Corporate Social Responsibility Reputation (CSRR)

Do Companies Comply with their Raised CSR Expectations?

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Abstract:

This paper develops the concept of CSR reputation (CSRR) both theoretically and empirically. The first part examines the literature on CSR reputation extensively in an attempt to develop both a qualitative and a quantitative interpretation to measure CSR reputation. Then, a sample of 2365 firms that covers on average 177 questions of corporate social responsibility, obtained from 29 countries, is implemented to measure CSR reputation per stakeholder, per country and per sector. We find that, on average, companies comply with their expectations. Next, we conclude that Europe is the best CSRR-performing continent, in which the United Kingdom and Finland are the top countries. We also find that the 'utilities' sector is the best performing sector. 'Health care' and 'financials' are at the lowest end of the distribution.

1. Introduction

Corporate managers continuously have to make multidisciplinary business decisions. They face organizational problems, have to deal with financial management, must make strategic decisions and have to cope with societal expectations (see e.g. Waddock and Graves, 1997). This broader set of societal expectations comprises *other* stakeholders of the firm besides its shareholders. Hence, the concept of a broader set of societal expectations is strongly related to the stakeholder theory as developed by Freeman (1983, 1984). The stakeholder notion is simple; it means that corporations are responsible for other groups in addition to stockholders: those groups that have a *stake* in the actions of the corporations and without whose support the organization would cease to exist (Freeman and Reed, 1983). Consistent with this theory, Clarkson (1995) defines stakeholders as persons or groups that have, or claim, ownership, rights or interests in a corporation and its activities in the past, present or future. Clarkson further states that these rights or interests can be legal, moral and both collective and individual. Generally speaking, stakeholders can be divided into primary and secondary stakeholders. Primary stakeholders are a group whose continuing participation is necessary for the survival of the corporation as a going concern (Clarkson, 1995). It consists typically of shareholders, investors, employees, suppliers and customers. The secondary group consists of stakeholders who are indirectly affected by actions undertaken by the firm (e.g. Freeman, 1984), like, for instance, the environment or community.

More recently, stakeholder theory has been introduced in the finance literature by Michael Jensen (2001). He acknowledges that a firm can only *maximize* one goal, which is sometimes seen as a criticism of stakeholder theory. However, he suggests that stakeholder theory could be implemented by *optimizing* more goals. Therefore, he introduces an objective function of the firm to maximize its total long-term firm market value in addition to what classical stakeholder theorists do to evaluate the firm, and entitles it 'enlightened stakeholder theory'. This implies that the way stakeholder theorists use processes and audits to measure and evaluate the company's management of its relations with all important constituents (like employees, environment etc.) is completed by a scorecard that measures the change in the total long-term market value of the firm. Jensen (2001) has attempted to implement stakeholder theory in traditional academic finance literature and has therefore made an important contribution.

CSR literature moved gradually in the direction of a stakeholder model from the very beginning.[1] The stakeholder concept will be leading in the analysis of this paper. We will address two major questions. From various points of view, it is interesting to see whether companies that intend to be corporate socially responsible will truly perform in conformance with their intentions. After all, it is easily imaginable that companies that advertise solid policies on CSR for whatever reason turn out to *act* differently. The subsequent question (RQ1) that needs answering reads:

1) *Do firms that intend to be corporate socially responsible through a transparent CSR policy truly act in accordance with their intention?*

This paper argues that a firm's individual answer to this question for a large part determines the company's CSR reputation as perceived by its stakeholders. The definition of **CSR reputation**, therefore, is derived from the above question. The second and most important question (RQ2) that needs answering is the proper definition of the concept of what we call CSR reputation – CSRR – in modern financial markets:

2) *What is the concept of corporate social responsibility reputation (CSRR) and what are its constituent elements?*

The empirical interpretations of these questions provide useful insights into the impact of corporate social responsibility in general and the society we live in. CSRR may provide general insights into the current state of sustainable businesses for strategic management as well as for corporate managers.

The extensive data sample used for this paper includes several measures of CSR and contains data of 2447 firms from 31 industries over 32 different countries measured from 2003 until 2007. The measures are segregated into 7 different stakeholders of the firm and categorized into 4 main themes, being transparency of the firm, formal policy, management systems and CSR performance of the firm. The 7 stakeholder categories are business ethics, community, governance, customers, employees, environment and suppliers. The CSR data are organized along the guidelines of SiRi international.[2]

The remainder of this paper will be as follows. Section 2 will provide a theoretical framework that is an introduction to both research questions (RQ1 and RQ2) and will be based upon prior academic literature. The section concludes with definitions and equations that define the concept of CSR reputation. Section 3 describes and explains the data and presents hypotheses for the research

[1] See Lockett *et al.* (2006) for an overview of the development of CSR literature in management journals.

[2] See section 3 for an extensive description.

questions. The methodology for RQ1 is described in section 4. Finally, section 5 summarizes and concludes.

2. Theoretical Framework

2.1 Corporate reputation

Corporate reputation has often been described as a valuable asset of a firm and one of the biggest competitive advantages that companies can have (Deephouse, 2000; Fombrun, 1996, 1998). According to Fombrun and Shanley (1990), corporate reputation is the perceived stakeholders' opinion of a firm, which depends on the extent to which the expectation of those stakeholders is met. This is in line with Waddock (2000), who argue that reputation is the organization's perceived capacity to meet the stakeholders' expectations. The idea that reputation is based on multi-stakeholder expectations is widely supported (Fombrun, 2002; Smidts *et al*., 2001; Wartick, 1992).

If reputation is interpreted accordingly, another point of interest is to examine the function of reputation. Akerlof (1970) describe reputation as an information signal that provides useful information about a firm. Cornell and Shapiro (1987) add to this point that corporate reputation is also valuable because of the information it gives for closing business contracts. Cornell and Shapiro argue that a firm that has a good reputation has more potential to attract capital sources than a firm with a bad reputation. This is because investors will not only tend to invest in well-reputed firms because of their past performance but also because they know that reputation is self-fulfilling. After all, if a firm does not meet or fulfil the raised expectations (Fombrun and Shanley, 1990; Waddock, 2000), this leads to lower expectations to be met for the future and thus a lower reputation. Assuming that firms want to avoid a low reputation, Cornell and Shapiro argue that firms always try their best to fulfil their raised expectations, which makes reputation self-fulfilling in principle. Intuitively argued, the higher the expectations that are met, the likelier it is that investors want to finance the firm. Hence, Quedevo-Puente *et al.* (2007) argue that well-reputed firms always have a privileged position in the market over firms that have no reputation because they have access to better resources and more favourable terms. This holds under the straightforward assumption that investors are more likely to invest in firms that fulfil their raised expectations than they are likely to invest in firms that do not realize what is expected.

In accordance with the previous paragraph, Fombrun *et al.* (2000) link reputation to value. They suggest that reputational value is created when a firm (i.e. its management) succeeds in convincing their stakeholders to increase expectations. For instance, if the management is able to induce employees to work hard, or customers to buy their product and investors to buy their stock, company value will be created. Conversely, reputational value is destroyed when stakeholders lose their confidence in the firm (Fombrun *et al.*, 2000). Also, other recent work suggests that corporate

reputation has become an important corporate factor that has an influence on a firm's financial performance (e.g. Roberts and Dowling, 2002).[3] In accordance with Fombrun and Shanley (1990) and Waddock (2000), this paper supports the definition that reputation is the perceived capacity to meet stakeholders' expectations. Furthermore, other scholars mentioned in this section have made plausible that reputation has potential value for the firm.

2.2 Corporate reputation in a CSR context

Many scholars (e.g. Brammer and Pavelin, 2004; Carroll, 1979; Logsdon and Wood, 2002; Mahon, 2002; Mahon and Wartick, 2003; Wood, 1991) have recognized that CSR influences corporate reputation. Siltaoja (2006) recognizes that CSR-related issues in the reputational context have been established by many others as factors that are associated with good financial performance (e.g. Burke and Logsdon, 1996; Carmeli and Cohen, 2001; Griffin and Mahon, 1997; Orlitzky *et al.*, 2003). Earlier, Fombrun and Shanley (1990) suggested that CSR leads to a company's increased reputation, although their study does not control for short-term and long-term components of reputation and does not take into account that firms may have more than one reputation. This last, also intuitive, doubt is validated by Bromley (2002), who argues that large companies have many different reputations. He distinguishes, for example, between reputation about product quality and about sponsor contracts. This conclusion is consistent with Siltaoja (2006). Assuming that reputation is formed over a certain period of time, Fombrun and Shanley (1990) suggest that long-term components of reputation matter, since reputation can gain stability and structure in the long run.

Siltaoja (2006) uses value theory to study the link between reputation and CSR based on an early study by Chatman (1989) showing that people are attracted to organizations they think have similar values and norms to those they regard as important themselves. The value theoretical approach presented by Siltaoja (2006) is based on the value theory by Schwartz, which claims that, although people differ in terms of their value priorities, the structure of the human value system is universal (Schwartz, 1992, 1994, 1999). This means that the set of values is universal and equally known to everyone, but people put relative weights on the importance of those universally important value types. Siltaoja (2006) suggests the existence of a link between corporate reputation and CSR based on the notion of value priorities using Schwartz's (1999) theory as theoretical backup. Quedevo-Puente *et al.* (2007) have yet another vision of the link between CSR and reputation. They argue that CSR describes the past and corporate reputation describes the future. They are linked by a process over time; a good performance over time consolidates a good reputation because a good fulfilment of stakeholder expectations in the past leads to new future expectations and thus retains reputation. Scholars like Schnietz and Epstein (2005) have also identified social responsibility as key dimensions of corporate reputation.

[3] See Fuente-Sabate and Quedevo-Puente (2003) for an extensive overview of the reputation literature.

2.3 *To corporate social responsibility reputation*

A theoretical framework is needed to define CSRR. To limit the interpretation of reputation in the CSR context, several scholars have selected criteria that appear to dominate the construction of reputation within the field of CSR to society. Fombrun (1998) names six of these criteria, being: 1) financial performance, 2) product quality, 3) employee treatment, 4) community involvement, 5) environmental performance and 6) organizational issues. These criteria were the basis for further research. Later, however, emphasis was put on responsibility. Lewis (2001), for instance, selects: 1) product quality, 2) customer service, 3) treatment of staff, 4) financial performance, 5) quality of management, 6) environmental responsibility and 7) social responsibility as the going criteria for reputation within the field of CSR. The going trend for reputation within the field of CSR is moving more towards responsibility as suggested by Lewis (2001) since stakeholders expect responsible actions (Siltaoja, 2006). Siltaoja supports Fombrun's (1996) arguments by saying that there is no 'right' set of criteria because different evaluators use different concepts. The set of criteria mentioned above can easily be expanded with the work of other scholars (e.g. Schultz *et al*., 2001). The sample used for this paper, although similar in principle, elaborates on these criteria (see section 3.1 for the details).

2.4 Defining CSR reputation (CSRR)

Fombrun and Shanley (1990) define corporate reputation as 'the perceived stakeholders' opinion of a firm which depends on the extent to which the expectation of those stakeholders is met'. Accordingly, Waddock (2000) define reputation as the perceived capacity of a firm's ability to meet stakeholders' expectations. So, corporate social responsibility reputation ($CSRR_{i,t}$) equals the perceived capacity ($PERCAP_{i,t}$) to meet raised expectations on the corporate social responsibility of company i in year t.

$$CSRR_{i,t} = PERCAP_{i,t} \tag{2.1}$$

Thus, the perceived capacity to meet raised stakeholder expectations is a function of past reputation (reputation in previous years, $PERCAP_{i,t-n}$), the capacity to meet expectations in year t (CAP_t) and the value of CSR expectations (EXP) and performance (PERF) in year t. Also, Bertels and Peloza (2006) argue that a firm's performance in relation to the expectations of the firm's stakeholders determines the reputation of the firm.

$$PERCAP_{i,t} = f\left(PERCAP_{i,t-T}, CAP_{i,t}, EXP_{i,t}, PERF_{i,t}\right) \tag{2.2}$$

The actual capacity to meet expectations (CAPt) is measured as a function of the expectations for CSR expressed by the transparency of CSR information (TRANS), published policies (POLIC) and management systems in place (MANSYS) over the performance on CSR expressed by identified controversies as measured by professional rating agencies.

$$EXP_{CSR,i,t} = f(TRANS, POLIC, MANSYS)_{i,t} \quad (2.3)$$

$$PERF_{CSR,i,t} = f(CONTROVERSIES)_{i,t} \quad (2.4)$$

Consistent with Waddock (2003), for this paper, two proxies are applied in order to measure the capacity to which the firm is able to meet stakeholder expectations (CAPt). These are the CSR expectations (EXPcsr) and CSR performance (PERFcsr). Therefore, capacity is a function of both. The equation to measure a firm's capacity (CAPt) to meet CSR expectations is given by

Capacity variable φ (phi) = $$CAP_{i,t} = \beta . \ln\left(\frac{PERF_{i,t}}{EXP_{i,t}}\right) \quad (2.5)$$

Equation (2.5) only returns a negative number if the CSR expectations are not met.[4] Equation (2.5) is therefore a good indicator of a firm's reputational gains/losses. Multiplier β is arbitrary. It determines the impact (read: perceived importance) of a firm's capacity variable relative to its value variable.[5] Because we argued that meeting raised expectations is an important aspect of CSRR, we set the multiplier β to 10 to offset the quantitative influence of the initial basis scores in relation to the subsequent value variable.

We argued that the quantitative level of CSR expectations influences CSRR (meeting higher expectations must lead to a higher reputation). The value of the reputation variable is therefore determined by the change in the score of $EXP_{i,t}$ compared with the average value of EXP of the entire market. The proxy for the quantitative value of reputation is thus given by:

Value variable γ (gamma) $$EXP_{i,t} - 1/n \sum_{i=1}^{n} EXP_{i,t}$$

$$= \overline{EXP}_{i,t} \quad (2.6)$$

where $\sum EXP_{i,t}$ represents the average CSR expectations of the entire market of CSR expectations. In defining the value variable, we followed Bertels and Peloza (2006), who argue that a firm's

[4] The natural logarithm only returns negative numbers if the result of PERF/EXP is a number between 0 and 1. Recall that the graph of the natural logarithm crosses the x-axis at 1. The fraction PERF/EXP, by definition, is only between 0 and 1 if the score for PERF is smaller than the score for EXP (expectations not met c.q. reputational losses). All other combinations (with scores 0 < PERF, EXP < 100) with PERF being covered by EXP yield a positive number in equation (2.5).

[5] The *capacity* variable answers the question of *whether* raised expectations are met. The *value* variable measures *what* expectations (quantitative scores) are met.

reputation is composed both of its own actions and of the status of those actions *relative* to the actions of others. The actions of other actors in the firm's organizational field help to define rules, norms and beliefs and thus set the expectations of the firm's stakeholders (Bertels and Peloza, 2008). In other words, the value variable gamma defines the status of each firm's expectations relative to the global average raised expectations of others and adds an acknowledged aspect of reputation.

Intuitively, meeting higher CSR expectations must yield a higher CSRR rating because of higher efforts in policies, transparency and management systems (2.3). Therefore, equation (2.6) adds the quantitative aspect of CSRR.

The definition of CSRR, then, is given by substituting (2.2) with (2.5) and (2.6) and defines equation (2.1):

$$\text{CSRR}_{i,t} = \sum_{j=t-(T-1)}^{t-1} \alpha_j \cdot \text{PERCAP}_{i,j} + \alpha_t \cdot Z_{i,t} \qquad (2.7)$$

where,

$$z_{i,t} = \begin{cases} \alpha_t \left[\beta \cdot \text{LN}\left(\frac{\text{PERF}_{i,t}}{\text{EXP}_{i,t}} \right) + \text{LN}\left(\frac{\text{PERF}_{i,t}}{\text{Exp}_{i,t}} \right) \cdot \Delta\overline{\text{EXP}}_{i,t} \right] & \text{if } \varphi < 0 \text{ and } \gamma > 0 \\ \alpha_t \left[\beta \cdot \text{LN}\left(\frac{\text{PERF}_{i,t}}{\text{EXP}_{i,t}} \right) + \Delta\overline{\text{EXP}}_{i,t} \right] & \text{if } \varphi < 0 \text{ and } \gamma < 0 \text{ , or if } \varphi > 0 \end{cases}$$

and

$\varphi = \text{LN}\left(\frac{\text{PERF}_{i,t}}{\text{EXP}_{i,t}} \right)$ = capacity variable

$\gamma = \Delta\overline{\text{EXP}}_{i,t}$ = value variable

α_t = the weight of the perceived capacity to meet expectations in period t.

sub 1) If $\varphi < 0$ (reputational loss) → the value of gamma is examined differently. Only if gamma > 0, the (positive) gamma is multiplied by the (negative) phi (corrected for its multiplier) and added to the equation. This (negative) value fraction gamma results in a lower CSRR rating, which implies that not meeting expectations EXP must lead to reputational losses, irrespective of the height of the value variable gamma. If $\varphi > 0$, phi and gamma are simply added.

sub 2) If t > 1, CSRR assigns weights to the ratings of previous years.

Sub 1) implies that, if the expectations are not met (PERF < EXP), a firm must score a negative CSRR rating even though firms that appear 'sustainable' (high scores for EXP, large value variable gamma) may offset the loss with high value variables. Moreover, multiplying a positive gamma with a negative phi in the case of reputational losses ensures that small losses result in less negative ratings than larger losses, ceteris paribus.

Sub 2) represents the time aspect of reputation. It implies that past reputation $PERCAP_{t-T}$ is included in the calculations. This implies that negative CSRR ratings from preceding years may not be fully compensated for by reputational gains in the following year(s) and vice versa. This resembles a realistic model since a controversy may very well influence stakeholder confidence and perception for a number of years to follow. In current research, weights that deteriorate over time have been applied in such way that the impact of $CSRR_{t-T}$ decreases as T becomes larger (CSRR longer ago). Regardless of the year, the CSRR weight for a company that only has a data entry at t = 0 is always 100%. If t = 0 is calculated in combination with t-1, the appropriate weights are 60% and 40%, respectively. After 3 years of data entry, the weights have become 60% for t = 0, 25% for t-1 and 15% for t-2. If a CSRR score is calculated for t = 0, t-1, t-2 and t-3, the weights are 60%, 20%, 10% and 10%, respectively. If a company has CSR data for all 5 years in the sample, the weights are 60%, 15%, 10%, 10% and 5%, starting with the most recent year. This implies that a CSRR score is primarily based on the results obtained in the most recent time period. If n > 5, CSRR ratings are assumed no longer to influence the current CSRR ratings. See Table 3 in Appendix 1 for a summary of weights.

Further, it must be noted that the multiplier beta (β) in equation (2.7) is fixed at 10 in the capacity variable phi. This multiplier determines the variable weight and is necessary to make sure that the capacity variable is not under- or overestimated compared with the others. Mathematically, it offsets the devaluation of phi as a result of the natural logarithm, to gamma, which (theoretically) ranges from -100 to +100. For example, consider the following possible combinations of EXP and PERF scores:

Schedule 1
Example of CSRR rating results on various EXP/PERF combinations

Average EXP	EXP	PERF	Phi	Gamma	CSRR rating
56.25	100	100	0	43.75	43.750
56.25	10	100	23.03	-46.25	-23.224
56.25	50	100	6.93	-6.25	0.681
56.25	100	50	-6.93	43.75	-37.257
56.25	10	10	0	-46.25	-46.250
56.25	60	80	2.88	3.75	6.627
56.25	80	60	-2.88	23.75	-9.709
56.25	40	20	-6.93	-16.25	-23.181

Note that the average EXP in the example is actually the average of the used examples for EXP. Hence, a rating is always dependent on other firms in the sample (which is also

derived from equation (2.7)). This example does not necessarily represent the used data sample.

Obviously, the 100/100 combination generates the best rating. Although 10/100 achieves reputational gains, it has a lower rating because we argued that higher scores on the components of EXP (equation 2.3) increase CSR reputation (equations (2.2) and (2.1)) and vice versa. The 100/50 combination has a low (negative) rating due to reputational losses. In this case, the multiplication of the actual loss (net fraction phi corrected for multiplier) and gamma is added to the (negative) capacity variable phi. This implies that a reputational loss always results in a negative rating relative to the size of the loss. As a result, smaller losses (e.g. 80/79) generate a better ranking than bigger losses (e.g. 80/60). If both phi and the value-variable gamma are negative, the CSRR score is calculated from the simple summation, so a small loss in combination with small scores (say 30/29) yields a lower rating. Hence, the aforementioned condition limits the loss for companies that have put effort into CSR and whose difference between EXP and PERF is small. A 10/10 combination scores negatively because, although the firm meets stakeholder expectations, it barely engages in CSR activity, which results in a straightforward low CSRR rating.

2.5 Reputational gains versus reputational losses

To finish our terminology on CSR reputation, the following definitions describe the condition where the expectations and performance do not match, i.e. when CSRR alters, ceteris paribus. If the expectations are exactly met, then the following equation, by definition, holds:

$$\frac{PERF_{CSR_t}}{EXP_{CSR_t}} = 1 \qquad (2.8)$$

Substituting (2.8) with equations (2.3) and (2.4) must imply that, if expectations are exactly met, this results in

$$\frac{PERF_{CSR\,t}}{\sum_{i=1}^{n} \left(TRANS\,, POLIC\,, MANSYS\right)_t / 3} = 1 \qquad (2.9)$$

For example, if a firm during one time period scores highly on the CSR categories, being 1) communication and transparency, 2) formal policy and 3) management systems, then this high number represents high raised stakeholder expectations. If a firm consequently meets the expectations, the corresponding score for category d) should match the score obtained with the first 3 categories, i.e. the ratio should be 1. If the score for category d) turns out to be lower, that implies that the firm has not been able to meet the stakeholders' expectations and that the firm, by definition, suffers reputational damage, ceteris paribus (i.e. the capacity variable phi results in a negative number, see equation (2.5)). If, however, the firm scores better on its performance, it implies that a firm has 'outperformed' with

respect to the raised expectations and this therefore leads to reputational gains, ceteris paribus. Hence, reputational gains are defined as:

$$\frac{PERF_t}{EXP_t} > 1 \quad = \quad PERF_t - EXP_t > 0 \qquad (2.10)$$

In other words, reputational gains (losses) are defined as the positive (negative) difference between CSR performance and CSR expectation, independent of the value aspect (γ). Reputational losses, then, are similarly defined:

$$\frac{PERF_t}{EXP_t} < 1 \quad = \quad PERF_t - EXP_t < 0 \qquad (2.11)$$

3. Data and Hypothesis

The sample used for this paper concerns CSR questionnaires on an annual basis from 2003 until 2007. The data were provided by Sustainalytics, a social rating agency from Bunnik, a branch of the Triodos Bank in the Netherlands. Sustainalytics is a network partner of Sustainable Investment Research International (SiRi). SiRi is a cooperation established in Fribourg (CH)[6] of 10 European social research companies that developed a common research questionnaire for analysing companies from different countries according to an identical structure on their corporate social responsibility. This CSR data is collected from 2,447 listed and non-listed firms in total.[7] For the 5 years, the number of firms in the CSR sample are 589, 756, 1086, 1731 and 2194 firms, respectively, from 2003 until 2007. The firms in the sample have a minimum of 1 year of data and a maximum of 5 annual observations. The firms have on average 2.6 yearly data entries.[8] The 2365 listed companies reviewed all come under the MSCI World Index, an index based on free float-adjusted market capitalization that is designed specifically to measure market equity performance for globally developed corporations. Furthermore, the data are segregated into 32 industrialized countries and 31 different industries. Staff members of all the national external social rating agencies evaluated their local firms in the sample by allocating scores to the firm using an identical questionnaire and method. Subsequently, SiRi administers the data in order to provide complete samples for customers on a global basis. The partner agencies evaluated several aspects of a firm's CSR by asking 176 questions on average.[9] A quantitative score was ascribed to each of the topics ranging from 0 to 100%. The ascribed score depends on the extent to which a firm complies with the corresponding topic of the questionnaire. To

[6] See www.siricompany.com for more information. The organizations stopped cooperating at the end of 2009.
[7] Out of 2447 firms, 73 firms are non-stock-listed companies.
[8] Based on 6356 observations of 2447 firms during 5 years.
[9] See Table 1 and 2 in appendix 1.

ensure that scores were identical among all the evaluators, SiRi applied strict standards, which were identical for each evaluator and each firm in the sample. The contents of the questionnaires were altered after 2004 in order to improve the usefulness of the data.

SiRi used the following sources when they collected the CSR data sample:
1) Company documents that are publicly released
2) National and international press articles
3) Associations, non-profit and non-governmental organizations
4) Contacts between SiRi group members and the company that is to be evaluated.

The sample is dynamically structured, which implies that the number and composition of the evaluated firms alters interchangeably each year on various grounds. New firms can enter the list, for instance, halfway through the research period (say year *t*), which implies that the code NA is assigned to this firm for the years *t*-1 and *t*-2 etc. If a firm disappears from the list due to, for instance, a merger or acquisition in year t, the code NA is assigned for the corresponding year and the years after year *t* if the firm remains unevaluated. Therefore, a cell containing code NA is considered empty and does not bias the sample.

3.1 Structure of the data

The content of the CSR data has a twofold structure. The topics of the questionnaire are firstly categorized into four main themes and secondly applied to seven stakeholder categories of the firm. A firm's total corporate social responsibility is represented by all seven stakeholder category scores together, so each stakeholder category represents a single CSR feature of the company. The four main themes cover questions on all the stakeholder categories independently:

1. *Communication and transparency* concerning the CSR of the company, which examines, for instance, public reporting, information on websites, director remuneration reports etc.
2. *Formal policy statements* on CSR issues, including, for instance, formal policy statements in annual reports on corporate governance or discrimination of employees etc.
3. CSR *management systems* in place, which looks at, for instance, special programmes and targets in the organization relating to CSR issues.
4. CSR *performance and controversies*, which measures CSR performance and possible controversies that were made public on any aspect of CSR.

The key element of the CRS data is that the questionnaires are aimed at seven different stakeholder areas of a firm. Acknowledged ratings apply to the following stakeholders:[10]

A. *Business ethics* (BE), which measures various ethical issues such as, for instance, bribery and whistle-blowing programmes.
B. *Community involvement* (COM) measures various contributions to the community, like charity or employment, as well as activities that had a negative economic impact on the community in which the company operates.
C. *Corporate governance elements* (GOV) measures classical corporate governance topics such as, for instance, remuneration committees and board composition.
D. *Customers* (CUS) measures characteristic customer issues such as safety and customer satisfaction.
E. *Employees* (EMP) is about human resources, safety, employee participation, other employee rights etcetera.
F. *Natural environment* (ENV) measures mainly problems, for instance, regarding various aspects of environmental pollution.
G. *Suppliers and contractors* (CON) handles issues such as child labour, freedom of working hours, safety and human rights from the point of view of the supplier.

This paper assumes that all the previously mentioned themes and stakeholder categories, measured by independent social rating agencies, can be expressed as integer numbers, i.e. a percentage number ranging from 0 to 100%. For example:

a) A firm scores credits on transparency and communication concerning CSR. This implies that, if for instance their policy or their performance on CSR is clearly *communicated* to both stakeholders outside the firm (e.g. banks, customers, suppliers, investors) as well as stakeholders inside the firm (e.g. employees), more credits are ascribed. For example: a score of '100' is given if a firm reports publicly on environmental issues; it scores '50' or '0' if it reports only partially or does not report publicly at all.
b) A firm scores credits on their *formal policy statements* on CSR. This implies that a firm scores more credits if they have a more elaborated and sophisticated CSR policy. For example: a score of '100' is ascribed if a firm has a formal policy on the elimination of discrimination. It scores '0' if it has no such policy.
c) A firm scores credits on *management systems in place* designed for handling CSR issues. This implies that a firm is rated higher if it has clear CSR targets and programmes. For example: a

[10] The seven categories are called stakeholders by SiRi agencies. Therefore, the term 'stakeholder' is copied even though category A is not a 'stakeholder' of the firm per se.

score of '100' is ascribed if a firm has clear targets and programmes for the reduction of CO_2. If it does not have such targets, it is ascribed a score of '0'.

This research assumes that these three categories together represent a firm's *intended attitude* towards CSR. Consequently, it is reasonable to expect that this intention raises stakeholder expectation. Intuitively, this claim should hold; if a firm has a certain issue in its policy and communicates it externally, stakeholders may expect this to happen. Also, samples used in prior studies (e.g. Bird *et al.*, 2007; Pava and Kreusz, 1996) that research CSR show similar categories to measure CSR or have at least some corresponding features that amplify the tenability of this assumption.

To see whether the raised SCR expectations are met, we subsequently look at the CSR performance as measured by category d): controversies and performance.

d) A firm scores credits on its performance on CSR. This means that a score is ascribed to a firm for the realized *actions* on CSR. This score includes all the CSR performance and possible CSR controversies that are known according to international standards. For example: a score of '100' is ascribed if data prove that CO_2 emission was very low and no controversies were reported. A score of '0' is ascribed if important controversies have been made public.

Whilst the communication and transparency, the formal policy statements and the management systems in place are gathered through company publications (annual reports, websites etc.), the CSR performance and possible controversies are gathered by the analysts through external information sources like news and magazines. A firms' performance on CSR is measured and subsequently expressed as an integer value, between '0', representing the worst CSR performance, and '100', representing the best CSR performance and the least controversies.

3.2 Hypothesis

Section 2 has introduced and defined the term corporate social responsibility reputation (CSRR). There, it is stated that CSRR is a function of the extent to which firms comply with the raised stakeholder CSR expectations (the above categories a), b) and c)), reputation from the previous period and the level of CSR expectations. This brings us to the core of the paper, which refers to research question 1) for CSRR: do companies that intend to be corporate socially responsible truly act in accordance with their intention? This question is formulated accordingly and leads to the following null hypothesis:

H_0 *Companies that have raised CSR expectations, on average, comply with these expectations with their subsequent CSR performance.*

This null hypothesis is numerically rewritten for mathematical interpretations and is given by

$$H_0 = \frac{\sum_{t=1}^{t=T} \sum_{n=1}^{n=N} \frac{\varphi_{n,t}}{\gamma_{n,t}}}{N \cdot T} = 1 \quad \text{versus the alternative hypothesis} \quad H_1 = \frac{\sum_{t=1}^{t=T} \sum_{n=1}^{n=N} \frac{\varphi_{n,t}}{\gamma_{n,t}}}{N \cdot T} \neq 1$$

where φ = EXP = *f* (policy, communication, management systems)$_t$, γ = PERF, N = number of firms and T = number of years. The following section first presents the resulting ranking of companies according to the calculated results as based on equation (2.7). Then, we take a look at the regional and sectoral distribution of CSRR rankings and we end with the test of the above hypothesis to answer the major research question of this paper: do companies comply with their CSRR expectations?

4 Results and Conclusions

Table 4 shows the per year top and bottom 10 companies as ranked by their CSRR scores calculated in equation (2.7).

INSERT TABLE 4 ABOUT HERE

We see, for example, that the Rabobank from the Netherlands scored highest in the year 2007. A remarkable detail is that this very bank performed outstandingly during the international 2008 and 2009 financial crisis. Another high-ranking company is United Utilities, specializing in water, wastewater, electricity and gas and based in the UK. This international organization appears 3 times in the top 10 companies of the last 5 years. At the lower end of the ranking, the Royal Dutch Shell Group especially stands out. Despite their extremely high expectations, as based on their impressive sustainability policies resulting from the Brent Spar conflicts in the mid-nineties, their reputation is especially damaged by the conflicts concerning the Niger Delta. The ongoing environmental and social debate turns out to be very harmful to the company's CSR reputation. Note that the scores are calculated on a yearly basis, implying that reputation is a moment in time that can change rapidly.

In Graphs 1 and 2, we present the average CSRR scores of companies over the entire research period. For these calculations, weights are applied that decrease the relevance of past reputation if companies have more than one data entry (see Table 3 for the weights). Then, we aggregate the CSRR scores per country and per region.

INSERT GRAPH 1 AND 2 ABOUT HERE

Graph 1 shows that the United Kingdom and Finland are the best performing countries, whereas the Asian regions Hong Kong and Singapore are at the other end of the distribution. In general, we see that Central European and Scandinavian countries are represented in the top segment. The exact scores per year are presented in Table 5 in the appendix. Graph 2 shows the aggregated development over time per continent. We conclude that Europe performs best in the entire 2003–2007 period, whereas Asia scores lowest. A likely cause is a different focus and a different culture concerning CSR policies in this region. Australia and New Zealand outperformed the US in the years 2006 and 2007. The results for most continents follow a similar pattern. Asia, however, is the only continent with an upward slope for the entire 2003–2007 period. This implies that Asian countries are gradually improving their CSRR ratings whereas the rest of the world shows no such homogeneous pattern in their CSR ratings.

Analysing the scores per sector, the results from our ranking system are shown in Graph 3 and Table 6. Here, utilities and materials score best with health care and financials performing worst.

INSERT GRAPH 3 AND TABLE 6 ABOUT HERE

It is remarkable that the non-stock-listed companies (financials and industrials) have a negative CSRR rating, which implies that they suffer reputational losses on average. This raises the question of whether financial markets are needed to discipline companies on their CSR policies. Finally, we perform a paired- and a one-sample t-test to answer research question number 1: do companies that intend to be corporate socially responsible through a transparent CSR policy truly act in accordance with their intention? The results from Table 7 show that they do. For all the different stakeholders, the average scores of the CSR performance are statistically significantly higher than the average score of the CSR expectations. This implies that, for the entire sample, companies do indeed have higher scores on performance than on raised expectations. The final conclusion, then, is that companies do comply with their raised CSR expectations. In the year 2007, only 2.8% of the companies (63 out of 2197) had a negative phi, implying reputational losses. The final conclusion, then, is that the vast majority of MSCI companies do comply with their raised expectations.

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Appendix 1

Table 1
Number of questions in the questionnaire 2003–2004

Stakeholder → / ***Theme ↓***	*BE*	*COM*	*GOV*	*CUS*	*EMP*	*ENV*	*CON*	**TOTAL**
Communication	4	5	5	5	5	5	6	**35**
Policy	2	2	1	3	6	1	7	**22**
Man Sys	2	5	12	3	11	20	3	**56**
Performance	3	6	6	4	14	24	7	**64**
TOTAL	**11**	**18**	**24**	**15**	**36**	**50**	**23**	**177**

Table 1 shows the number of questions per theme and per stakeholder in the questionnaire for the period 2003–2004. Stakeholders are represented by BE = Business Ethics, COM = Community, GOV = Corporate Governance, CUS = Customers, EMP = Employees, ENV = Environment, CON = Contractors and Suppliers. Themes are CSR Communication and Transparency, CSR Formal Policies, CSR Management Systems and CSR Performance and Controversies. The totals add up the total number of questions per theme and per stakeholder.

Table 2
Number of questions in the questionnaire 2005–2007

Stakeholder → / ***Theme ↓***	*BE*	*COM*	*GOV*	*CUS*	*EMP*	*ENV*	*CON*	**TOTAL**
Communication	2	2	3	2	2	2	2	**15**
Policy	2	9	1	8	5	6	2	**33**
Man Sys	1	4	5	3	3	27	4	**47**
Performance	6	11	5	9	11	29	8	**79**
TOTAL	**11**	**26**	**14**	**22**	**21**	**64**	**16**	**174**

Table 2 shows the number of questions per theme and per stakeholder in the questionnaire for the period 2005–2007. Stakeholders are represented by BE = Business Ethics, COM = Community, GOV = Corporate Governance, CUS = Customers, EMP = Employees, ENV = Environment, CON = Contractors and Suppliers. Themes are CSR Communication and Transparency, CSR Formal Policies, CSR Management Systems and CSR Performance and Controversies. The totals add up the total number of questions per theme and per stakeholder.

Table 3
Applied weights alpha α in equation (2.7)

Weights alpha α	t = 1-T	t = 2-T	t = 3-T	t = 4-T	t = 5-T
if 1 data entry (T = 1)	100%				
if 2 data entries (T = 2)	40%	60%			
if 3 data entries (T = 3)	15%	25%	60%		
if 4 data entries (T = 4)	10%	10%	20%	60%	
if 5 data entries (T = 5)	5%	10%	10%	15%	60%

Table 4 **Yearly CSSR ranking of top 10 and bottom 10 companies**

2003

	Company name	EXP	PERF	CSRR
1	British Telecom	68.4	76.8	33.1
2	Centrica	67.7	68.4	31.4
3	Safeway plc	66.6	70.6	30.7
4	mmO2	65.1	73.3	29.9
5	ENI	65.1	67.2	29.0
6	BG Group	63.7	74.0	28.7
7	BP PLC	64.2	67.0	28.1
8	Novartis	63.5	68.4	27.8
9	Severn Trent Plc	62.5	71.4	27.4
10	Carrefour	62.2	65.8	26.3
580	SNIA S.p.A	12.2	60.1	-8.3
581	Altadis	10.9	61.0	-8.3
582	Bulgari s.p.a.	9.2	60.7	-8.4
583	Stryker Corporation	9.4	60.5	-8.4
584	Almanij	10.0	60.5	-8.4
585	ABB	71.4	59.1	-8.5
586	YAHOO! Inc.	12.8	58.0	-8.5
587	Computer Sciences Corporation	11.9	58.0	-8.7
588	Viacom	10.1	58.4	-8.8
589	Terra Networks	14.6	53.7	-8.8

2004

	Company name	EXP	PERF	CSRR
1	Sony Corporation	78.1	82.4	28.3
2	Intel	77.9	78.5	28.1
3	BG Group	73.6	80.7	27.8
4	Arcelor	74.6	81.9	26.9
5	Henkel KGaA	74.4	85.2	26.5
6	Nokia	73.9	89.0	26.3
7	SAB Miller	74.4	74.9	26.2
8	Swisscom	75.2	81.3	26.2
9	United Utilities	75.0	76.9	26.1
10	Imperial Chemical Industries	72.7	80.5	25.7
747	Phoenix Mecano	12.3	75.9	-16.9
748	Edipresse	11.6	74.8	-17.1
749	Moevenpick	13.3	71.2	-17.3
750	Surgut Neftegas	6.7	68.9	-17.4
751	Lindt & Sprüngli	16.5	63.4	-17.4
752	Swisslog Holding AG	12.8	68.4	-17.8
753	Hermes	12.7	68.1	-17.9
754	Zehnder	10.9	69.4	-18.0
755	AP Moller Maersk	13.3	66.0	-18.0
756	Actelion	12.0	67.5	-18.1

2005

	Company name	EXP	PERF	CSRR
1	KONINKLIJKE DSM N.V.	79.1	81.2	36.2
2	The Body Shop International PLC	78.4	81.9	35.8
3	Australian Gas Light	77.3	87.7	35.4
4	Johnson Controls Inc	77.4	83.5	35.0
5	HBOS	88.3	88.8	33.7
6	Coca-Cola Hellenic Bottling	76.1	81.1	33.6
7	Nike, Inc.	76.2	79.2	33.5
8	TNT NV	74.6	83.8	32.7
9	GUS plc	71.0	88.0	30.1
10	United Utilities	74.1	82.7	29.3
1077	Ascom	16.7	76.2	-12.7
1078	Phoenix Mecano	20.0	74.1	-12.8
1079	Berna Biotech	10.3	75.9	-12.8
1080	BOC Hong Kong Holdings	14.6	80.8	-13.1
1081	Hermes	17.5	79.4	-13.4
1082	Swiss First	7.9	82.8	-13.5
1083	Swisslog Holding AG	14.1	80.2	-14.1
1084	Moevenpick	9.1	81.9	-14.1
1085	Edipresse	11.9	79.8	-14.2
1086	AP Moller Maersk	15.4	70.4	-14.7

2006

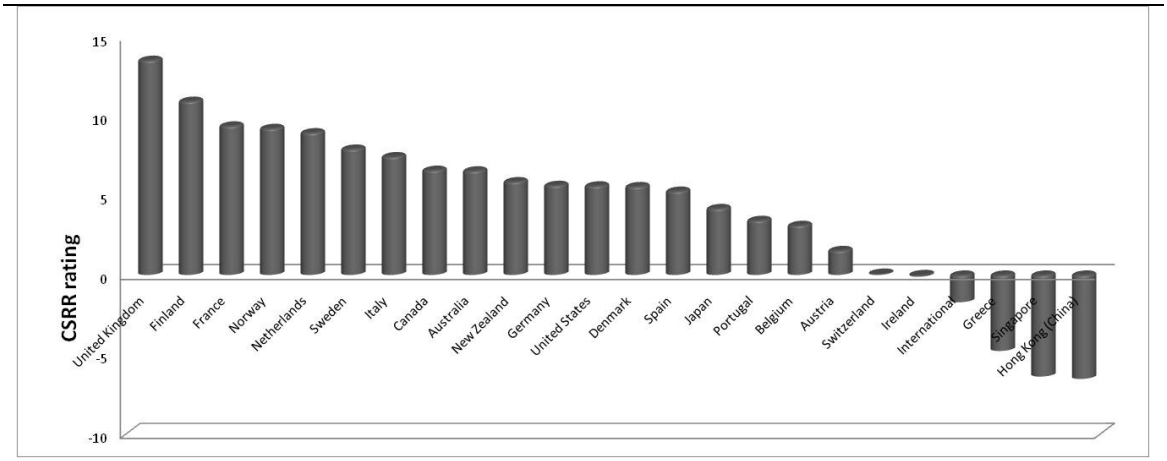
	Company name	EXP	PERF	CSRR
1	BT Group plc	88.0	89.4	47.2
2	Wartsila	80.9	86.4	40.6
3	SAS Group	79.9	82.1	39.2
4	The Body Shop International PLC	78.4	81.9	37.0
5	Australian Gas Light	77.3	87.7	36.7
6	Johnson Controls Inc	77.4	83.5	36.3
7	Nike, Inc.	78.3	78.9	35.8
8	Coca-Cola Hellenic Bottling	76.1	79.9	34.8
9	BG Group	78.6	83.8	34.4
10	Kesko	74.0	83.2	34.2
1723	Acerinox	10.8	80.8	-10.9
1724	Fonterra Cooperative Group	12.5	72.5	-10.9
1725	Marui Co Ltd	11.0	76.2	-11.0
1726	BOC Hong Kong Holdings	14.6	80.8	-11.2
1727	Kudelski	12.4	71.2	-11.2
1728	Berna Biotech	10.3	75.9	-11.6
1729	Moevenpick	7.9	81.9	-11.9
1730	Edipresse	13.1	80.4	-12.0
1731	Swisslog Holding AG	13.4	79.4	-12.1
1732	Royal Dutch/Shell Group of Companies	88.8	67.9	-12.8

2007

	Company name	EXP	PERF	CSRR
1	Rabobank	86.8	87.1	40.1
2	Red Electrica de España SA	85.4	86.9	39.2
3	La Caixa	80.2	89.6	38.6
4	Wartsila	79.4	82.5	38.5
5	Xstrata	86.7	87.6	37.7
6	Insurance Australia Group	78.7	89.1	37.2
7	United Utilities	83.5	86.1	36.5
8	Sharp Corp	84.1	85.5	35.9
9	Westpac Banking	85.2	91.8	35.5
10	BG Group	80.5	83.8	35.2
2185	Kudelski	13.8	71.2	-12.1
2186	Schweizerhall	10.1	78.2	-12.1
2187	Shoppers Drug Mart Corp	10.6	77.6	-12.2
2188	Santhera Pharmaceuticals	11.7	76.7	-12.2
2189	Matsumotokiyoshi Co	8.6	76.6	-12.2
2190	Tingyi	13.0	74.5	-12.2
2191	Daimler	82.1	64.1	-12.2
2192	Parkson Retail Group Ltd	8.7	73.3	-12.6
2193	Swisslog Holding AG	12.2	79.4	-12.6
2194	Royal Dutch/Shell Group of Co	90.2	66.4	-14.7

Graph 1

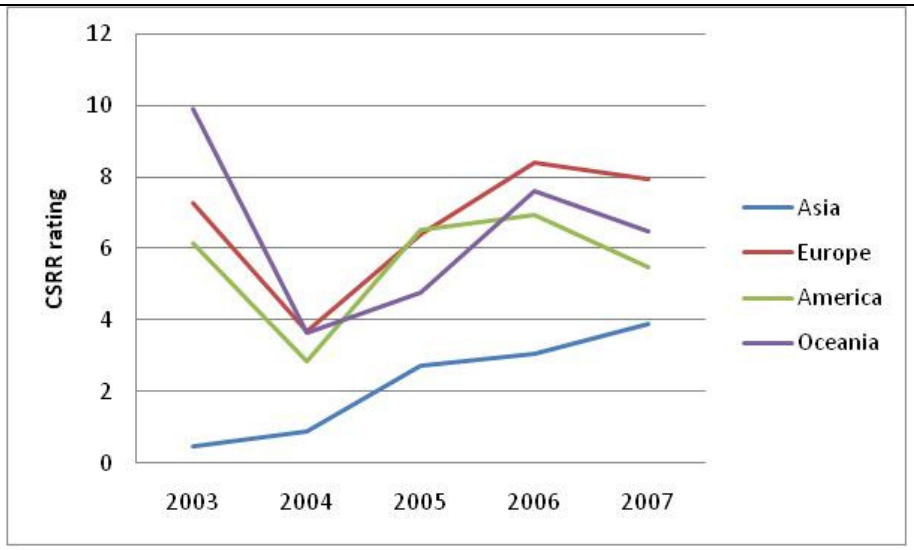
5-year average CSRR rating distributed by countries in the period 2003–2007



Luxembourg, Taiwan, Korea, Poland, Brazil, Mexico and Russia are omitted from this graph because they consist of fewer than 5 observations.

Graph 2

CSRR rating for continents: 2003 to 2007; 5 years



Asia includes the following countries: China, Japan and Singapore. Europe includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. America includes Brazil, Canada, Mexico and the United States. Oceania includes Australia and New Zealand.

Table 5

Corporate social responsibility reputation (CSRR) ratings distributed per country: 2003 to 2007; 5 years

Country	No. of firms in sample	2003	2004	2005	2006	2007	AVERAGE
Australia	101	9.93	3.67	5.00	7.74	6.43	6.55
Austria	16	2.35	0.86	3.01	1.13	0.34	1.54
Belgium	27	2.20	-0.82	1.63	5.75	6.83	3.12
Brazil	2	NA	NA	NA	NA	11.57	11.57
Canada	120	11.69	4.88	5.33	6.42	4.63	6.59
China	1	NA	NA	NA	NA	-11.84	-11.84
Denmark	24	19.68	1.92	2.80	1.35	2.06	5.56
Finland	23	13.76	6.17	10.78	11.76	12.22	10.94
France	88	6.71	3.21	11.14	13.97	11.88	9.38
Germany	76	4.92	3.34	6.55	7.59	5.80	5.64
Greece	21	-4.28	-10.58	-2.83	-2.27	-3.93	-4.78
Hong Kong (China)	53	-5.00	-10.66	-6.15	-4.94	-5.95	-6.54
International	74	NA	NA	NA	-2.74	-0.67	-1.71
Ireland	16	-3.62	-1.31	0.68	1.73	2.01	-0.10
Italy	52	4.02	3.84	8.98	11.06	9.35	7.45
Japan	427	2.29	3.44	4.46	4.62	6.08	4.18
Korea (South)	3	-0.12	-0.65	NA	NA	11.18	3.47
Luxembourg	1	25.03	26.90	26.04	27.25	NA	26.31
Mexico	1	NA	-9.15	NA	NA	NA	-9.15
Netherlands	59	7.97	3.62	10.53	11.96	10.69	8.96
New Zealand	14	NA	NA	3.66	6.82	7.13	5.87
Norway	22	9.79	8.74	11.20	8.93	7.48	9.23
Poland	1	NA	-5.62	NA	NA	NA	-5.62
Portugal	13	-0.99	-1.28	-0.90	5.99	14.33	3.43
Russia	2	NA	-11.27	NA	NA	NA	-11.27
Singapore	40	-4.95	-10.67	-6.03	-5.20	-5.11	-6.39
Spain	49	1.53	0.72	3.56	7.87	12.69	5.27
Sweden	51	5.54	5.90	8.15	10.14	9.90	7.92
Switzerland	175	4.53	-1.57	-2.36	-0.04	-0.24	0.06
Taiwan	1	NA	14.83	NA	NA	NA	14.83
United Kingdom	195	12.97	10.00	14.08	15.24	15.31	13.52
United States	699	5.98	2.74	6.66	7.02	5.64	5.61

Graph 3
5-year average CSRR ratings distributed by sector in the period 2003–2007

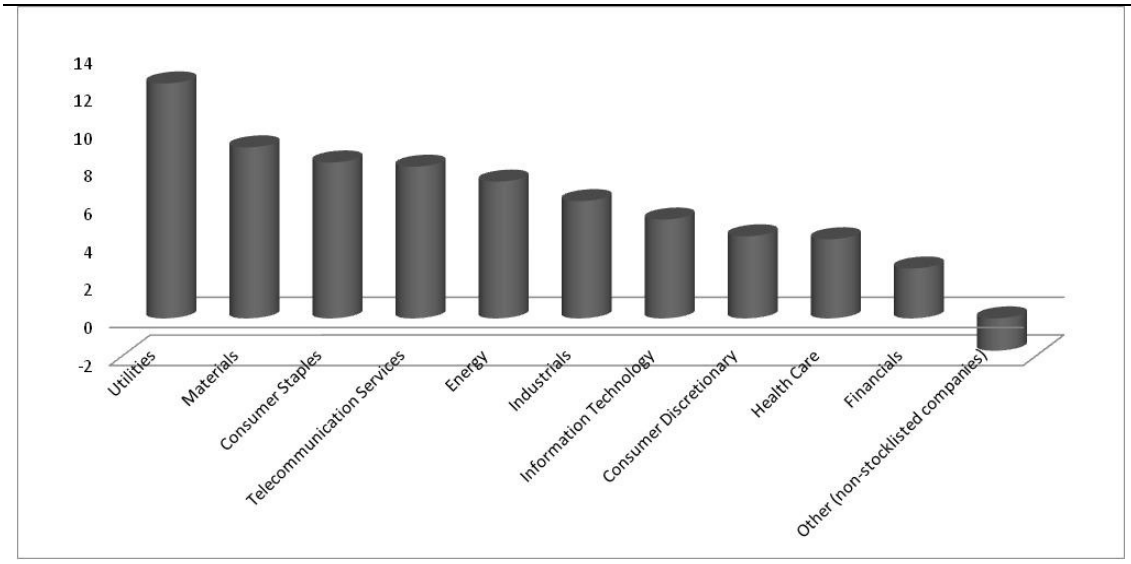


Table 6
Corporate social responsibility reputation (CSRR) ratings per sector: 2003 to 2007; 5 years

Sector	No. of Firms	2003	2004	2005	2006	2007	AVERAGE
Consumer Discretionary	404	4.88	1.50	4.72	5.45	5.13	4.34
Consumer Staples	164	9.13	3.96	9.31	10.19	8.63	8.24
Energy	131	10.59	5.30	7.80	6.93	5.51	7.23
Financials	512	4.44	2.38	1.59	2.46	2.30	2.64
Health Care	166	6.42	2.51	3.77	4.20	4.02	4.18
Industrials	383	6.71	2.89	5.80	7.82	7.76	6.20
Information Technology	240	3.24	0.96	7.44	7.98	6.49	5.22
Materials	211	9.90	7.45	9.08	9.21	9.55	9.04
Other (Non-stock-listed Companies)	74	NA	NA	NA	-2.74	-0.67	-1.71
Telecommunication Services	61	8.53	4.20	8.06	11.57	7.71	8.02
Utilities	101	12.84	9.92	12.22	14.48	12.63	12.42

Table 7
T-tests CSRR performance

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	A.EXP - A.PERF	-40.89	32.16	.65	-42.16	-39.62	-62.90	2446	.00
Pair 2	B.EXP - B.PERF	-36.00	20.08	.41	-36.80	-35.21	-88.69	2446	.00
Pair 3	C.EXP -C.PERF	-33.73	22.55	.46	-34.63	-32.84	-73.99	2446	.00
Pair 4	D.EXP -D.PERF	-48.18	31.58	.64	-49.43	-46.93	-75.47	2446	.00
Pair 5	E.EXP - E.PERF	-34.42	23.87	.48	-35.37	-33.48	-71.33	2446	.00
Pair 6	F.EXP - F.PERF	-17.07	25.04	.51	-18.06	-16.08	-33.72	2446	.00
Pair 7	G.EXP - .PERF	-74.00	29.55	.60	-75.17	-72.82	-123.87	2446	.00

	One Sample Test					
	Test Value = 1				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
A.hyp0	-63.1	2446	.00	-.42	-.44	-.41
B.hyp0	-81.2	2446	.00	-.51	-.52	-.50
C.hyp0	-74.7	2446	.00	-.37	-.38	-.36
D.hyp0	-74.8	2446	.00	-.52	-.53	-.51
E.hyp0	-73.0	2446	.00	-.48	-.49	-.46
F.hyp0	-32.9	2446	.00	-.31	-.33	-.29
G.hyp0	-133.2	2446	.00	-.80	-.81	-.79
TOT.hyp0	-115.1	2446	.00	-.50	-.51	-.49