and Reed 1983:91). By relating the firm's survival to the dependence on its stakeholders, the emphasis is set on the mutual relationships between the firm and its stakeholders.

Clarkson distinguishes primary and secondary stakeholders, defining the first group as those "without whose continuing participation the corporation cannot survive as going concern" (Clarkson, 1995: 106). By primary stakeholders Clarkson explicitly refers to shareholders, investors, employees, customers, suppliers, the governments and communities. Secondary stakeholders, on the other hand, are defined as "those who influence or affect, or are influenced or affected by, the corporation, but they are not engaged in transactions with the corporation and are not essential for its survival" (Clarkson, 1995: 107). He also designates special interest groups or the media as examples for secondary stakeholders. The firm's success is defined by the instrumental understanding of stakeholder management as proposed by Donaldson & Preston (1995). Cornell & Shapiro (1987) recognize that there is risk involved with the position as a stakeholder. Clarkson (1994) also recognizes stakeholders' position as risk-bearers. He distinguishes voluntary and involuntary stakeholders, dependent on the reason of their risk-bearing: "Voluntary stakeholders bear some form of capital, human or financial, something of value, in as firm. Involuntary stakeholders are placed at risk as a result of a firm's activities. But without the element of risk there is no stake." (Clarkson, 1994: 5; quoted in Mitchell et al., 1997: 857)

The essence of the above definitions is the insight that stakeholder theory stresses the importance of the firm's relations to internal and external groups that have a legitimate claim on the firm. The idea of stakeholder management, as formulated by Freeman (1984), is that managers must try to satisfy the needs of all groups who have a stake in the business. It is the management's task to balance the interests of stakeholders, employees, customers, suppliers, communities and other groups in a way that ensures the survival and long term success of the firm. Management should understand relationships to all stakeholders to achieve the organization's objectives. From an instrumental or managerial perspective of stakeholder theory this corporate goal is the maximization of shareholder value (Friedman, 1970). However, it is acknowledged that all stakeholders have to be considered to generate that value (Freeman & Mc Vea, 2001).

From a risk management perspective, the benefits of consulting with stakeholders are said to be numerous and include: higher levels of trust with stakeholder groups; stakeholders being able to contribute to decisions affecting their future; higher quality information for making business decisions; a wider understanding in the community of constraints upon firms; stakeholders feeling more involved in decision-making processes and feeling their interests are being considered; stakeholders better understanding their risk and opportunity management responsibilities and; greater collective responsibility in managing risks (Loosemore, 2009). However, most approaches to risk management are not driven or inspired by the need for broad consultation which risk management can offer but by the fear of the ever greater penalties for doing something wrong.

Organizations have looked towards processes of stakeholder dialogue and engagement to increase trust, hedge risks and provide better processes of communication regarding their activities. One of the reasons underlying many of the arguments which have been made in favour of increased and widespread stakeholder dialogue is that only through

such consultation is it possible for managers to develop an understanding of their stakeholders' expectations. However, corporate stakeholder engagement initiatives do not acknowledge the difficulties and the biases involved in identifying, and soliciting the views of, all stakeholders affected by organisations activities.

One method that is usually used by corporation in identifying stakeholders is stakeholders mapping. Mitchell et al., (1997) argues that definitive stakeholder status is determined by the synchronized presence of three factors: legitimacy, power, and urgency. 'Legitimacy' refers to socially accepted and expected behaviours. 'Power', refers to the ability to control resources. 'Urgency' exists when there is a pressing call for attention. However, these attributes are socially constructed in the perception of management. For example stakeholders such as investors can have power over an organization, as do employees if the business rely heavily on its human capital, but unless they make it known that they are prepared to use that power, then employees, will all rank low in priority in managers' minds. Overall, when deciding upon which social contractual responsibilities are to be addressed, businesses usually seek to prioritise the interests of those stakeholders who exert the greatest economic power and influence (Agle et al., 1999). It would be reasonable to assume that the expectations of the most vulnerable stakeholder might not be taken into consideration and therefore can be a source of negative risks.

Matching the types of risks that organizations face to the specific business needs, as well as understanding the vulnerability of stakeholders against the main business activities that are relevant of the sector activities might lead to a more efficient and well integrated ERM system which takes into account both opportunities and threats linked with stakeholder management. This approach might lead to a strategic competitive advantage, but also provide increase the assurance level in the company's ability to manage these risks taking advantage of opportunities and hedging the severity of potential threats (Gemmer 1997).

### 2.4.2 Defining Vulnerability

The field of vulnerability research embraces an array of different definitions for vulnerability. Blaikie et al., (1994: 9) define vulnerability as "the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard". Vulnerability is also the degree to which a system, subsystem, or system component is likely to experience harm due to exposure to a hazard, either a perturbation or stress stressor (Steffen et al., 2002). According to the UNDP Bureau for Crisis Prevention and Recovery (UNDP, 2004:11), human vulnerability is "a condition or process resulting from physical, social, economic and environmental factors, which determines the likelihood and scale of damage from the impact of a given hazard". This definition also encompasses response and coping, since vulnerability refers to the different variables that make people less able to absorb the impact and recover from a hazard event.

Applying the concept of vulnerability to the stakeholder's perspective, vulnerability can be defined as a set of conditions and processes resulting from social, economic and environmental factors that increase the susceptibility of a company' stakeholders to the impact of business related activities. Vulnerability also encompasses the idea of response and coping, since it is determined by the potential of stakeholders to react and withstand a crisis Blaikie et al., (1994).

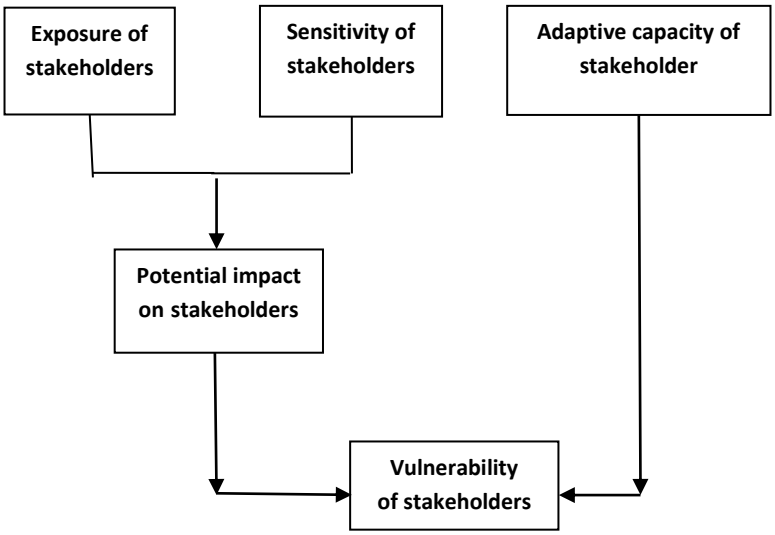
### 2.4. 3 Assessing Stakeholder Vulnerability:

To assess vulnerability, I use a conceptual model that builds upon work of the Intergovernmental Panel on Climate Change and illustrated by Schröter & Metzger, 2004. In this model, vulnerability was assessed for communities suffering from drought. This assessment is based on three primary variables:  exposure, sensitivity, and adaptive capacity. Exposure incorporates frequency and severity of the drought; severity includes magnitude, duration, and spatial extent. Sensitivity is the susceptibility of a water user or users to the

effects of the drought. Adaptive capacity is the ability of a water user to manage or reduce adverse effects of a drought, through actions taken before, during, or after the drought. Exposure and sensitivity determine the potential impact (Schröter & Metzger, 2004).

The same conceptual framework could be used by companies to assess the vulnerability of the stakeholder against the impact of their business operations which directly or indirectly affect them. This assessment can be based on the same primary variables: exposure of stakeholders, sensitivity of stakeholders, and adaptive capacity of stakeholders. Exposure incorporates frequency and severity of the impact of business related activities that directly affect stakeholders; severity includes magnitude of the impact. Sensitivity is the susceptibility of a stakeholder to the effects of the business activities externalities. Adaptive capacity is the ability of a stakeholder to manage or reduce adverse effects, through actions taken before, during, or after the exposure to business risk factors. Exposure and sensitivity determine the potential impact. Adaptive capacity determines the portion of the potential impact that becomes an actual impact. The combination of the three components results in a net impact or vulnerability to the business operations (figure 5).

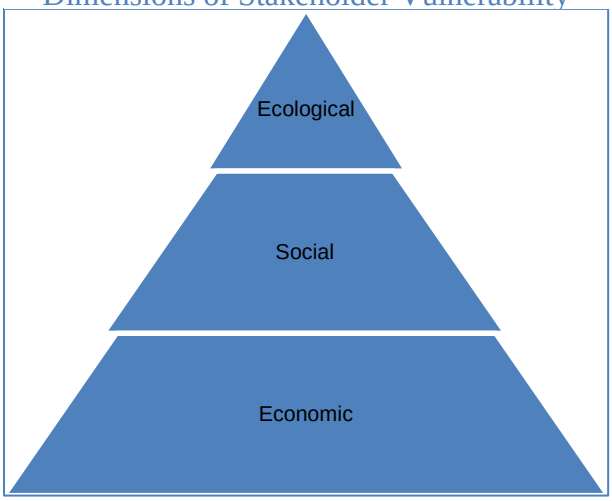
FIGURE 5:
Vulnerability Assessment Framework applied to Stakeholder Theory




***Source:*** Adapted from (Schröter & Metzger 2004)

Vulnerability of stakeholders can be also classified in line with the three dimensional model of corporate performance (figure 6) developed by Caroll (1979).

FIGURE 6:
Dimensions of Stakeholder Vulnerability




**2.4. 3.1 The Economic Dimension of Vulnerability**

The economic dimension of vulnerability acknowledges economic damage potential, which can be understood as anything concrete that affects the economy of a region in which stakeholders are present and can be impacted by the company's business operations. The economic dimension of vulnerability represents the risk to production, distribution and consumption (Steffen et al., 2002).

**2.4.3.2 The Social Dimension of Vulnerability**

The social dimension of vulnerability acknowledges the vulnerability of stakeholders, and the emphasis is on coping capacity. Especially weak and poor population groups are considered vulnerable. Cannon et al. (2003) see social vulnerability as a complex set of characteristics that includes a person's initial wellbeing, livelihood and resilience, self-protection, social protection and social and political networks and institutions. Cutter et al. (2003) define social vulnerability as a multidimensional concept that helps identify those

characteristics and experiences of communities and individuals that enable them to respond and recover from exposure to business activities.

#### 2.4.3.3 The Ecological Dimension of Vulnerability

The ecological dimension of vulnerability acknowledges ecosystem or environmental vulnerability or fragility. In the case of ecological vulnerability, it is important to find out how different kinds of natural environments cope with and recover from different hazards. According to Williams & Kaputska (2000), ecosystem vulnerability can be seen as "the inability of an ecosystem to tolerate stressors over time and space". Villa & McLeod (2002) state that environmental vulnerability can be either intrinsic or extrinsic. Intrinsic vulnerability is related to factors internal to the system (ecosystem health and resilience), whereas extrinsic vulnerability contains factors external to the system (present exposure and external hazard). Ecological vulnerability thus recognizes both ecological damage potential and coping capacity.

Overall, an assessment of stakeholder vulnerability toward businesses operations is based on stakeholder input, the approach provides an integrated assessment of vulnerability that considers factors important to stakeholders, and can promote discussions about vulnerability. Through the implementation of a stakeholder vulnerability assessment framework, companies can gain a good understanding of stakeholder's expectation without the need to prioritize one stakeholder group over the other since all expectation can be integrated at the heart of the ERM system.

## 2.5 ERM and Corporate Governance

In addition to exploring a wide range of risks, the objective of ERM includes the objectives of internal control, which is the process within an organization to achieve reasonable assurance of effectiveness and efficiency of the company's operations. From corporate governance view, the purpose of effective risk management could be aimed at

different types of risks, ranging from fraud to embezzlement to financial distortion, mismanagement of perilous strategy (Daelen & Elst, 2010). The key elements of successful ERM programs, insofar as corporate governance is concerned, are comprehensive and transcendent risk management that operates to avoid silos, and senior level (preferably board level) involvement in risk management.

Under current corporate governance practices, the CEO is usually a risk silo (Simkins & Ramirez, 2008). The CEO's interests will align with the shareholders in a manner that encourages appropriate risk management. Nevertheless, the CEO could be tempted to manipulate enhanced compensation for increased profits today at the expense of large risks for the corporation tomorrow (Bebchuk et al., 2011). For example, in the past few years, some CEOs have demonstrated an inclination to manipulate the system of corporate governance to harvest illegitimate gains by backdating options grants (Bebchuk et al., 2011). Indeed, this practice suggests that CEOs are sorely tempted by higher compensation to expose the corporation itself to huge losses in the long term from lost investor confidence.

In order to develop an integrated firm-wide perspective on risk, senior management must overcome organisational silos between business lines and share information on market developments, risks and risk mitigation techniques. This includes reputational, legal and strategic risks, as well as risks that do not appear to be significant in isolation, but when combined with other risks could lead to material losses (Simkins & Ramirez, 2008).

It is the responsibility of the board of directors and senior management to define the institution's risk appetite and to ensure that the firm's risk management framework includes detailed policies that set specific firm-wide the firms' activities, which are consistent with its risk taking appetite and capacity. In order to determine the overall risk appetite, the board and senior management must have an understanding of risk exposures on a firm-wide basis through assessing stakeholders' vulnerability against the business daily operations.

## 2.6 Communicating Risks

Communication of risk is characterized with two important aspects: how to comprehensively understand the nature and probabilities of risks; and how to most effectively explain it to stakeholders. Communication strategy must be shaped by recognition that adverse impacts of risks are shared between stakeholders, whereas their benefits are concentrated with most going to shareholders. Thus thoughtless communication of risks to the community, regulators, lenders and employees will elicit a negative reaction. Miscommunications merely alarm stakeholders. This will be at a cost to shareholders who benefit from well-judged risks (Coleman, 2009).

Good communications becomes even more important once a crisis breaks. Companies that have a communications strategy that enables them to respond quickly and effectively to "bad news", and which manage issues promptly and openly, often emerge with their reputations enhanced (The Economist Intelligence Unit, 2005). Management can hedge negative risks by assessing the crisis situation and choosing an appropriate response strategy to shape public perception (Coombs & Holladay, 2002). Such strategies, which Coombs (1995) calls crisis response strategies, become an important symbolic resource for crisis managers. After analysing crisis response strategies developed, Benoit (1997) grouped them into five main categories: denial, evasion of responsibility, reduction of offensiveness, mortification strategies, and corrective action.

The legal liability incurred by an organization diminishes with increasing use of defensive strategies (Tyler, 1997), but this approach suggests denial of responsibility, corporate arrogance, and inappropriate defensiveness, and may ultimately increase negative stakeholder perceptions of the organization. Therefore, when firms face lawsuits, they must quickly decide whether they should focus on protecting themselves from the financial risks of legal liability or defending their public image.

The objective of risk communication should be to inform all stakeholders that prudent risk management strategies are being followed, and to demonstrate that their benefits are being achieved, without necessarily disadvantaging any group (Coleman, 2009). Reporting a firm's strategies to manage a specific risk in isolation can be limited, which makes it desirable to integrate risk communications into a broader ERM framework where risk management is just one corporate objective (Jenkins 2009).

**2.7 Risk Categories and Shareholder Value**

Risks can be organized along a spectrum, depending on how quantifiable they are. At one extreme lie the market risks arising from changes in the values of liquid assets. At the other extreme lie the risks arising from infrequent events (such as a contagious financial crisis) with potentially massive consequences. In this case, risk is very difficult to quantify. There are other schemes of risk classification. These include endogenous versus exogenous risk, financial versus nonfinancial risk, static versus dynamic risk, pure versus speculative risk, fundamental versus particular risk, systematic versus unsystematic risk, and others. Appendix A provides summary definitions of these concepts (Moosa 2007).

Another perspective on risks is to divide them into specific categories to type and location. One set is tangible because it is measurable or affects tangible assets. Another set of risks is less tangible and although often identifiable is far more diffuse and imprecise. These arise in intangible assets and include employee skills and competencies, customer and suppliers' contracts and relationships, brands and patents, intellectual property and knowledge, etc (Coleman, 2009).

Ackermann et al. (2007) argue that the categorization of risk in a simple way can be extremely unhelpful since the categories may be viewed as independent of each other. In addition to considering a wider range of risk categories, it is significant to consider more than

just the risks themselves but also their impact on one another. In order to represent the different aspects of risk in an accurate way, it is important to consider risk as systemic. Overall, there is no right or wrong way of classifying risk. For the purpose of this study, four broad categories will be defined: Legal, reputational, operational, and human capital risk.

### 2.7. 1 Legal Risks

The concept of risk has been studied in different disciplines based on a variety of definitions. The most convincing definition of legal risk is probably the one included in the Basel II accord: "Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements" (Basel Committee on Banking Supervision 2006).

There are many different definitions of legal risk, but most seem to fall into one of the following two groups. The first set of definitions links legal risk to legal uncertainty. Most other definitions define legal risk by giving a number of examples, which include, in addition to legal uncertainty, uncertainty about factual elements. The definition of legal risk should distinguish legal risk from other types of risk (Mahler 2007).

Compliance with environmental, consumer protection, anticompetitive, and consumer's protection laws has become a legal obligation for firms. Compliance is all about making sure that the firm complies with state and federal law, particularly the regulations of agencies that license, certify, or otherwise have the authority to seriously affect the firm. The legal perspective of risk management is often seen as a method for protecting the firm. While there is nothing wrong with protecting the firm, risk management is not really about protection. It is about making changes within the firm that lead to an ability to control risk. Although aspects of compliance planning are designed within an ERM framework, an efficient compliance planning should not be strictly about developing a plan to ensure the firm complies with the law. The principal focus of Legal risks within an ERM system is

finding a way to control risk so more of the firm's resources can be used to further the firm's business planning. For example, companies have the legal obligation to meet certain minimum standards in order to sell their services (quality assurance) or their products (quality control). From a legal perspective, quality assurance and quality control can be seen as efficient methods for preventing breach of contract (by meeting quality standards or specifications) and for avoiding negligence such as professional malpractice. Therefore, developing a legal compliance plan as a part of ERM requires carrying out the objectives learned from the risk management analysis (Johnson & Swanson, 2007).

Legal costs can range from 3% to 10% of businesses annual revenues (Sweeney, 2001). When a company faces legal actions, not only it faces the possibility of paying out large fines but also incurs indirect costs such as management distraction and difficulty in obtaining credit on favourable terms (Cornell & Shapiro 1987), reducing consequently the value of the company. In a study investigating the impact of antitrust fines on firm valuation, Gande & Lewis (2009) documented significantly negative stock price reactions to antitrust related lawsuits. They also reported that shareholders partially anticipate these lawsuits based on lawsuit filings against other firms in the same industry.

### 2.7.2 Reputational Risk

In addition to the legal fines, the company's reputation is damaged when stakeholders learns that it may have used illegal working practices. Compliance failures are the biggest source of reputational risk (The Economist Intelligence Unit, 2005). The biggest threat to reputation is seen to be a failure to comply with regulatory or legal obligations. Failure to deliver minimum standards of service and product quality to customers is a close second. The risk that unethical practices in the organisation will be exposed follows closely behind. For example, when a company's compliance with environmental protection laws is in doubt, the public's appraisal of the company and support for stricter environmental protection

legislation may cause this type of crisis to have a relatively larger impact on the company's reputation and business interests. Therefore, firms must consider the impact of crises on their relationships with important public sectors.

Conceptualisations of reputation range from a strategic management perspective that views reputation as a resource (Fombrun & Van Riel, 1997); for example, Fombrun (1996: 57) describes reputations as strategic assets that "produce tangible benefits: premium prices for products, lower costs for capital and labour, improved loyalty from employees, greater latitude in decision making, and a cushion of goodwill when crises hit." Overall, reputation is viewed as an intangible asset with the potential for value creation (Little & Little, 2000).

Maintaining a good reputation may be a sound business decision because it could help withstand future reputation shocks. At the same time, Scott & Walsham (2005: 312) note that reputation takes "time to create, cannot be brought and is easily damaged". In addition, reputations are contextual: that is, different organisations will have different reputation characteristics depending on the details of their situation (Deephouse & Carter, 2005). Reputation, therefore, while being an intuitively appealing concept is a complex organisational characteristic and this affects how it can be formally studied. The identification of reputation risk is closely linked to attempts to manage such risks. The notion of RRM, however, causes academic controversy because of the conceptual difficulty in separating RRM from the management of other organisational processes (Fombrun &Van Riel 1997). Nevertheless, particular organisations can be seen to attempt to control and manage their reputation risks (Rayner 2001). Evidence for the proposition that corporations seek to enhance their reputation and manage risks to reputation can also be found in CSR reports (Bebbington et al., 2007).

The resource-based view of the firm stipulates that a positive reputation denotes a psychological contract between the firm and its stakeholders and is an intangible asset that

enhances firm performance (Barney, 1991) while damage to firm reputation negatively impacts its performance. Overall, the benefit of a reputation comes not from increases in financial performance, but rather from insulation from negative financial performance (Godfrey et al., 2005). Scholars have previously suggested that firms with good reputations may withstand crises, such as the Tylenol tampering in the 1980s suffered by Johnson & Johnson, with lesser economic losses than firms without good reputations (Knight & Pretty 1999). To this end, Fombrun (2001: 24) argues that "reputations have considerable hidden value as a form of insurance — they act like a reservoir of goodwill". Unfortunately, there is still a dearth of empirical support for this claim.

Opinion is divided as to whether reputational risk is a category of risk in its own right, or merely the consequence of a failure to manage first-tier risks. Whatever position companies take on this, almost all executives agree that corporate reputation is a hugely valuable asset that needs to be protected. It is also clear that serious reputational damage can occur simply as a result of perceived failures, even if those perceptions are not grounded in fact. Understanding how different aspects of an organisation's activities impinge on stakeholder perceptions is therefore a vital aspect of protecting a company's reputation.

Reputational risk is multidimensional and reflects the perception of other market participants. Furthermore, it exists throughout the organisation and exposure to reputational risk is essentially a function of the adequacy of the firm's ERM processes, as well as the manner and efficiency with which management assess the stakeholders' vulnerability directly affected by the business operations and how well it is integrated within the ERM framework.

### 2.7.3 Operational Risk

Industry mythology associates operational risk with a specific event, namely the collapse of Baring bank in 1995 resulting from the activities of the rogue trader Nick Leeson. (Coleman 2009). In reality, the category of operational risk pre-existed the collapse of

Barings and was used in the context of more humble and less dramatic risks associated with organizational infrastructure and systems. But it was the Baring experience which helped to see the idea within many organisations. The category of operational risk becomes a prominent focus for organisational reform and discussion despite being problematic to define (Moosa 2007).

The definition of operational risk settled upon by the Basel Committee (2001), the transnational policy body for banking supervision, is very general: the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events. The broad nature of this definition means that the concept of operational risk can appeal to a wide range of sub-groups within organizations and functions as an umbrella for much different interests. Operational risk characterises a new risk management in which the imperative is to make visible and manageable essentially unknowable and incalculable risks. New categories are a part of the appearance of manageability, a conceptual ‘mopping-up” exercise involving definition and formalisation (Power, 2004). In spite of the widespread recognition of the importance of operational risk among managers, investors, and regulators, there is little systematic information on the extent of operational risk, the magnitude of losses from this source of risk.

Fontnouvelle, et al. (2003) primary objective was to quantify operational risk and to provide guidance to managers and regulators about the magnitude of operational risk in the banking industry. They suggest that operational losses are an important source of risk for large, internationally active banks, and that the capital charge for operational risk will often exceed the charge for market risk. Their results are consistent with the amounts of capital that some large international banks are allocating for operational risk. Bizjak & Coles (1995) study on the impact of private anti-trust litigation on a broad sample of firms, and Bhagat, et al. (1994) analyze the impact of inter-firm lawsuits, including operational loss events such as

breach of contract and patent infringement. Blacconiere & Patten (1994) provide evidence regarding the market value impact of environmental losses on firms in the chemical industry.

### 2.7.4 Human Capital Risk

The concept of human capital has its origins in the economic literature. Becker (2002) defined human capital as '. . . the knowledge, information, ideas, skills, and health of individuals' (Becker 2002: 1). On the other hand, the uniqueness of human capital stems from the fact that people cannot be separated from their knowledge, skills, health or values in the way they can be separated from their financial and physical assets (Becker 2008). As Becker noted, "Human capital analysis starts with the assumption that individuals decide on their education, training, medical care, and other additions to knowledge and health by weighing the benefits and costs" (Becker, 1996: 9–10). At the individual level, human capital consists of the characteristics possessed by an individual that can yield positive outcomes for that individual while at the unit level, human capital can refer to the aggregate accumulation of individual human capital that can be combined in a way that creates value for the unit (Wright & McMahan, 2011). Human Capital risks can be associated with the acquisition, management, and maintenance of a human workforce. These risks would include workers' compensation, unionization, turnover, absenteeism, strikes, workplace violence, harassment, and discrimination. Environmental issues related to safety and security, occupational, and environmental hazards are also included within this domain.

The Conference Board 2011 report entitled 'Managing human capital risk: A call for a partnership between enterprise risk management and human resources' suggests that there is a need for stronger integration of human capital risks into a company's ERM framework. The report suggests that these risks are mainly handled by the human resources department to manage alone with little understanding of the potential impact to a company's entire operation. Surveying 161 leading companies worldwide, researchers have concluded the

following. For most companies, human capital accounts for at least half of operating costs and can have a significant impact on business outcomes. Nevertheless, the study reveals that human capital risk tends to be siloed in the human resources department, away from the companywide assessment and mitigation processes of enterprise risk management (ERM). This organization prevents information about human capital risk from having a role in the comprehensive, aggregate view of risks (Conference Board, 2011).

The impact of human resource management (HRM) policies and practices on firm financial performance is an important topic in the fields of human resource management (Boudreau, 1991). Among the emerging conventional perception among human resource professionals, there is a growing consensus that organizational human resource policies can, if properly configured, provide a direct and economically significant contribution to firm performance (Huselid, 1995). In theory, the belief is that effective systems of HRM practices, which exploit the potential for complementarities and help to a firm's competitive strategy, are sources of sustained competitive advantage (Barney, 1991). However, as of today, very limited empirical evidence supports such a belief (Groarke, 1998).

With these theoretical arguments providing the backdrop, this next section explores whether the announcement of CSR negative related events has any empirical impact on the market value of a firm. Reflecting most of the extant literature in event studies, it is assumed that markets are efficient in the sense that all publicly available information is priced into the firm’s stock. If the announcement of CSR negative event conveys negative and unexpected information, the firm’s stock price will be adversely affected. In an efficient capital market, announcements of negative events are said to be informative if they lead to a change in investors’ assessments of the companies’ future cash flows. Otherwise, the announcements are said to be non-informative. This discussion suggests the following hypothesises:

***Null Hypothesis 1:*** CSR related negative events do not significantly change the stock prices of affected companies. That is, the announcement of CSR related negative event is non-informative. The alternative hypothesis is that such announcements are informative.

***Null Hypothesis 2:*** Reputational risks do not induce a significant negative reaction of the stock market.

***Null Hypothesis 3:*** Legal risks do not induce a significant negative reaction of the stock market.

***Null Hypothesis 4:*** Operational risks do not induce a significant negative reaction of the stock market.

***Null Hypothesis 5:*** Human Capital risks do not induce a significant negative reaction of the stock market.

# METHODOLOGY

The purpose of this section is to explore the securities' market's reaction to negative events. Based on the argument raised earlier, it seems reasonable to explore the hypothesis if CSR related negative risks can materialize and impact the investors through changes in security prices, manifesting themselves in abnormal security returns (Peterson 1989). This research applies the event study methodology which allows investigating the share price reactions as a result of the announcement of unexpected events (Fama et al., 1969). The results of this event study can have serious implications as it can provide an important source of 'market' information to both individual and institutional investors (Firth 1979).

## 3.1 Event Study

The event study method, like many other forms of quantitative analysis in economics, finance, and accounting, is considered as positivist. It is rooted in econometric theory and, in particular, relies on results on prediction from regression models (Coutts et. al 1995). The event study method has significantly contributed to strategic management research by investigating the financial impact of various corporate announcements. This method has been used widely in accounting and finance, often to measure the impact of corporate control changes. In management, the framework has been used to judge the effects of corporate events such as divestiture, CEO turnover, layoffs, plant closures, product recalls, the appointment of top executives, and the deaths of CEOs, etc (McWilliams & Siegel 1997).

An event study attempts to measure the valuation effects of a corporate event by exploring the response of the stock price around the announcement of the event. More specifically, event studies assess whether specific events create abnormal stock returns. Abnormal returns are the differences between the observed returns and the estimated returns derived from a particular stock return model (Campbell & MacKinlay 1997).

The major underlying assumption in event studies is that the market processes information about the event in an efficient manner and that there is an immediate response and adaptation of capital markets to new information (Fama et al., 1969). Efficient markets hypothesis suggests that control variables will be unnecessary as investors have already calculated known controls, such as size, industry, etc. into their valuation methods; therefore only new relevant information affects the firm's valuation during an event.

"Security return event studies are one of the most objective ways in which researchers can determine whether accounting or other events have an impact on investors" (Thompson 1988: 77). However, the event study analysis provides a true measure of the financial impact of an event only if a series of assumptions are respected and if the research design is properly executed. The most important assumptions are that the markets are efficient, the event was unanticipated, and that there were no confounding effects during the event window (McWilliams & Siegel 1997).

**3.2 Event Study Methodology**

The literature refers to different methods on how to conduct an event study. There is a number of reviews of event study methodology, including, Lamdin (2001), Kothari & Warner (2005), Cichello &Lamdin (2006), and Johnston (2007). Concerning the design of this event study, I follow the recommendations of McWilliams & McWilliams (2000), McWilliams and Siegel (1997), Bowman (1983), Brown & Warner (1980) as they are perceived as demanding by the research community. I have reviewed these recommendations and summarized them in table 3 below.

TABLE 3
10 Steps for Implementing an Event Study

| |
|---|
| ***Step 1***: Define the sample and the event that provides new information to the market. |
| ***Step 2***: Choose an appropriate event window and justify its length, if it exceeds two days. |

| |
|---|
| ***Step 3***: Eliminate or adjust for firms that experience other relevant events during the event window. |
| ***Step 4***: Model the normal (expected) total shareholder returns. |
| ***Step 5***: Compute abnormal returns during the event window and test their significance. |
| ***Step 6***: Organize and group the abnormal returns according to event type (For the purpose of this study in accordance to companies, sectors, and risk categories). |
| ***Step 7***: Analyse summary measures for abnormal returns by event type |
| ***Step 8***: Robust test check across all events in order to highlight significance. |
| ***Step 9***: For small samples, discuss the impact of skewedness, kurtosis, and outliers. |
| ***Step 10***: Report firm names and event dates in data appendix. |

***Source:*** Summarized from the recommendations of: McWilliams & McWilliams (2000); McWilliams & Siegel (1997), Bowman (1983); and Brown & Warner (1980).

### 3.2.1 Sample Selection

The starting point for the collection of the sample group of companies was the constituents of the FTSE 100 as at 31 July 2011, with those companies which were not included in the index at any stage over the period ranging from January 2007 to July 2011 being excluded. The FTSE 100 was chosen on the basis that, given the size of the top 100 UK constituent companies in terms of market capitalisation, comprehensive data should be obtainable for these firms. Most importantly, the choice is justified by the accuracy of a single country setting market to assimilate information at a uniform level as opposed to multiple country settings. In fact, an event study which investigates the effect of any type of announcements in multiple countries is likely to distort the findings when researchers are not aware of institutional and cultural differences (Park 2004). It is also important to highlight that from the investors' psychology perspective, the perception of the nature of the events can differ from one market setting to another (Daniel & Titman 1997). Finally, for convenience

purpose, single-country event studies collect announcements of events from a few domestic newspapers, as opposed to the need to expand sources of news media to collect comprehensive event announcements in multiple countries.

The study use Methodology data from the European rating agency Vigeo to investigate the effect of CSR related events on shareholder value. Vigeo is the leading CSR rating agency in Europe and specialises in producing ratings of corporations' CSR performance on both environmental, social and governance aspects (Vigeo, 2010: Slide 3). Vigeo's methodology builds on international recognised standards within the different ESG areas such as conventions, recommendations, statements and guidelines from the UN, ILO, UNEP, OECD, Global Compact, European Union etc. These standards form the foundation for generating specific measures against which corporations are assessed. Overall, the measures are organized into six domains (Vigeo, 2010: slide 9). Not all criteria are assessed for all corporations. Only corporations from industries within which issues are pertinent are assessed (Vigeo, 2010: slide 12). For the purpose of this study, access to Vigeo's methodology allows to cluster the event type into risk categories. The ratings model is based on internationally recognized CSR standards, made up of 38 generic criteria. The sub- fields are aggregated into 6 domains. A summary description of each domain is summarized in Appendix B.

Using qualitative subjective assessment, I was able to analyse each event from the sample and categorize it within a Vigeo criterion. For example, if the Financial Times reported that a company was fined due to a corruption allegation, this event would be placed under "C&S 3.1: Prevention of Corruption" criterion, etc. While screening the sample events against Vigeo 38 criteria, the events were categorized within 20 out of these 38 criteria (Appendix B).

For each CSR issue (criterion), and for each sector, Vigeo assigns 4 risk categories Reputational, Legal, Operational, and Human Capital. Each of these risk categories carries a different weight given the power of the risk category for each criterion (Vigeo, 2010b: slide 5). The risk category with the highest weight, meaning the risk category that is more likely to materialize for each criterion and sector, was selected in this study in order to have each CSR issue (criterion) from a specific sector assigned a risk category. Moving from 20 clear categories to 4 broader risk categories was necessary to have samples large enough for meaningful analysis. Details on these event types and risk category for each event appear in the Appendix C.

From reviewing the article of the Financial Times, 151 events associated with 78 firms between January 2007 and July 2011 has been identified. The sample was reduced from 100 companies to 78 because of the exclusion of 8 companies that left the index within the January 2007- July 2011 period, and the exclusion of 16 companies which did not experience any CSR related negative event during that period. The event date was taken as the date that the information was provided to the market via publication in the Financial Times. Although deficiencies associated with the use of the Financial Times have been noted (Thompson 1985), the majority of event studies in economics, accounting and finance, have used this source.

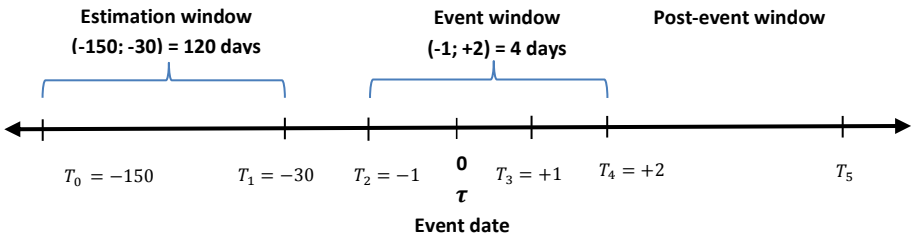
### 3.2.2 Selecting the Event Window and Estimation Period

In order to account for the possibility that information was leaked to the market prior to the announcement of the event in the Financial Times, an event window covering T= 1 day before the event was evaluated. In order to allow for the possibility that the information slowly leaked into the market, a T=+2 day period was evaluated after the event occurred. The event window denotes the period of interest over which the effect of an event is measured.

The more days are included in the event window, the lower is the power of the methodology (Brown & Warner 1980).

The estimation window length is a key decision to take in event studies. If the normal market return model structure is expected to vary frequently across time (i.e. due time varying betas), a too long window may miss that change under-representing the more recent normal market return structure. On the other hand, a too short estimation window may have not enough degrees of freedom to properly capture the model structure. Being aware of it, my first choice is a six months window. The estimation windows covers six months: [−150 : −30], the event window applied is 4 days: [−1 : +2] as reflected in figure 7.

FIGURE 7:
Approach to Event Study Methodology




### 3.2.3 Investigating Confounding Effects

In event study analysis, one must be cautious against spurious abnormal returns, caused not by the event of interest, but by firm specific confounding events occurring during the event interval. Management (McWilliams & Siegel 1997) and finance (Peterson 1989) scholars reviewing event study protocols caution that material events coincident to the event of interest, such as earnings announcements, new product announcements, major sales, or a merger & acquisition announcement, confound the ability of the event study methodology to assign abnormal share price movements to the focal event.

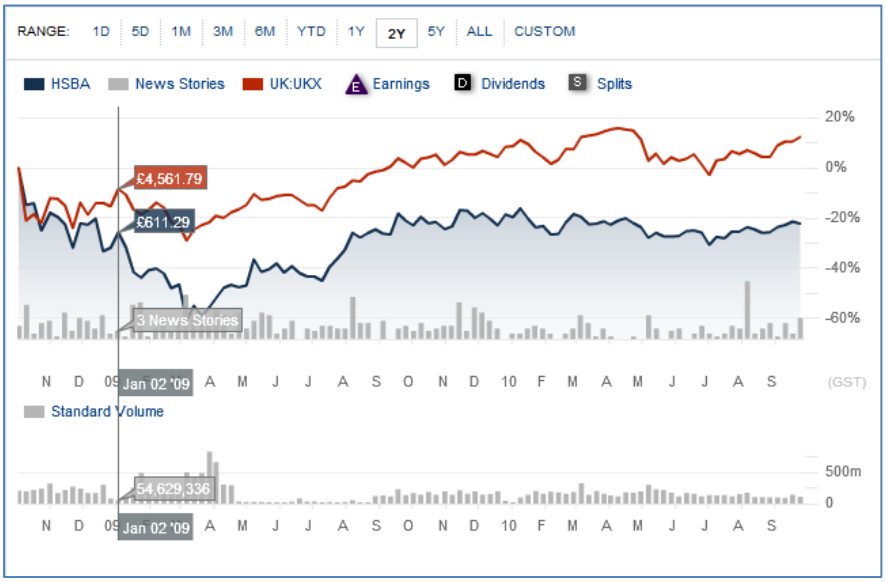
This possibility was controlled for by searching Financial Times interactive chart for mergers and acquisitions, earning announcement, new product announcements, and other

events. 220 potential events have been screened for: (1) action against the corporate entity and not one of its directors, officers, or employees individually; and (2) the presence of any material confounding corporate events (e.g., earnings adjustments or forecasts, announcement of major sales, mergers & acquisitions) within a 10-day period preceding the event date and 10-days following the event date. An example of the screening procedure applied is highlighted as follows.

On January 14 2009, the Financial Times reported that Deminor, an investor activist group in Brussels, was considering legal action against HSBC and other financial institutions for allegedly neglecting their responsibilities toward protecting clients who invested in Madoff-related products. Under the nature classification schemes of events, this event would be considered as relevant since it is linked with failure in protecting customers.

As reflected in figure 8, the first screening resulted in the absence of earning announcement, dividends, mergers and acquisition or stock splits within 10 days of the event window.

FIGURE 8
Screening technique for Confounding Effect




***Source:*** Financial Times Interactive Charting

Overall, all the first signs suggest that this particular event had an impact on the stock price. However, it is important to investigate other factors that could influence the event that might have caused the stock drop. In this case, on January 2 2009, the Financial Times reported that the shares of HSBC Holdings are trading roughly 28% below where they were a year ago, after Morgan Stanley reported that the lender HSBC needs to raise capital and cut its dividend. This announcement constitutes noise and can jeopardize the event study analyses. This event is therefore not suited for the purpose of this research and has been removed accordingly.

Following the same screening approach, confounding effects have been screened meticulously to avoid any misleading results leading to a total of 74 events being removed from the sample. Overall, in order to select the relevant negative CSR events, exclusion criteria: I have excluded firms, which exited the FTSE 100 from the period ranging from 1/2007 to 08/2011. I have also excluded events with confounding effects around 10 days estimation window. These include: dividends payment, earning announcement, mergers & acquisitions, stock splits, and any confounding news that can affect the reliability of the study. Firms with missing trading day in the estimation or event window and companies who have not experienced a negative event related to CSR have been excluded as well. Table 4 below summarizes the exclusions.

TABLE 4
Events Filter

| Filter | #firms | #events |
|---|---|---|
| **Companies excluded from the FTSE 100 (1/2007- 8/2011)** | 8 | - |
| **Missing Days in estimation windows** | 4 | 2 |
| **Confounding effects within 5 days of event window** | 23 | 78 |
| **Companies without events** | 16 | 0 |
| **Total** | 51 | 80 |

After applying filters, the sample size in terms of number of companies was reduced from 100 to 49 and the number of events from 151 to 71. Although these filters affected heavily the sample size of this study, it is a very essential step in order to avoid biases in the sample.

### 3.2.4 Model the Normal Returns

The total shareholder return and stock price information for those firms experiencing negative CSR events was extracted from Thomson DataStream daily stock returns. In this study, the daily return, dividends paid plus the change in the price of the security for each trading day, was used and computed as follows:

$$R_{it} = \frac{P_{it} + D_{it} - P_{it-1}}{P_{it\_1}},$$

where $P_{it}$ and $D_{it}$ are respectively the price of a stock *i* and dividend on date *t*.

A simple market model is formed by regressing the daily returns on each stock against the FTSE 100 index. In the literature, the simple market model generally provides results which are robust to estimation of "normal returns" when compared to other alternatives such as Fama-French three factor models, and ARCH/GARCH models. This is due to the fact that such alternatives have much higher probability of statistically insignificant parameters and therefore have much higher noise on the normal return which is automatically transferred in the measure of the abnormal return (Brown &Warner 1985). The measurement of abnormal returns implies that a model can be specified that generates normal returns using the following market model:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it},$$

where

$R_{it}$ = the rate of return on the share price of firm $i$ on day $t$;

$R_{mt}$ = the rate of return on a market portfolio of stocks (FTSE 100) on day $t$;

$\alpha_i$ = the intercept term;

$\beta_i$ = the systematic risk of stock $i$;

$\varepsilon_{it}$ = the error term; with $E(\varepsilon_{it}) = 0$.

### 3.2.5 Calculating Abnormal Returns during the Event Window and Testing their Significance

Considering the nature of these CSR unexpected events, abnormal returns are calculated starting from the day prior the event (in order to take into account for eventual anticipation of the news) so the event window is (-1; +2) with 0 as event day. Actual returns are compared with the normal returns to obtain the differences called abnormal returns, summed and averaged the abnormal returns across. These computations have been made using STATA 11® statistical software.

From estimation of the above equation, estimates of daily abnormal returns $AR_{it}$ for the $i$th firm were derived using the following equation:

$$AR_{it} = R_{it} - (a_i + b_i R_{mt}) \,,$$

where

$R_{it}$ = the return on security *i* at time *t*;

$a_i$ = the regression intercept;

$b_i$ = the beta coefficient of the regression;

$R_{mt}$= the return on the market index at time *t*.

The regression intercept and the beta coefficient of the regression $a_i$ and $b_i$ are the ordinary least squares (OLS) parameter estimates obtained from the regression of $\mathrm{R_{it}}$ on

$R_{mt}$ over an estimation period (T) preceding the event, in this case, over a 120 days estimation window prior to the event (-30, 150).

The abnormal returns $AR_{it}$ represent returns earned by the firm after adjusting for the "normal" return process. In other words, the rate of return on the stock is adjusted by deducting the expected return from the actual return. Any significant difference is considered to be an abnormal return. Using abnormal returns allows to investigate whether the event had any significant effect on returns. However, problems arise from uncertainty regarding the event since even if the event day is known precisely, it is not always clear when the information content of the event, usually associated with its announcement, became available (Coutts et. al 1994). An efficient way of overcome these issue is to use the cumulative abnormal return (Fama et al., 1969).

$$CAR_i = \sum_{i=1}^{t} AR_{it}$$

Following Dodd & Warner (1983) and McWilliams & Siegel (1997) recommendations, it is preferable to compute a standardized abnormal return [SAR], where the abnormal return is standardized by its standard deviation:

$$SAR_{it} = AR_{it}/SD_{it}\,,$$

with

$$SD_{it} = \left\{ S_i^{\,2} \times \left[ 1 + 1/T\,(R_{mt} - R_m)^2 \,/\, \sum_{t=1}^{T} (R_{mt} - R_m)^2 \right] \right\}^{0.5},$$

where:

$S_i^{\,2}$ = the residual variance from the market model as computed for the firm *i*;

$R_m$ = the mean return on the FTSE 100 calculated during the estimation period;

$T$ = the number of days in the estimation period.

The standardized abnormal returns can then be cumulated over a number of days, k (the event window), to derive a measure of the cumulative abnormal return [CAR] for each firm i

$$CAR_i = \left(1/\sqrt{k}\right) * \sum_{t=1}^{k} SAR_{it}$$

To draw inferences from the abnormal returns, the null hypothesis that abnormal returns are equal to zero is being tested. This test can be carried out for the individual securities as well as for the aggregate abnormal returns. If investors have received information that causes stock prices to decline relative to the market, the average abnormal returns and cumulative abnormal returns will be negative. t-tests are conducted on the statistics to determine their levels of significance. The test statistic used to assess whether the average cumulative abnormal return is significantly different from zero (its expected value) is:

$$t = \left(1/\sqrt{k}\right) * SCAR_{it}$$

If significant, the cumulative abnormal return is assumed to measure the average effect of the event on the value of the firms. That is, the significance of the abnormal return allows inferring that the event had a significant impact on the values of the firms.

### 3.2.6 Organize and Group the Abnormal Returns According to Categories

The abnormal returns were grouped according to a classification system developed by Vigeo which linked criteria to risk categories. Statistics, based on the abnormal returns, were computed for the event window of 4 days (-1; 2) with T= -1 days before the event, T=0 the event day itself, and T= +2 days after the event. Hence, when daily returns are used, t = 0 for the event day; the day before the announcement is t = - 1; and the day after the announcement

is t= 1. Abnormal returns were grouped by event type and day relative to the event day (t), and then averaged across firms for each of the following risk categories: Legal, reputational, operational, and human capital.

### 3.2.7 Analyse Summary Measures for Abnormal Returns by Event Type

In an efficient market, the return of a security will react immediately to an event that affects its intrinsic value. Under these conditions, the CAR will be random except upon receipt of the news of an event. In general in this study, if the securities' market viewed the CSR related events as negative information, the test statistics for the ARs and CARs around the time of the announcement will be statistically negative. However, if the CSR related events was considered irrelevant, the test statistics will show the ARs and CARs to be insignificantly different from 0.

### 3.2.8 Robust Test Check

In addition to looking at the average abnormal return and the cumulative abnormal return for each company, by sector, and by risk category, the cumulative abnormal for all companies treated as a group has been calculated. The P-value on the constant from this regression gives the significance of the cumulative abnormal return across all companies. This test is preferable to a t-test because it allows for robust standard errors.

### 3.2.9 The impact of Skewedness, Kurtosis, and Outliers

Both skeweness and kurtosis are a problem for parametric test statistics in event studies conducted with relatively small samples (Bartholdy et. al 2007). Serra (2002) also asserts that previous studies have highlighted that abnormal returns distribution often reflect right skewedness. Normality plot and descriptive statistics have been reported in this study in order to test the normality assumption.

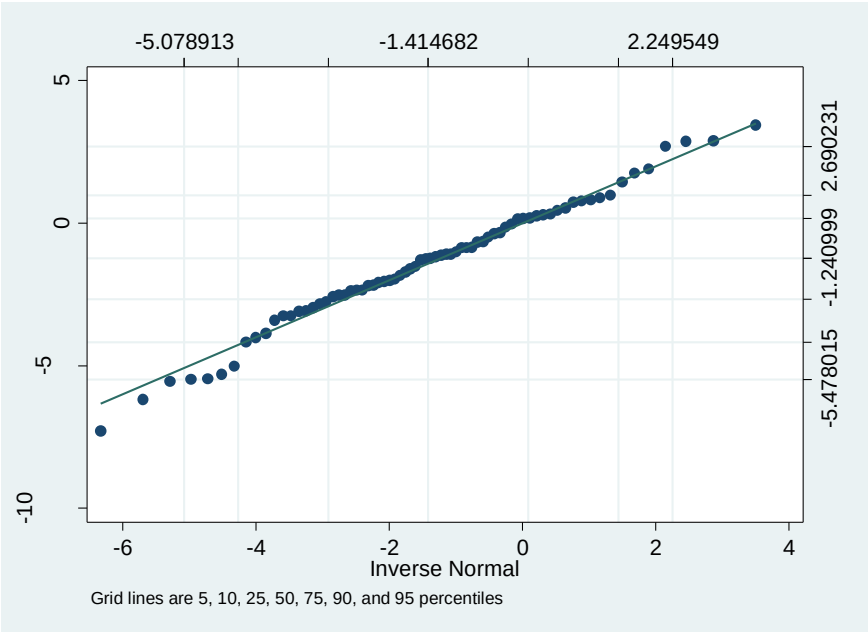
### 3.2. 10 Report Firm Names and Event Dates in Data Appendix

See Appendix D.

## RESULTS & DISCUSSION

This section outlines the results and finding of the event study. Before highlighting the results and finding, it is imperative to assess the distribution of data used notably of the Cumulative Abnormal Returns (CARs) since the sample size of the events has been impaired with a massive reduction from 151 to 71 events due to filters. A normal probability plot for the calculated CARs has been constructed below (figure 9). Principally, the CAR values are lining up along the diagonal that goes from lower left to upper right. This plot provides therefore a visual confirmation that the cumulative abnormal returns in this sample are normally distributed.

Figure 9
Normal Probability Plot for Abnormal Returns




In addition to looking at a graphic examination of the data, a statistical examination of the data's normality follows. Specifically, looking at the skewness and kurtosis for the CARs; an extreme value for either one would tell that the data are not normally distributed.

Summary statistics on the event study sample are provided in table 5. Extreme values for skewness and kurtosis are values greater than +3 or less than -3. Looking at skewness and kurtosis below, it appears that the assumption of normality holds.

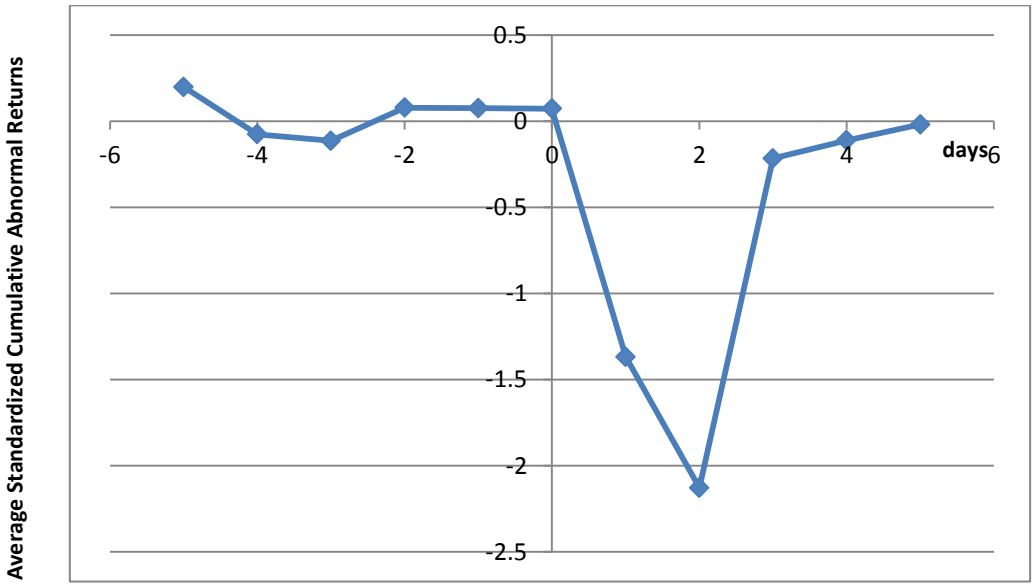
TABLE 5
Summary Statistics for Abnormal Returns for each Company

| company_name | N | mean | sd | min | max | skewness | kurtosis |
|---|---|---|---|---|---|---|---|
| A B Food | 1 | -3.252704 | . | -3.252704 | -3.252704 | . | . |
| AMEC | 1 | -3.066948 | . | -3.066948 | -3.066948 | . | . |
| AstraZeneca | 1 | 1.436385 | . | 1.436385 | 1.436385 | . | . |
| Aviva | 1 | -2.164139 | . | -2.164139 | -2.164139 | . | . |
| BAE Systems | 2 | .3809086 | .5987768 | -.0424905 | .8043077 | 0 | 1 |
| BG Group | 1 | -2.373491 | . | -2.373491 | -2.373491 | . | . |
| BHP Billiton PLC | 2 | -1.163565 | 2.263084 | -2.763808 | .436677 | 0 | 1 |
| BP | 4 | -.9419053 | 2.222367 | -4.186729 | .7437103 | -.977922 | 2.196236 |
| Barclays | 1 | -.3236611 | . | -.3236611 | -.3236611 | . | . |
| British American To | 2 | -1.576784 | .6475781 | -2.034691 | -1.118877 | 0 | 1 |
| Burberry Group | 1 | .8783705 | . | .8783705 | .8783705 | . | . |
| Centrica | 1 | -1.224389 | . | -1.224389 | -1.224389 | . | . |
| Compass GRP | 2 | -1.608799 | 1.053882 | -2.354006 | -.8635921 | 0 | 1 |
| Diageo | 1 | .7731733 | . | .7731733 | .7731733 | . | . |
| GlaxoSmithkline | 2 | -1.265441 | 2.229139 | -2.84168 | .3107982 | 0 | 1 |
| HSBC Holdings | 2 | -1.725848 | .1720831 | -1.847529 | -1.604167 | 0 | 1 |
| ICAP | 1 | -1.706627 | . | -1.706627 | -1.706627 | . | . |
| IMI | 1 | -6.175175 | . | -6.175175 | -6.175175 | . | . |
| ITV | 1 | -1.01292 | . | -1.01292 | -1.01292 | . | . |
| Imperial Tobacco Gr | 1 | -2.358938 | . | -2.358938 | -2.358938 | . | . |
| Intertek Group | 1 | .5402036 | . | .5402036 | .5402036 | . | . |
| Investec | 1 | -2.519405 | . | -2.519405 | -2.519405 | . | . |
| Kasakhmys | 1 | -.8647327 | . | -.8647327 | -.8647327 | . | . |
| Lloyds GRP | 2 | -4.28052 | 1.669832 | -5.461269 | -3.09977 | 0 | 1 |
| Lonmin | 1 | 2.870535 | . | 2.870535 | 2.870535 | . | . |
| National Grid | 2 | -.725862 | .4975817 | -1.077705 | -.3740185 | 0 | 1 |
| Old Mutual PLC | 1 | -.8516977 | . | -.8516977 | -.8516977 | . | . |
| ROYAL DUTCH SHELL A | 6 | -2.061484 | 2.53139 | -5.478015 | 1.899317 | .2098542 | 2.320985 |
| RSA Insurance Group | 1 | 3.452739 | . | 3.452739 | 3.452739 | . | . |
| Rio Tinto | 3 | -3.786627 | 1.560441 | -5.305941 | -2.188078 | .0930435 | 1.5 |
| Royal Bank Of Scotl | 3 | -1.980232 | 2.701777 | -5.016433 | .1589244 | -.5427194 | 1.5 |
| Royce-Royce HLG | 2 | -2.038674 | 1.941531 | -3.411544 | -.6658043 | 0 | 1 |
| SABMILLER | 1 | -2.964233 | . | -2.964233 | -2.964233 | . | . |
| Sainsbury | 1 | -1.25761 | . | -1.25761 | -1.25761 | . | . |
| Scottish & Southern | 2 | -1.497279 | 2.493368 | -3.260357 | .2657982 | 0 | 1 |
| Severn Trent | 1 | .9728248 | . | -.9728248 | -.9728248 | . | . |
| Shire Ltd. | 1 | -1.176699 | . | -1.176699 | -1.176699 | . | . |
| Smith & Nephew | 1 | -5.560292 | . | -5.560292 | -5.560292 | . | . |
| Standard Life | 1 | -2.568525 | . | -2.568525 | -2.568525 | . | . |
| Tesco | 3 | -.9334986 | .9664368 | -2.012033 | -.1460913 | -.5031895 | 1.5 |
| Unilever | 2 | 1.024657 | 1.020839 | .3028144 | 1.746499 | 0 | 1 |
| VEDANTA RESOURCES | 1 | -7.285904 | . | -7.285904 | -7.285904 | . | . |
| Vodafone Group | 2 | .3012283 | 3.37856 | -2.087775 | 2.690231 | 0 | 1 |
| Weir Group | 1 | -2.515177 | . | -2.515177 | -2.515177 | . | . |
| XSTRATA PLC | 1 | .1432995 | . | .1432995 | .1432995 | . | . |
| Total | 71 | -1.414682 | 2.227694 | -7.285904 | 3.452739 | -.2315313 | 2.400325 |

Figure 10 shows that CAR distribution over 5 day window in order to highlight if there is a significant change in abnormal return within the chosen event window [−1 : 2]. The overall reaction is firmly negative on the event day T=0, followed by a sharp decrease at T=1, At T=-1, it can be presumed that the events were not anticipated and that there were no leakages of information on the day preceding the events. Overall, the market appears to process the incremental information in an efficient manner because cumulative abnormal returns are significantly different from zero in the 2 days period immediately following the event date.

FIGURE 10

Average Standardized Cumulative Abnormal Returns




In addition to looking at the average abnormal return for each company, a robust test for the CARs for all companies treated as a group (table 6). The P-value on the constant from this regression reflects a high significance level of the cumulative abnormal return across all companies. This test preferable to a t-test because it allows to use robust standard errors.

TABLE 1

Robust Test across the Whole Sample

```
Linear regression                                      Number of obs =      71
                                                       F(  0,    99) =    0.00
                                                       Prob > F      =       .
                                                       R-squared     =  0.0000
                                                       Root MSE      =  2.2277

------------------------------------------------------------------------------
                                                 Robust
cumulative~n |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |  -1.414682   .2625363    -5.39   0.000    -1.938164   -.8911993
------------------------------------------------------------------------------
```

Table 7 highlights the cumulative abnormal returns for each event analysed in the sample. The results show that the cumulative abnormal returns for 53 out of 71 events (75%) are negative and with 11 out of 71 events (15%) are highly significantly at the 1% level as highlighted by the test statistics.

TABLE 7

Cumulative Abnormal Returns for each Company

| company_name | event_d~e | risk_category | cumulat~n | test |
|---|---|---|---|---|
| A B Food | 12jan2009 | Reputational Risk | -3.252704 | -1.467391 |
| AMEC | 26oct2009 | Legal Risk | -3.066948 | -1.455105 |
| AstraZeneca | 07jun2011 | Human Capital | 1.436385 | 1.746074 |
| Aviva | 18dec2007 | Legal Risk | -2.164139 | -1.03467 |
| BAE Systems | 15jan2010 | Human Capital | -.0424905 | -.0278387 |
| BAE Systems | 02aug2010 | Legal Risk | .8043077 | .295994 |
| Barclays | 11dec2009 | Legal Risk | -.3236611 | -.0731645 |
| BG Group | 25feb2010 | Legal Risk | -2.373491 | -1.999004*** |
| BHP Billiton PLC | 21apr2010 | Reputational Risk | -2.763808 | -1.431381 |
| BHP Billiton PLC | 08jun2011 | Reputational Risk | .436677 | .3987692 |
| BP | 26oct2007 | Legal Risk | -.5021526 | -.1897926 |
| BP | 18feb2009 | Legal Risk | .7437103 | .2731196 |
| BP | 30oct2009 | Human Capital | .17755 | .0995288 |
| BP | 22apr2010 | Legal Risk | -4.186729 | -2.009671*** |
| British American Tobacco | 07nov2007 | Legal Risk | -2.034691 | -2.368253*** |

| | | | | |
|---|---|---|---|---|
| British American Tobacco | 11nov2010 | Operational Risk | -1.118877 | -3.659881*** |
| Burberry Group | 23jun2011 | Reputational Risk | .8783705 | .2820437 |
| Centrica | 01jul2011 | Legal Risk | -1.224389 | -.6204008 |
| Compass GRP | 02apr2009 | Legal Risk | -2.354006 | -.5581957 |
| Compass GRP | 15apr2009 | Human Capital | -.8635921 | -.1460796 |
| Diageo | 15feb2008 | Reputational Risk | .7731733 | .1254329 |
| GlaxoSmithkline | 20may2008 | Legal Risk | .3107982 | .1219682 |
| GlaxoSmithkline | 29jan2010 | Legal Risk | -2.84168 | -1.425501 |
| HSBC Holdings | 21sep2010 | Legal Risk | -1.847529 | -2.32503 |
| HSBC Holdings | 06dec2010 | Operational Risk | -1.604167 | -1.816122 |
| ICAP | 18dec2009 | Legal Risk | -1.706627 | -1.446259 |
| IMI | 16aug2007 | Legal Risk | -6.175175 | -1.502828 |
| Imperial Tobacco Group | 16apr2010 | Legal Risk | -2.358938 | -1.169044 |
| Intertek Group | 13jun2011 | Human Capital | .5402036 | .5733433 |
| Investec | 12apr2010 | Legal Risk | -2.519405 | -1.477748 |
| ITV | 08may2008 | Legal Risk | -1.01292 | -.6874946 |
| Kasakhmys | 12aug2010 | Legal Risk | -.8647327 | -.3061874 |
| Lloyds GRP | 23dec2009 | Legal Risk | -3.09977 | -2.360116*** |
| Lloyds GRP | 25feb2011 | Legal Risk | -5.461269 | -.7858867 |
| Lonmin | 24may2011 | Human Capital | 2.870535 | 1.290268 |
| National Grid | 25feb2008 | Legal Risk | -1.077705 | -.4276114 |
| National Grid | 06jan2011 | Legal Risk | -.3740185 | -.1328439 |
| Old Mutual PLC | 10sep2010 | Operational Risk | -.8516977 | -1.791765 |
| Rio Tinto | 13aug2009 | Reputational Risk | -3.865862 | -.9005925 |
| Rio Tinto | 29apr2010 | Reputational Risk | -5.305941 | -3.08248*** |
| Rio Tinto | 01jun2010 | Human Capital | -2.188078 | -2.18231*** |
| Royal Bank Of Scotland | 17dec2009 | Legal Risk | -5.016433 | -1.673892 |
| Royal Bank Of Scotland | 30mar2010 | Legal Risk | -1.083189 | -.3235458 |
| Royal Bank Of Scotland | 06jun2011 | Legal Risk | .1589244 | .1048308 |
| ROYAL DUTCH SHELL A | 04dec2008 | Reputational Risk | -4.005491 | -.8308911 |
| ROYAL DUTCH SHELL A | 17mar2009 | Reputational Risk | -5.478015 | -2.860845*** |
| ROYAL DUTCH SHELL A | 08jun2009 | Reputational Risk | -1.280033 | -1.275051 |

| | | | | |
|---|---|---|---|---|
| ROYAL DUTCH SHELL A | 20aug2010 | Legal Risk | -1.530898 | -1.095246 |
| ROYAL DUTCH SHELL A | 05nov2010 | Legal Risk | -1.973784 | -3.569811*** |
| ROYAL DUTCH SHELL A | 25jan2011 | Operational Risk | 1.899317 | 1.501995 |
| Royce-Royce HLG | 01oct2010 | Legal Risk | -3.411544 | -1.685009 |
| Royce-Royce HLG | 20jun2011 | Legal Risk | -.6658043 | -1.351879 |
| RSA Insurance Group | 31jul2008 | Legal Risk | 3.452739 | 1.683962 |
| SABMILLER | 17sep2008 | Legal Risk | -2.964233 | -.8772959 |
| Sainsbury | 07dec2007 | Reputational Risk | -1.25761 | -.4686477 |
| Scottish & Southern Energy | 08feb2011 | Legal Risk | .2657982 | .2660207 |
| Scottish & Southern Energy | 27jul2011 | Legal Risk | -3.260357 | -3.97888*** |
| Severn Trent | 09apr2008 | Legal Risk | -.9728248 | -.4987523 |
| Shire Ltd. | 19may2011 | Legal Risk | -1.176699 | -.3874565 |
| Smith & Nephew | 16aug2007 | Legal Risk | -5.560292 | -2.038245*** |
| Standard Life | 20jan2010 | Legal Risk | -2.568525 | -1.368999 |
| Tesco | 23jan2008 | Legal Risk | -2.012033 | -.6099344 |
| Tesco | 02sep2010 | Human Capital | -.1460913 | -.1027324 |
| Tesco | 30mar2011 | Human Capital | -.642372 | -.3749398 |
| Unilever | 21mar2011 | Reputational Risk | .3028144 | .1660539 |
| Unilever | 14apr2011 | Reputational Risk | 1.746499 | .9369025 |
| VEDANTA RESOURCES | 24aug2010 | Reputational Risk | -7.285904 | -1.880596 |
| Vodafone Group | 28jan2011 | Reputational Risk | -2.087775 | -1.30455 |
| Vodafone Group | 12aug2011 | Legal Risk | 2.690231 | 1.726519 |
| Weir Group | 14dec2010 | Legal Risk | -2.515177 | -.673995 |
| XSTRATA PLC | 12nov2010 | Human Capital | .1432995 | .0281526 |

*** statistically significant at 1%

Table 8 highlights CARs across sectors. For all sectors, except business support services, and luxury goods & services, negative abnormal returns are negative in response to the events. The test results show that the cumulative abnormal returns are only significant for the sectors health care equipment and tobacco at the 1% level.

Table 8
Cumulative Abnormal Returns per Sector

| sector | N | cumula~n | test |
|---|---|---|---|
| Aerospace | 4 | -.8288827 | -.6921833 |
| Banks | 8 | -2.284637 | -1.156616 |
| Beverage | 2 | -1.09553 | -.3759315 |
| Broadcasting & A | 1 | -1.01292 | -.6874946 |
| Business Support | 1 | .5402036 | .5733433 |
| Electric & Gas U | 5 | -1.134134 | -.9787431 |
| Energy | 11 | -1.682729 | -1.086879 |
| Financial Servic | 2 | -2.113016 | -1.462004 |
| Food | 3 | -.40113 | -.1214781 |
| Health Care Equi | 1 | -5.560292 | -2.038245*** |
| Hotel, Leisure G | 2 | -1.608799 | -.3521376 |
| Industrial Goods | 1 | -2.515177 | -.673995 |
| Insurance | 4 | -.5329055 | -.6278681 |
| Luxury Goods & S | 1 | .8783705 | .2820437 |
| Mechanical Compo | 1 | -6.175175 | -1.502828 |
| Mining & Metals | 9 | -2.091535 | -.8962618 |
| Oil Equipment & | 1 | -3.066948 | -1.455105 |
| Pharmaceuticals | 4 | -.5677991 | .0137711 |
| Supermarkets | 4 | -1.014526 | -.3890636 |
| Telecommunicatio | 2 | -.3012283 | -.2109846 |
| Tobacco | 3 | -1.853807 | -2.370452*** |
| Waste & Water Ut | 1 | -.9728248 | -.4987523 |
| Total | 71 | -1.414955 | -.7826953 |

*** statistically significant at 1%

Of primary importance for the purpose of this study is to investigate which risk category reflects the most significant negative cumulated abnormal returns. Table 9 represents the test results for CARs per risk category.

Table 9
Cumulative Abnormal Returns per Risk Category

| risk_category | N | cumula~n | test |
|---|---|---|---|
| Human Capital | 10 | .1285349 | .0903466 |
| Legal Risk | 42 | -1.605149 | -1.965814** |
| Operational Risk | 4 | -.4070114 | -1.403906 |
| Reputational Risk | 15 | -2.16304 | -1.986214** |
| Total | 71 | -1.414955 | -.7826953 |

** statistically significant at 5%

In general, the results in table 9 indicate that the stock market did react predictably to reputational, legal, and operational risk, with reputational and legal reflecting a high significance level at 5%. The results for these risks categories show that on average the securities in the sample lost a significant portion of their value during the event window. Reputational (-2.16%) and legal risk (-1.60%) highlight a relatively large negative cumulative abnormal return (CAR) for the (-1; +2) event window when compared to operational risk (-0.40%). On the other hand, with human capital risk (0. 12%), negative events did not materialize in terms of negative abnormal returns within the event window. These results allow to test the hypotheses stated earlier as shown in table 10.

TABLE 10
Hypothesises Results

| **Hypothesis** | **Significance Test Results** |
|---|---|
| ***Null Hypothesis 1:*** CSR related negative events do not significantly change the stock prices of affected companies. | $p<0.05$<br>Reject the Hypothesis |
| ***Null Hypothesis 2:*** Reputational risks do not induce a significant negative reaction of the stock market. | $t>1.96$<br>Reject the Hypothesis |
| ***Null Hypothesis 3:*** Legal risks do not induce a significant negative reaction of the stock market. | $t>1.96$<br>Reject the Hypothesis |
| ***Null Hypothesis 4:*** Operational risks do not induce a significant negative reaction of the stock market. | $t<1.96$<br>Fail to Reject the Hypothesis |
| ***Null Hypothesis 5:*** Human Capital risks do not induce a significant negative reaction of the stock market. | $t<1.96$<br>Fail to Reject the Hypothesis |

In terms of human capital risk, there is a possibility that human capital negative risk might not be perceived as relevant by the market and not likely to impact stock returns over the short term. As Becker (2008) pointed out, when comparing human capital to financial or physical capital, he notes that all are forms of capital in the sense that they are assets that yield income and other useful outputs over long periods of time. Therefore it can be suggested that although human capital risks do not materialize over the short run, its application over the long run might lead to different results.

In terms of reputation risk, it can be concluded that reputation is a highly valued, and highly vulnerable, corporate asset. Reputation is one of the most important corporate assets, and also one of the most difficult to protect. According to the Economist Intelligence Unit 2005 quarterly surveys, reputational risk emerges as the main concern for the majority of risk managers, ahead of regulatory risk, human capital risk, IT network risk, and market risk and credit risk. In line with this reasoning, this study reveals that investors value reputation risk as well at a higher extent than legal, operational and human capital risks. This preoccupation with reputational risk might derive primarily from the fact that investors see reputation as a major source of risk which impairs the future profitability of the firm. Overall, changes in the business environment have made companies more vulnerable to reputational damage, with the development of global media and communication channels, increased scrutiny from regulators and reduced customer loyalty cited as three issues that expose companies to increased reputational risk.

In terms of legal risks, results significantly indicate that following the imposition of the sanction and legal penalties, investors expect the company's profitability to be reduced. The link between corporate returns and legal risks arises in the cost and uncertainties that are associated with them. Frauds, crises and incidents have direct costs and divert management attention, and so reduce profits and thus returns. In addition, legal risk raises uncertainty over

future profitability and investors require a premium to support risky companies (Coleman, 2009).

In terms of operational risk, results indicate although not significant that CSR related operational loss events are negatively translated by the market. A possible explanation would be that these operational losses may serve as signals of poor management quality and operational controls, leading the market to reduce expectations of future cash flows.

## LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH

As with all empirical studies, this study has limitations that potentially constrain the generalizability of the results. McWilliams & Siegel (2000) note that several studies rely on extremely small sample sizes, sometimes as small as 20. For an event study to produce meaningful results the sample size must be large enough to have sufficient statistical power and to warrant claims of generalizability. Due to the filtering of confounding effects, the sample sizes of events have been reduced from 151 to 71 events. While some of the findings are consistent with the proposed theoretical argument, results can not be generalized.

The sample does not consist of a representative sample for each sector and for each risk category tested in this study. The sample consists of events of a number of publicly listed corporations operating in industries with sometimes one company representing a sector. Limited by this, the statistical test will not produce findings that can be inferred to the general. This statistical test can mainly be used to determine the risk category that stands out as in this case reputational and legal risks. These methodological constrains will hopefully be accommodated in future research by reviewing larger sample size while applying the same stringent filtering approach adopted in this study. Nonetheless, the indication of which risk factors are important since they provide empirical interesting insights to which managers and mainstream investors must pay a closer look at.

The event study measures relatively well investors' estimate of the financial impact of the CSR related negative on the returns of a sample drown from the FTSE100, it does not assess investors for their reasoning. Developing methods to uncover and understand the actual attribution processes stakeholders use to assess information would provide support to understand the effects observed in this study and why it varies from a company to another and from one sector to another. Moreover, the methodology relies on stringent assumptions which are that investors are perfectly rational and markets perfectly efficient. Therefore,

when new information becomes available, investors instantly and accurately quantify the financial impact of that event on the future revenues of the firm. The growing field of behavioural economics demonstrates quite clearly that such strong, efficient market assumptions are unrealistic (Bebchuk et al., 2010). Few would take the position that the financial markets are 100% right all the time. Thus, the cumulative abnormal returns reported in the tables of this paper should not be interpreted as exact figures of how much investors drove down the market capitalizations of firms, but rather as broad estimates of the financial relationship between CSR and risk management.

Referring back to the framework built earlier, the empirical part of this study focus only on one segment of interconnection between CSR and risk management. It would be relevant to empirically examine each of these interconnections. For example, assessing the degree of the impact of CSR negative events on stock prices based on the level of integrations of ERM within the company's business operations. In this case, an evaluation for the companies ERM system should be conducted. Another direction of research would be to assess whether there is a significant difference upon the announcement of an event on the stock prices according to the crisis response strategies used by the firm. In this case, an analysis of how firms responded to the crisis situation can determine how efficient the company's ERM system is in integrating CSR related risks.

## CONCLUSION

Risk requires control at the source, not to handle it by dancing to the tune played and led by risk (Johnson & Swanson 2007). Risk management is often seen as a method for protecting the firm. However, this view is limited as it does not capture the full potential of risk management. Risk management is about making changes within the firm that lead to an ability to control risk so that more of the firm's resources can be used to further the firm's business operations.

The recent development in risk management creates the potential for integrating the elements of CSR into the internal strategic objectives of corporations in a way that the practice of managing risk and being socially responsible converge. Such convergence has been facilitated by the expansion of the risks considered in ERM to include other types of risks such as reputational, operational, and human capital risks, in which stakeholder interests and social issues become risks can be managed. I assert that stakeholders' interest can only be fully integrated within the firm decision making process, only if an efficient assessment of stakeholder vulnerability is developed by the firm to assess its economic, social, and ecological impact of its business operations. I also assert that an effective CSR/ERM convergence would require an efficient board structure which looks at the holistic picture of risk management. An effective CSR risk communication is also key in managing risks. Indeed, today, risk management has become critical to CEOs and board of directors as regulatory authorities requires new disclosure and listing requirements that require more explicit information on risks and the risk management practices of the firm.

In the aim to emphasize the importance of considering and integrating CSR related risks as an integral part of the business risk management framework, I document in this paper the short term capital market reaction to CSR negative events. Using an event study, I determined abnormal returns associated to the negative events announcements. The event

study analysis reveals a significant negative stock price response to CSR related negative events. For reputational and legal risks, the market value response is much stronger than for other risk categories namely operational and human capital risks. Overall, the results strongly support the business case view that CSR negative related risk poses a significant threat to the market value of firms, providing a rationale for firms to manage these kinds of risks, even though such risks tend to be non-systematic. Investors do "price" reputational and legal risk into their views on the future profitability of a firm, supporting the contention that the management of CSR risks should be the core component of any ERM framework.

With this possible convergence comes the further possibility of expanding the means by which corporations can be made socially responsible beyond legal requirement by internalizing CSR into the purely economic calculation within an efficient ERM system which takes into account an assessment of the stakeholders' vulnerability against the business operations.

As author Bernstein (1996) observed in his book 'Against the Gods: The Remarkable Story of Risk', the past cannot always be used to predict the future. Risk management cannot deliver absolute certainty. Reasonable assurance reflects the notion that uncertainty and risk relate to the future, which no one can predict with precision. Yet, reasonable does not imply that enterprise risk management will frequently fail (Daelen & Elst 2010).

To preserve value, companies need to go beyond the traditional risk management in silos to create an integrated, organization-wide ERM management function. Firms adopting such a comprehensive approach to risk management will define an overall risk appetite and model critical interdependencies among different types of risks. While risk can never be eliminated, companies that move beyond traditional risk management to implement a more comprehensive approach to their control environment might be better placed to prevent, minimize, or recover from losses in shareholder value.

Creating a risk-aware corporate culture is important to facilitate a responsive organization, where emerging threats and opportunities are observed and addressed at all levels of the organization in accordance with the general strategic aims (Anderson & Schroder 2010). ERM is not a magic elixir but if robustly and wisely executed, it can offer a system to ensure that possible CSR related risks including threats and opportunities be anticipated and managed effectively in a holistic manner (Barton et al., 2001).

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## APPENDIX A

### Major Risk Categories

| Concept | Definition |
|---|---|
| Compliance risk | The operational risk of regulatory sanctions or financial losses resulting from failure to comply with laws, regulations and internal policies, processes, and controls. |
| Behavioural compliance risk | The compliance risk arising from failure to comply with internal risk management practices. |
| Regulatory compliance risk | The compliance risk arising from failure to comply with external regulatory and legal obligations. |
| Processing risk | A specific operational risk. It is the risk of financial losses from failed processing due to mistakes, negligence, accidents, or fraud by directors and employees. |
| System risk | A specific operational risk. It is the risk of losses due to system and telecommunication failures. |
| Tangible asset risk | A specific operational risk. It is the risk of damage to tangible assets from disasters or accidents. |
| Human resources risk | A specific operational risk. It is the risk of loss of key personnel or failure to maintain staff morale. |
| Regulatory risk | A specific operational risk. The operational risk of losses due to changes in the regulatory environment, including the tax system and accounting system. |
| Crime risk | A specific operational risk. The operational risk of losses arising from crime, such as theft, fraud, hacking, and money laundering. |
| Disaster risk | A specific operational risk. The operational risk of losses arising from disasters, such as fire, flood, etc. |

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| Information technology risk | A specific operational risk. The operational risk of losses arising from the failure of IT systems. |
| Reporting risk | A specific operational risk. The operational risk of losses arising from errors in reporting the amounts of risk in quantitative terms. |
| Accounting risk | A specific operational risk. The operational risk of losses arising from the use of estimates in preparing financial statements. |
| Fiduciary risk | A specific operational risk. The operational risk of losses arising from the possibility of the product implementation differing from how it was presented to the client. |
| Model risk | A specific operational risk. The operational risk of losses incurred by making a wrong decision on the basis of a faulty or inadequate model. |
| Legal risk | The risk that a transaction proves unenforceable in law or that it has been inadequately documented. |
| Reputational risk | The risk of incurring losses because of the loss or downgrading of the reputation of firms and individuals. |
| Macroeconomic risk | The risk of incurring losses because of adverse macroeconomic developments (for example, a sharp rise in the inflation rate). |
| Business cycle risk | The macroeconomic risk arising from fluctuations in economic activity. |
| Business risk (strategic risk) | The risk of financial loss resulting from inappropriate strategic business decisions. |
| Lapse risk | A specific business risk. The type of business risk arising from the possibility that clients may choose to terminate contracts at any time. |
| Efficiency risk | A specific business risk. The type of business risk that is triggered by the internal organization of the firm (for example, inability to manage costs effectively). |
| Expense risk | A specific business risk. The type of business risk arising from the possibility that actual expenses could deviate from expected expenses. |

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|---|---|
| Performance risk | A specific business risk. The business risk of underperforming the competitors. |
| Country risk | The risk arising from unanticipated changes in the economic or political environment in a particular country. |
| Transfer risk | A specific country risk. The type of country risk arising from the possibility that foreign currency funds cannot be transferred out of the host country. |
| Convertibility risk | A specific country risk. The type of country risk arising from inability to convert foreign currency proceeds into the domestic currency. |
| Political risk | A specific country risk. The type of country risk arising from the possibility of incurring losses due to changes in rules and regulations or adverse political developments in a particular country. |
| Sovereign risk | A specific country risk. The type of country risk arising from the possibility of incurring losses on claims on foreign governments and government agencies. |
| Purchasing power risk | The risk arising from the adverse effect of inflation on the real value of the rate of return on investment. |
| Systemic risk | The risk of breakdown in an entire system as opposed to breakdown in individual parts or components. |
| Inherent risk versus residual risk | Inherent risk is the risk arising from the absence of any action the management might take (the absence of risk management) to alter either the likelihood or the impact of risk. Residual risk (also known as net risk or composite risk) is the remaining risk after the management has taken action to alter the likelihood or impact of the risk. |
| Financial vs. non financial risk | Financial risk is the risk arising from changes in financial prices, such as interest rates and equity prices. Non financial risk includes everything else, such as the risk of fire. |

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| Dynamic vs. static risk | Dynamic risk results from changes in the economy (changes in taste, output, and technology). Static risk involves losses that would result even if no changes in the economy occurs (perils of nature and dishonesty of individuals). |
| Speculative risk vs. pure risk | Speculative risk describes a situation in which there is a possibility of either loss or gain (for example, gambling). Pure risk involves situations of loss or no loss. Pure risks can be classified into personal risks, property risks, liability risks (unintentional injury of other persons or damage to their property through negligence or carelessness), and risks arising from the failure of others (for example, the risk of default on a loan). It appears that the distinction between pure and speculative risks is disappearing, as a loss or no loss situation represents the bad side of risk, which is invariably two-sided. |
| Fundamental vs. particular risk | Fundamental risk involves losses that are impersonal in origin and consequence, group risks that are caused by economic, social, and political developments. Particular risk involve losses that arise out of individual events and felt by individuals rather than entire groups. |
| Systemic vs. idiosyncratic risk | Systemic risk implies that the effect of a loss event endured by one firm spreads to the whole industry. Idiosyncratic risk affects one firm without spreading to other firms in the industry. The distinction between systemic and idiosyncratic risk may sound similar to the distinction between fundamental and particular risk, but this is not the case. Unlike fundamental risk, systemic risk may result from a firm-specific event if, for example, this firm is unable to meet its obligations to other firms. |
| Endogenous vs. exogenous risk | Endogenous risk refers to the risk from shocks that are generated and amplified within the system. Exogenous risk refers to shocks that arise from outside the system. |
| Systematic vs. unsystematic risk | Systematic risk is market risk that cannot be diversified away. Unsystematic risk is non-diversifiable. |

***Source:*** Adapted from Moosa (2007)

## APPENDIX B:

### Vigeo Domain Description

| Vigeo Domain | Description |
|---|---|
| **Business Behavior (C&S):** | Consideration of the rights and interests of clients, integration of social and environmental standards in the selection of suppliers and on the entire supply chain, effective prevention of corruption and respect for competitive practices. |
| **Corporate Governance (CGV)** | Effectiveness and integrity, guarantee of independence and efficiency of the Board of Directors, effectiveness and efficiency of auditing and control mechanisms, in particular the inclusion of social responsibility risks, respect for the rights of shareholders, particularly minority shareholders, transparency and rationale for the remuneration of directors. |
| **Community Involvement (CIN)** | Effectiveness, managerial commitment to community involvement, contribution to the economic and social development of territories / societies within which the company operates, positive commitment to manage the social impacts linked to products or services and overt contribution and participation in causes of public or general interest. |
| **Environment: (ENV)** | Protection, safeguarding, prevention of damage to the environment, implementation of an adequate management strategy, eco-design, protection of biodiversity and coordinated management of environmental impacts on the entire life-cycle of products or services. |
| **Human Resources (HRS)** | Continuous improvement of professional relations, labour relations and working conditions. |
| **Human Rights at the Workplace (HRT )** | Respect for freedom of association, the right to collective bargaining, non-discrimination and promotion of equality, elimination of illegal working practices such as child or forced labour, prevention of inhumane or degrading treatment such as sexual harassment, protection of privacy and personal data. |

## APPENDIX C

## Vigeo Criteria Applied to this Study

| Domain | Criterion | Issue |
|---|---|---|
| C&S | C&S 1.1 | Product safety |
| | C&S 1.2 | Information to customers |
| | C&S 1.3 | Responsible contractual agreement |
| | C&S 2.4 | Integration of social factors in the supply chain |
| | C&S 3.1 | Prevention of corruption |
| | C&S 3.2 | Prevention of anti-competitive practices |
| CGV | CGV 2.1 | Audit & Internal Controls |
| | CGV 3.1 | Shareholders rights |
| CIN | CIN 1.1 | Promotion of the social and economic development |
| | CIN 2.1 | Societal impacts of the company's products / services |
| ENV | ENV 1.2 | Pollution prevention and control (soil, accident) |
| | ENV 2.5 | Waste Management |
| | ENV 2.6 | Management of local pollution |
| HRS | HRS 1.1 | Promotion of labour relations |
| | HRS 2.3 | Responsible management of restructurings |
| | HRS 3.2 | Improvement of health and safety conditions |
| | HRS 3.3 | Respect and management of working hours |
| HRT | HRT 1.1 | Respect for human rights standards and prevention of violations |
| | HRT 2.1 | Respect for freedom of association and the right to collective bargaining |
| | HRT 2.4 | Career management and promotion of employability |

## APPENDIX D : Linking Event Types, Criteria, and Risk Categories Using Vigeo Risks Weighting Methodology

| Sector | Company Name | Events Dates | Criterion | Risk Category |
|---|---|---|---|---|
| Aerospace | BAE Systems | 15/01/2010 | HRS 2.3 | Human Capital |
| Aerospace | BAE Systems | 02/08/2010 | C&S 3.1 | Legal Risk |
| Aerospace | Royce-Royce HLG | 01/10/2010 | C&S 1.1 | Legal Risk |
| Aerospace | Royce-Royce HLG | 20/06/2011 | C&S 1.1 | Legal Risk |
| Banks | Barclays | 11/12/2009 | C&S 3.1 | Legal Risk |
| Banks | Barclays | 17/08/2010 | C&S 3.1 | Legal Risk |
| Banks | Barclays | 18/01/2011 | C&S 1.3 | Legal Risk |
| Banks | HSBC Holdings | 14/01/2009 | C&S 1.2 | Legal Risk |
| Banks | HSBC Holdings | 21/09/2010 | C&S 3.1 | Legal Risk |
| Banks | HSBC Holdings | 06/12/2010 | CGV 2.1 | Operational Risk |
| Banks | Lloyds GRP | 23/12/2009 | C&S 3.1 | Legal Risk |
| Banks | Lloyds GRP | 25/02/2011 | C&S 1.3 | Legal Risk |
| Banks | Royal Bank Of Scotland | 17/12/2009 | C&S 3.1 | Legal Risk |
| Banks | Royal Bank Of Scotland | 30/03/2010 | C&S 1.2 | Legal Risk |
| Banks | Royal Bank Of Scotland | 06/06/2011 | C&S 1.3 | Legal Risk |
| Banks | Standard Chartered | 06/07/2009 | C&S 1.2 | Legal Risk |
| Beverage | Diageo | 15/02/2008 | CIN 2.1 | Reputational Risk |
| Beverage | Diageo | 18/11/2009 | CGV 2.1 | Operational Risk |
| Beverage | SABMILLER | 17/09/2008 | C&S 1.1 | Legal Risk |
| Broadcasting & Advertising | ITV | 26/07/2007 | CIN 2.1 | Reputational Risk |
| Broadcasting & Advertising | ITV | 08/05/2008 | C&S 1.3 | Legal Risk |
| Business Support Services | Intertek Group | 13/06/2011 | HRS 3.3 | Human Capital |
| Electric & Gas Utilities | Centrica | 01/07/2011 | C&S 1.3 | Legal Risk |
| Electric & Gas Utilities | National Grid | 25/02/2008 | C&S 3.2 | Legal Risk |
| Electric & Gas Utilities | National Grid | 06/01/2011 | C&S 1.3 | Legal Risk |
| Electric & Gas Utilities | Scottish & Southern Energy | 08/02/2011 | C&S 1.3 | Legal Risk |

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|---|---|---|---|---|
| Electric & Gas Utilities | Scottish & Southern Energy | 11/05/2011 | C&S 1.3 | Legal Risk |
| Electric & Gas Utilities | Scottish & Southern Energy | 27/07/2011 | C&S 1.3 | Legal Risk |
| Energy | BG Group | 12/02/2007 | C&S 3.1 | Reputational Risk |
| Energy | BG Group | 25/02/2010 | ENV 1.2 | Legal Risk |
| Energy | BP | 26/10/2007 | ENV 1.2 | Legal Risk |
| Energy | BP | 18/02/2009 | ENV 1.2 | Legal Risk |
| Energy | BP | 30/10/2009 | HRS 3.2 | Human Capital |
| Energy | BP | 22/04/2010 | ENV 1.2 | Legal Risk |
| Energy | BP | 12/08/2010 | HRS 3.2 | Human Capital |
| Energy | ROYAL DUTCH SHELL A | 04/12/2008 | C&S 3.2 | Reputational Risk |
| Energy | ROYAL DUTCH SHELL A | 17/03/2009 | C&S 3.1 | Reputational Risk |
| Energy | ROYAL DUTCH SHELL A | 24/04/2009 | CIN 1.1 | Reputational Risk |
| Energy | ROYAL DUTCH SHELL A | 08/06/2009 | HRT 1.1 | Reputational Risk |
| Energy | ROYAL DUTCH SHELL A | 20/08/2010 | ENV 1.2 | Legal Risk |
| Energy | ROYAL DUTCH SHELL A | 05/11/2010 | C&S 3.1 | Legal Risk |
| Energy | ROYAL DUTCH SHELL A | 25/01/2011 | CGV 2.1 | Operational Risk |
| Financial Services | ICAP | 18/12/2009 | C&S 1.2 | Legal Risk |
| Financial Services | Investec | 12/04/2010 | C&S 1.3 | Legal Risk |
| Food | A B Food | 12/01/2009 | C&S 2.4 | Reputational Risk |
| Food | Tate & Lyle | 09/10/2009 | HRS 3.2 | Human Capital |
| Food | Unilever | 21/03/2011 | C&S 3.2 | Reputational Risk |
| Food | Unilever | 14/04/2011 | C&S 3.2 | Reputational Risk |
| Health Care Equipment & Services | Smith & Nephew | 16/08/2007 | C&S 1.1 | Legal Risk |
| Home Construction | Reckitt Benckiser | 15/10/2011 | C&S 3.2 | Reputational Risk |
| Hotel, Leisure Goods & Services | Carnival | 11/10/2011 | ENV 2.5 | Legal Risk |
| Hotel, Leisure Goods & Services | Compass GRP | 02/04/2009 | ENV 2.5 | Legal Risk |

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|---|---|---|---|---|
| Hotel, Leisure Goods & Services | Compass GRP | 15/04/2009 | HRS 3.2 | Human Capital |
| Industrial Goods & Services | Weir Group | 14/12/2010 | C&S 3.1 | Legal Risk |
| Insurance | Aviva | 18/12/2007 | C&S 1.3 | Legal Risk |
| Insurance | Old Mutual PLC | 10/09/2010 | CGV 2.1 | Operational Risk |
| Insurance | RSA Insurance Group | 31/07/2008 | C&S 1.3 | Legal Risk |
| Insurance | Standard Life | 20/01/2010 | C&S 1.2 | Legal Risk |
| Luxury Goods & Services | Burberry Group | 23/06/2011 | C&S 2.4 | Reputational Risk |
| Mechanical Components & Equipment | IMI | 16/08/2007 | C&S 3.1 | Legal Risk |
| Mining & Metals | Anglo American | 20/12/2010 | HRS 3.2 | Human Capital |
| Mining & Metals | BHP Billiton PLC | 21/04/2010 | C&S 3.1 | Reputational Risk |
| Mining & Metals | BHP Billiton PLC | 08/06/2011 | ENV 2.6 | Reputational Risk |
| Mining & Metals | Kasakhmys | 12/08/2010 | ENV 2.5 | Legal Risk |
| Mining & Metals | Lonmin | 24/05/2011 | HRS 1.1 | Human Capital |
| Mining & Metals | Rio Tinto | 13/08/2009 | C&S 3.1 | Reputational Risk |
| Mining & Metals | Rio Tinto | 29/04/2010 | C&S 3.1 | Reputational Risk |
| Mining & Metals | Rio Tinto | 26/05/2010 | CGV 3.1 | Reputational Risk |
| Mining & Metals | Rio Tinto | 01/06/2010 | HRT 2.1 | Human Capital |
| Mining & Metals | VEDANTA RESOURCES | 24/08/2010 | HRT1.1 | Reputational Risk |
| Mining & Metals | XSTRATA PLC | 12/11/2010 | HRS 2.3 | Human Capital |
| Mining & Metals | XSTRATA PLC | 20/12/2010 | HRS 3.2 | Human Capital |
| Oil Equipment & Services | AMEC | 26/10/2009 | C&S 3.1 | Legal Risk |
| Oil Equipment & Services | Wood Group (John) | 11/01/2010 | CGV 2.1 | Operational Risk |
| Pharmaceuticals & Biotechnology | AstraZeneca | 01/07/2010 | C&S 3.1 | Reputational Risk |
| Pharmaceuticals & Biotechnology | AstraZeneca | 07/06/2011 | HRT 2.4 | Human Capital |
| Pharmaceuticals & | GlaxoSmithkline | 28/03/2007 | C&S 1.2 | Legal Risk |

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|---|---|---|---|---|
| Biotechnology | | | | |
| Pharmaceuticals & Biotechnology | GlaxoSmithkline | 21/05/2007 | C&S 1.1 | Legal Risk |
| Pharmaceuticals & Biotechnology | GlaxoSmithkline | 20/05/2008 | ENV 1.2 | Legal Risk |
| Pharmaceuticals & Biotechnology | GlaxoSmithkline | 29/01/2010 | C&S 1.2 | Legal Risk |
| Pharmaceuticals & Biotechnology | GlaxoSmithkline | 11/05/2010 | C&S 1.1 | Legal Risk |
| Pharmaceuticals & Biotechnology | GlaxoSmithkline | 08/02/2011 | C&S 1.1 | Legal Risk |
| Pharmaceuticals & Biotechnology | Shire Ltd. | 19/05/2011 | C&S 1.2 | Legal Risk |
| Specialised Retail | Marks & Spencer | 07/04/2011 | C&S 1.1 | Legal Risk |
| Supermarkets | Morrison | 17/04/2010 | C&S 3.2 | Reputational Risk |
| Supermarkets | Sainsbury | 07/12/2007 | C&S 3.2 | Reputational Risk |
| Supermarkets | Tesco | 23/01/2008 | C&S 1.1 | Legal Risk |
| Supermarkets | Tesco | 02/09/2010 | HRT 2.1 | Human Capital |
| Supermarkets | Tesco | 30/03/2011 | HRS 3.2 | Human Capital |
| Telecom | BT Group | 30/10/2008 | C&S 1.3 | Legal Risk |
| Telecom | Vodafone Group | 28/01/2011 | HRT 1.1 | Reputational Risk |
| Telecom | Vodafone Group | 12/08/2011 | C&S 1.2 | Legal Risk |
| Tobacco | British American Tobacco | 07/11/2007 | C&S 1.2 | Legal Risk |
| Tobacco | British American Tobacco | 11/11/2010 | CGV 2.1 | Operational Risk |
| Tobacco | Imperial Tobacco Group | 16/04/2010 | C&S 3.2 | Legal Risk |
| Waste & Water Utilities | Severn Trent | 09/04/2008 | C&S 1.3 | Legal Risk |
| Waste & Water Utilities | United Utilities | 18/04/2007 | C&S 3.2 | Legal Risk |
| Waste & Water Utilities | United Utilities | 25/06/2007 | C&S 1.3 | Legal Risk |