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Does the Stock Market Favor Socially Responsible Firms? Evidence from SEOs

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Several scholars have inferred that firms following principles of corporate social responsibility (CSR) exhibit features that differ from other firms. In this study, we examine how these features might influence market participants' preferences with regard to announcement effects of seasoned equity offerings (SEOs) and long-term stock performance. Our pioneering study advances the literature by classifying socially responsible firms into seven groups based on the major category of their CSR activities. Overall, we find that socially responsible firms generate less negative announcement returns in comparison to non-CSR firms on the issuance of SEOs, which suggests that return premiums yield lower discounts for socially responsible firms during SEO events. Furthermore, our findings show that during the announcement period market participants respond favorably to socially responsible firms that focus on environment, community, and governance. Nevertheless, the long-term market performance of socially responsible firms and non-CSR firms is generally similar and differences in abnormal returns are insignificant.

Keywords: corporate social responsibility, long-term performance, rate of return, seasoned equity offerings, SEO announcements

JEL classification: G11, G14, G32

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1 Introduction

Corporate Social Responsibility (CSR) has become a focal point for both business and society over the past few decades. Several scholars have proposed that modern corporations, while pursuing profit maximization for their shareholders, should simultaneously take into account the interests of other stakeholders. According to Carroll (1991), CSR can be defined as a pyramid with four layers: economic (maximizing stakeholders' wealth or value); legal (complying with all governmental laws and regulations); ethical (following the acceptable behavior approved by the stakeholders); and philanthropic (providing feedback to society). The fact that a growing number of modern corporations are making commitments to CSR provides the inspiration for this study.

At the same time, scholars have also been investigating issues related to the financial performance of CSR firms (Fry, Keim, and Meiners, 1982; McGuire, Sundgren, and Schneeweis, 1988; Brown and Perry, 1994; Campbell, 2007). In a survey conducted by Margolis, Elfenbein, and Walsh (2007), 167 studies were systematically reviewed in order to investigate the relationship between corporate social performance (CSP) and corporate financial performance (CFP). These authors confirmed that a positive relation exists between CSP and CFP. Nevertheless, the causality or association between CSP $\rightarrow$ CFP or CFP $\rightarrow$ CSP remains unclear and deserves further investigation. Firms may immerse themselves in corporate social activities in order to ensure positive financial performance in the future. Kelly (2004) suggests that investors might perceive CSR firms favorably and consider these firms to be "future winners" in the stock market. However, opponents of CSP practices might follow Margolis, Elfenbein, and Walsh (2007), who claim that this behavior might be *a waste of free cash flows*. Others have concentrated on the CFP $\rightarrow$ CSP relation. Their findings suggest that there is a stronger positive effect when CSP is defined by third party audits and when CFP is determined prior to CSP.

In this paper, we seek to contribute to the CSR literature by investigating how firms' commitment to CSR activities causes market participants to recognize these firms' good deeds, which then might lead to better CFP. Instead of focusing on definitions of CSR, or answering questions concerning the implementation of CSR strategies, we examine the following question: Do market investors treat CSR firms differently than non-CSR firms during significant corporate decisions? We use one of the most commonly imple-

mented practices, seasoned equity offerings (SEOs), to investigate this question. We postulate that CSR firms may be linked to higher ethical standards, which mitigate the underperformance of CSR firms around the announcement of SEOs. This reduced level of underperformance subsequently implies that market participants have not only recognized CSR firms, but also reflects the market perspective on the short-term performance of CSR firms around SEO announcements. This study also contributes to the literature by further classifying CSR firms into seven CSR "focuses" according to their practical strength in different CSR activities, which include an Environment Focus (ENV), a Community (COM) Focus, an Employee (EMP) Focus, a Diversity (DIV) Focus, a Product (PRO) Focus, a Governance (GOV) Focus and a Human Rights and Others (OTH) Focus. The design of the Focus dummy allows us to measure the resources that a firm is willing to invest.

The remainder of this article is organized as follows. Section 2 reviews the extant literature in this field. Section 3 describes the sample data and the research methodology. Section 4 reports and explains the results of our empirical analyses. Section 5 concludes with a discussion of the key findings of our study and some implications.

2 Literature Review

Several theoretical studies have argued that CSR can be rationalized as a result of asymmetric information in financial or labor markets. Fombrun and Shanley (1990) propose that firms may use CSR as an informational signal upon which stakeholders can base their judgments regarding firm quality or reputation. Indeed, after the financial scandals involving firms such as Enron, Tyco, and WorldCom, public companies have been under increased pressure to meet investors' expectations, and become more responsible for the firm's decision-making procedures and executives' behavior. Fisman, Heal, and Nair (2006) showed that CSR might act as a credible signal of firms' trustworthiness in providing quality products. Similarly, CSR might take the form of reputational capital, which can be a valuable asset to firms in certain instances. However, when does this reputational symbol realize added economic value and through which channels? In this study, we argue that the informational signal of being a CSR firm and revealing firms' efforts in committing to various CSR activities may not only be recognized by market investors in the event of SEOs, but will also be offered higher premiums in comparison to their non-CSR peers.

Ritter (2003) mentioned that the announcement effect in SEOs might represent indirect costs for issuing firms. Thus, the market reaction to an announcement may be due to information efficiency or the adverse selection effect. Ritter also reported that previous studies have found that SEO events generally show a negative announcement effect (on average −2%) and long-term underperformance (Myers and Majluf, 1984). Ritter also echoes a point made in other studies, which is that under certain circumstances, market reactions to SEO events are less negative in the short-term, particularly for firms that are entering the expansion phase in the business cycle, but also have higher investment opportunities, lower adverse selection costs, and less information asymmetry (Korajczyk, Lucas, and McDonald, 1991; Choe, Masulis, and Nanda, 1993; Jung, Kim, and Stulz, 1996; Houston and Ryngaert, 1997). Researchers have also offered explanations regarding the long-term underperformance of firms after SEOs. According to Ritter (2003), this may be due to a poor empirical model, higher liquidity (which leads to lower risk), overoptimistic investors and managers, and potential window dressing prior to SEOs (Loughran and Ritter, 1997; Fama, 1998; Rangan, 1998; Teoh, Welch, and Wong, 1998a; Teoh, Welch, and Wong, 1998b; Eckbo, Masulis, and Norli, 2000; Jegadeesh, 2000; Denis and Sarin, 2001; Heaton, 2002).

Several studies have also focused on lines that are similar to CSR, such as socially responsible investments (SRI), which are funds that are portfolios of CSR firms' stocks. Sparkes and Cowton (2004) reviewed the development of socially responsible investments and their association with firms' adoption of CSR. They concluded that SRIs have gradually become a more typical type of investment due to the increasing number of retail SRI funds, the involvement of institutional investors, and shareholder resolutions. In addition, these authors pointed out that SRI funds may initially exclude firms that are considered to be "unethical" from their investment portfolios, but these funds tend to adopt the "threshold acceptance" approach rather than "strict binary" propositions. Furthermore, the involvement of institutional investors in SRI funds becomes more important in monitoring companies undertaking CSR, which is another reason for the growing number of SRIs. Interestingly, Sparkes and Cowton also called attention to the fact that previous studies have found that investors are not only willing to accept lower expected returns from SRI funds, but also that SRI funds may emerge with lower expected risk-adjusted returns (Lewis and Mackenzie, 2000; Sparkes, 2003). However, if there are a large number of pension funds involved in

SRI investments, the empirical results may be different.

Galema, Plantinga, and Scholtens (2008) applied KLD Social Index data from 1992 to 2006 in their examination of market performance and the risks linked with SRI. Additionally, these authors attempted to measure the Fama and French (1993) three-factor and the Carhart (1997) four-factor models' alphas, and thus formed 12 portfolios based on six SRI dimensions. They found that while SRI does not increase the number of positive returns in comparison to non-SRI stock, it does have a lower B/M ratio. Moreover, the authors also claimed that SRI stocks with positive scores in terms of diversity, environment, and product generate a significant and positive association with stock returns.

Renneboog, Horst, and Zhang (2008) offered a thorough literature review on SRI and CSR. They pointed out that some studies have proposed that SRI investors are willing to accept "suboptimal" contracts (not equal to traditional risk-return optimization) when considering both SRI and CSR (Bollen, 2007). In fact, this acceptance may be the reason behind SRI growth, even though their risk-adjusted returns are lower than those of conventional funds. Renneboog and his co-authors further confirm the theory that SRI funds may be less volatile than conventional funds, which also implies that SRI is less sensitive to money flows. These authors also found that investors were unable to select outperforming SRI funds and paid higher costs (with lower risk adjusted returns emerging) for corporate governance and social screening. They also observe that a considerable number of studies fail to see any significant benefit for firms that undertake CSR (Friedman, 1970; Baumol, 1991; Tirole, 2001; Shleifer, 2004; Barnea and Rubin, 2010).

However, numerous studies support CSR (Bagnoli and Watts, 2003; Orlitzky, Schmidt, and Rynes, 2003; Heal, 2005; Allen, Carletti, and Marquez, 2007; Besley and Ghatak, 2007). Moreover, Hillman and Keim (2001) claimed that while stakeholder value is aligned with shareholder value, particularly when CSR is highlighted, "social issue participation" might have a negative impact on share value. Comparing the abnormal returns between SRI and non-SRI firms, Hamilton, Jo, and Statman (1993) found that SRIs with a shorter history underperformed in comparison to non-SRI funds between 1981 and 1990 (−0.28% vs. −0.04% monthly). Goldreyer, Ahmed, and Diltz (1999) confirmed a negative alpha for 29 SRI funds and a positive alpha for non-SRI funds, although the differences were insignificant. However, SRIs that adopt "positive" screening outperformed their peers.

Additionally, while Statman (2000) did not find a significant difference in monthly alpha between SRI (−0.42%) and non-SRI funds (−0.62%) in the US from 1990 to 1998, Geczy, Stambaugh, and Levin (2006) found that the expenses were higher for SRI funds than for non-SRI funds. However, while the performance was higher, it was not significant.

Moreover, Renneboog, Horst, and Zhang (2008) examined the performance of SRI funds and compared them to the performance of non-SRI funds from seventeen countries between 1991 and 2003. They found that in the major markets that they sampled (UK, US, and several European and Asian countries), SRI funds significantly underperformed compared to non-SRI funds, with the abnormal return ranging between −2.2% to −6.5%. These authors also find that investors are not only unable to select outperforming SRI funds, but also that higher costs are paid (with lower risk adjusted returns emerging) for corporate governance and social screening.

Other researchers have shown that the market generally does not differently value firms practicing or perceived to be practicing CSR. Consolandi et al. (2009) invited a group of students from one university to participate in an experiment in portfolio selection between 2007 and 2008. The experimenters provided the participants with information on the expected returns of certain stocks as well as whether these firms were included in an ethical index. Results of the experiment indicated that participants still reacted rationally when making investment decisions based on risk-return correlations.

Linthicum, Reitenga, and Sanchez (2010) looked at the performance of a group of Arthur Anderson (AA) clients (147 firms) between 2001 and 2002, and compared these firms to non-AA firms (matched) that belonged to the KLD index after the Enron scandal. They concluded that involvement in CSR did not help AA's clients improve their market performance after Enron's failure. In addition, these authors claimed that the reputation of being socially responsible did not save client firms in the crisis and that there is no association between CSR and firm value.

Yet, to some extent, many investors and the market in general may still recognize CSR firms as "good/quality firms." In other words, information asymmetry might be lower for CSR firms, especially when they are recognized and included in a so-called CSR index. Thus, the information asymmetry hypothesis has long been applied to different corporate events, such as the announcement effect and underpricing issues in IPOs and SEOs. In fact, Booth and Smith (1986) developed a theory regarding the role of the

underwriter in certifying uncertain issue prices that may potentially signal adverse inside information. This theory further indicates that the use of reputational capital might guarantee product quality.

The certification hypothesis has also been applied in the analysis of many different corporate events, including announcement effects, issue underpricing, the choice of competitive versus negotiated underwriting, and the level of underwriter compensation as a function of firm-specific information. McLaughlin, Safieddine, and Vasudevan (2000) examined whether reputable investment bankers mitigate information asymmetry problems faced by outsiders when conducting equity offerings. They found a positive relation between an investment banker's reputation and announcement period returns when conducting SEOs. Furthermore, few studies on SRI (socially responsible investments) have found significant long-term differences between SRI and non-SRI funds over an extended period of time.

Several scholars have found that the market may hold diverse viewpoints regarding firms with different attributes. Thus, we postulate that the inclusion of firms in a CSR index might indicate more transparent information, which illustrates a reputational/certification effect, but also, to a certain extent, may help contribute to the firms' recognition in terms of SEO events, at least in short-term announcement periods. Therefore, this study contributes to the literature by being the first attempt to distinguish between the different CSR focuses that firms may choose to pursue. We argue that, to some extent, market participants may recognize a particular aspect of CSR rather than CSR as a whole. In addition, we propose that CSR firms that allocate more resources and show a higher degree of commitment to a specific focus may receive more credit from investors in terms of SEOs. Our investigation of seven focuses of CSR broadens the literature on CSR and firm's stock performance in SEO events.

3 Data and Methodology

3.1 Data

Various organizations (e.g., KLD Research and Analytics, *Business and Ethics Magazine*, BITC Corporate Responsibility Index, Oekom-Corporate Responsibility Ratings, Innvovest, CoreRating) have introduced CSR proxies (ratings) and indices. Firms appearing on these indices may serve as examples of efficient governance practices and have a high degree of participation

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in CSR activities. In the U.S. market, the MSCI KLD 400 Social Index is a well-known index of CSR firms. MSCI, a provider of investment indices, selects firms for inclusion in this index from the pool of firms listed in the MSCI USA Investable Market Index (USA IMI). Each firm has ratings on environmental, social, and governance topic areas. According to the definitions found in the MSCI ESG STATS ratings, these topic areas comprise several categories: environment, community, human rights, employee relations, diversity, product and governance. This index is revised every quarter, and market participants are able to trace the performance of the MSCI KLD 400 index through databases including CRSP and Compustat. Hence, we believe this index serves as a pertinent proxy for CSR in our study.

To collect our data sample, we first downloaded all seasoned equity offerings for stocks traded on the NYSE, AMEX, and NASDAQ between 1991 and 2008 from SDC. Then we filtered the data using the following criteria: 1) the firms must be covered by CRSP; 2) multiple SEOs within 3 years must be excluded to avoid double calculation of long-term stock returns; 3) relevant data must be available (including financial information and market information) in COMPUSTAT; 4) CSR firms must be part of the MSCI KLD 400 Social Index. The screening whittled the final sample down to 190 CSR firms.

In addition, to assess the performance of short-term announcements and long-term performance, abnormal returns were compared to non-CSR peers. Matched peer firms were selected according to size (market capitalization at the beginning of SEO month) and the book to market ratio as well as the industry effect (1-digit SIC code).[1] The matched peers also needed to have SEO events available to compute abnormal returns.

Table 1 presents the distribution of the sample events for CSR firms, spreading across different industries, according to SIC codes. The majority of the SEO events occurred in the manufacturing industry, which consisted of firms belonging to SIC codes 2 and 3 (68 firms). The mean annual sales for these firms were $4,186.24 million, while the median sales were lower, around $1,857.72 million. Gross proceeds from the SEOs averaged $374.92 million. In fact, since the number of observations from the manufacturing industry dominated the sample, the mean and median of the annual sales

[1] In the robustness test, we further limited the matching peer firms to those that conducted SEOs within the same year as the CSR firms. There were a total of 115 pairs. Results are available upon request.

Table 1: Mean and median sales, gross proceeds (sample offers categorized by industry)

Industry	SIC codes	No. of Obs.	Annual sales $ millions Mean	Annual sales $ millions Median	Gross Proceeds $ millions Mean	Gross Proceeds $ millions Median
Agriculture, Forestry, and Fishing	**0**	**0**	—	—	—	—
Mining and Construction	**1**	**14**	**1,846.36**	**821.12**	**290.68**	**193.45**
Oil and Gas Extraction	131,138	11	1,129.63	679.09	253.32	210.50
Other firms		3	4,474.37	2,091.70	427.68	96.95
Manufacturing	**2,3**	**68**	**4,186.24**	**1,857.72**	**374.92**	**163.55**
Food and Kindred Products	201–209	7	7,621.21	9,112.27	426.61	403.93
Paper and Paper Products	241–249					
	251–259					
	262–267,					
	271–278	7	2,887.01	1,553.96	160.53	134.48
Chemicals and Allied Products	281–289	8	3.169.71	2,363.88	513.65	394.42
Manufacturing	301–349	10	6,753.90	6,491.00	553.41	376.59
Industrial and Commercial Machinery						
and Computer Equipment	351–359	8	5,330.91	2,606.05	640.77	308.84
Electronic Equipment	361–369	12	1,038.87	612.77	275.03	123.03
Transportation Equipment	371–379					
	394–399	5	2,950.05	2,734.47	253.22	144.00
Scientific Instruments	381–387	5	8,220.97	4,134.10	305.18	410.00
Other firms		6	1,206.38	1,088.93	87.18	67.19
Transportation, Communications,						
Electric, Gas, and Sanitary Service	**4**	**39**	**3,940.80**	**1,313.61**	**205.17**	**117.00**
Transportation	401					
	411,414					
	421,422					
	441–449					
	451,452	9	8,623.15	2,975.30	413.03	209.25
Communications	481–489	6	3,138.49	2,858.85	209.61	155.27
Other firms		24	2,385.49	1,049.62	126.12	99.60
Wholesale and Retail Trade	**5**	**16**	**9,058.62**	**5,387.57**	**198.44**	**165.08**
Durable Goods	501–509	3	10,231.81	8,679.31	254.67	255.20
Retail	531–539					
	541–549					
	561–569					
	571–573					
	591–599	7	11,051.79	4,184.47	220.24	136.00
Eating and Drinking Places	581	0	—	—	—	—
Other firms		6	6,146.68	4,698.04	144.88	110.19

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Industry	SIC codes	No. of Obs.	Annual sales $ millions Mean	Annual sales $ millions Median	Gross Proceeds $ millions Mean	Gross Proceeds $ millions Median
Finance, Insurance, and Real Estate	**6**	**41**	**9,873.81**	**4,245.40**	**1,062.48**	**229.25**
Financial Services	614–616					
	621,628					
	641					
	651–655	10	10,766.64	4,795.30	1,273.28	367.29
Other firms		31	9,576.21	4,144.93	994.47	228.00
Services	**7,8**	**12**	**1,413.74**	**749.91**	**92.18**	**54.49**
Entertainment Services	701					
	781–784					
	794–799	1	3,090.64	3,090.64	39.85	39.85
Business Services	731–739	8	1,559.78	749.91	98.52	54.49
Health Services	801–809	0	—	—	—	—
Engineering, Accounting, Research, Management, and Related Services	871–874	0	—	—	—	—
Other firms		3	465.35	178.55	92.72	108.80
All firms		190	5,402.43	1,908.85	449.52	153.19

Note: Table 1 presents the distribution of the sample events for CSR firms across different industries according to SIC codes.

and gross proceeds of the sample firms (mean annual sales: $5,402.43 million; mean gross proceeds: $449.52 million) were close to the mean and median of the manufacturing industry. Furthermore, the retail industry presented the highest mean in annual sales ($9,058.62 million) (excluding finance, insurance and real estate).

3.2 Subsample Proxies for CSR firms: The ENV, COM, EMP, DIV, PRO, GOV, and OTH Focuses

To investigate CSR activities in greater depth, we classified CSR firms into seven *Focuses* according to the major category of their CSR commitments. To assign each CSR firm to a specific focus, we first computed the ratio of strengths (concerns) to the number of total strengths (concerns) for each CSR firm in each category. We then took the difference between the two ratios in each category. This value was designated as the *predummy value*. When the predummy value was positive, it showed that the firm had strengths that outweighed concerns for that particular category. We further

compared the predummy value in each category for each firm. The proxy with the highest ratio in estimated predummy values represented the CSR focus of that particular firm. Therefore, each CSR firm was assigned seven predummy values, and these were allocated in a specific *Focus* under the highest predummy value.

$$\text{predummy value} = \frac{\text{number of strength classified as l}}{\text{total number of strengths}} - \frac{\text{number of concerns classified as l}}{\text{total number of concerns}}.$$

The highest and most positive predummy value was also assigned a dummy, denoted as *Focus*, which equaled 1, while others were 0. The seven focuses were ENV (environment), COM (community), EMP (employee relations), DIV (diversity), PRO (product), GOV (governance), and OTH (human rights and others). Each focus was a construct formed from several indicators. ENV consisted of beneficial products and services, pollution prevention, recycling, clean energy, and environment management systems. COM included charitable and innovative giving (e.g., 25% or more of its charitable giving to support NGOs). GOV included reporting quality and firms' public policy support. DIV consisted of representation, board of directors, employee benefits, women and minority contracting, and other firm efforts to promote diversity in its workforce. EMP included indicators such as unions and employee bonus programs. PRO consisted of quality, benefits to economically disadvantaged, and access to capital categories. OTH included indigenous people relations, human rights policies and others.

Overall, of the 190 CSR firms, 19 were designated ENV, 31 COM, 29 EMP, 39 DIV, 20 PRO, 16 GOV, and 36 were OTH.

3.3 Announcement-period Abnormal Returns

We followed the traditional market model to estimate the short-term announcement reaction in the market, with (−90 to −210) days prior to the SEO event as the estimation period.[2] We specified the following model:

$$E\left(R_{jt}\right) = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}, \tag{1}$$

[2]We tried different durations, from 120 to 255 days, for the estimation period. The pattern was consistently the same for both CSR firms and non-CSR firms in the CAR (−1,0) window.

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where R_{jt} is the rate of return of the common stock of the j^{th} firm on day t; R_{mt} is the rate of return of a market index on day t; ε_{ji} is a random variable that, by construction, must have an expected value of zero, and is assumed to be uncorrelated with R_{mt}, uncorrelated with R_{kt} for $k \neq j$, not auto correlated, and homoskedastic. j is a parameter that measures the sensitivity of R_{jt} to the market index. We define the abnormal return (or prediction error) for the common stock of the j^{th} firm on day t as follows:

$$A_{jt} = R_{jt} - \left(\hat{\alpha}_j + \hat{\beta}_j R_{mt}\right),$$

where the coefficients $\hat{\alpha}_j$ and $\hat{\beta}_j$ are ordinary least squares estimates of α_j and β_j. The average abnormal return AR_t is the sample mean.

$$AR_t = \frac{\sum_{j=1}^{N} A_{jt}}{N},$$

where t is defined in trading days relative to the event date. The cumulative average abnormal returns is

$$\mathrm{CAR}_{T1,T2} = \sum_{t=T1}^{T2} AR_t, \tag{2}$$

where $\mathrm{CAR}_{T1,T2}$ is the cumulative average abnormal return over an interval of two or more trading days beginning with day T1 (e.g. -1 day prior to the SEO event), and ending with T2 (e.g. the day 0, event day).

3.4 Long-term Stock Performance

We also measured CSR firms' stock performance subsequent to SEOs. In order to assess long-term abnormal returns, the non-CSR control group was again matched with market capitalization at the beginning of the month when an SEO commences, as well as the B/M ratio and 1-digit SIC code.

We employed four well-known methodologies: (1) cumulative average abnormal return, (2) buy-and-hold abnormal return, (3) Fama and French (1993) three-factor model and (4) Carhart (1997) four-factor model.

The aforementioned methods are explained in detail in the following sections.

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3.5 Cumulative Average Abnormal Returns

The cumulative mean abnormal return at month T (CAR_T), was defined as the sum of monthly abnormal returns over T months. The cumulative mean abnormal returns (CAR) were defined as

$$\mathrm{CAR}_T = \sum_{i=0}^{T} \left[\frac{1}{N} \sum_{t=1}^{N} \left(R_{i,t} - R_{benchmark,t} \right) \right], \tag{3}$$

where $R_{i,t}$ and $R_{benchmark,t}$ is corresponding return of control-firm.

3.6 Buy-and-Hold Abnormal Returns

The 'buy-and-hold abnormal return' (BHAR) was calculated following Barber and Lyon (1997) and Mitchell and Stafford (2000). Therefore, the long-term mean BHAR on security i, over holding period, T, was defined as follows:

$$\mathrm{BHAR}_T = \frac{1}{N} \sum_{i=1}^{N} \left[\prod_{t=0}^{T} \left(1 + R_{i,t} \right) - \prod_{t=0}^{T} \left(1 + R_{benchmark,t} \right) \right], \tag{4}$$

where $R_{i,t}$ is the monthly raw return for firm i in month t; and $R_{benchmark,t}$ is the monthly benchmark raw return for month t. The benchmark is as previously defined. Furthermore, the skewness-adjusted transformed normal test (Hall, 1992; Lyon, Barber, and Tsai, 1999) is employed to mitigate the biased t-statistics and hence avoid any potential biases caused by the compounding effect.

3.7 The Fama-French Three-factor Model and Carhart Four-factor Model

The three-factor model regression is shown in Equation 5.

$$R_{p,t} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft} \right) + s_p \mathrm{SMB}_t + h_p \mathrm{HML}_t + \varepsilon_{p,t}, \tag{5}$$

where $R_{p,t}$ is the return on portfolio p in month t; R_{ft} is the return on one-month T-bills in month t; R_{mt} is the return on the market index in month t; SMB_t is the difference in the returns on a portfolio of small and big stocks in month t; and HML_t is the difference between portfolios of high to low book-to-market stocks in terms of the returns accrued in month t, and $\varepsilon_{p,t}$

is the error term for portfolio p in month t. The intercept coefficient α_p tests the null hypothesis that the average abnormal return is zero.

The Carhart (1997) four-factor model includes the three factors of the Fama and French (1993) model and a momentum factor used by Carhart (1997), using a calendar-time portfolio approach. Portfolios of equity offerings are formed monthly, in calendar time. The estimated long-term market performance was calculated according to Equation 6.

$$R_{p,t} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft}\right) + s_p \mathrm{SMB}_t + h_P \mathrm{HML}_t + p_p \mathrm{PR1YR}_t + \varepsilon_{p,t}, \quad (6)$$

where $R_{p,t}$, R_{ft}, R_{mt}, SMB_t, HML_t and $\varepsilon_{p,t}$ are defined as in Eq. (5), $\mathrm{PR1YR}_t$ is the difference in the returns of a portfolio of prior-year high return stocks and prior-year low return stocks in month t.

4 Empirical Results

4.1 Post-SEO Performance of CSR and Non-CSR Firms

Table 2 presents some descriptive characteristics of CSR firms and contrasts them with non-CSR firms. On average, both the total assets and the market value of non-CSR firms were larger than they were for CSR firms (the total assets were $27,310.67 million for CSR firms and $46,443.42 million for non-CSR firm; the market value was $8,548.60 million for CSR firms and $8,810.33 million for non-CSR firms). However, sales growth was slightly higher for CSR firms (16.41%) than for non-CSR firms (15.39%).

Table 3 presents the statistics on short-term market performance around SEO events for both CSR and non-CSR firms. Panel A presents results of the market-adjusted returns and Panel B contains the results of the market model. Overall, the results for the two peer groups were consistent with past findings in SEO literature (i.e., Teoh, Welch, and Wong (1998a); and Wong, 1998a; Teoh, Welch, and Wong (1998b)), which showed that there are significant negative abnormal returns surrounding an SEO issue.

Although the mean CAR for all of the windows still generated negative results, the magnitude was significantly lower than it was for non-CSR peers for the majority of the windows. In Panel A, for CSR firms, the negative abnormal returns ranged from −0.56% for the (−1, −1) window, −0.67% for (0,0), −1.24% for (−1,0), to −1.41% for the (−3,0) window. As for non-

Table 2: Descriptive statistics of firm groups, 1991–2008 (in millions, US dollars)

Descriptive Statistics	No. of Obs.	CSR firms Mean	Median	Minimum	Maximum	No. of Obs.	Non-CSR firms Mean	Median	Minimum	Maximum
Total Assets	189	27,310.67	3,234.17	12.07	1,562,147.00	185	46,443.42	2,333.66	12.15	1,715,746.00
Book Value	189	2,697.38	827.60	−2,700.04	123,221.00	185	4,232.98	588.54	−17,311.00	142,394.00
Market Value	190	8,548.60	1,889.44	56.18	385,384.83	190	8,810.33	1,873.93	52.85	445,760.67
Sales Growth	173	0.1641	0.0671	−1.0503	3.3189	161	0.1539	0.0512	−0.6394	1.9249

Note: Table 2 presents some basic characteristics of CSR and non-CSR firms. On average, both the total assets and the market value of non-CSR firms were larger than they were for CSR firms (the total assets were $27,310.67 million for CSR firms and $46,443.42 million for non-CSR firms; the market value was $8,548.60 million for CSR firms and $8,810.33 million for non-CSR firms.). However, sales growth was 16.41% for CSR firms and 15.39% for non-CSR firms.

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Table 3: Announcement returns of SEOs, 1991–2008

Panel A. Announcement Cumulative Returns Measured by Market-Adjusted Returns

Holding Period	No. of Obs.	CSR firms (sample firms) Mean CAR	t-stat.	Sign z-stat.	No. of Obs.	Non-CSR firms (control firms) Mean CAR	t-stat.	Sign z-stat.	Difference (sample-control) Mean	t-stat
(−1, −1)	190	−0.56%	−2.364**	−1.827*	190	−0.64%	−2.841**	−3.729***	0.07%	0.22
(0,0)	190	−0.67%	−2.373**	−2.698***	190	−1.60%	−4.165***	−4.019***	0.93%	1.94**
(−1,0)	190	−1.24%	−3.176***	−3.133***	190	−2.24%	−4.427***	−4.890***	1.00%	1.57
(−3,0)	190	−1.41%	−2.904***	−2.988***	190	−2.36%	−3.603***	−5.470***	0.95%	1.17

Panel B. Announcement Cumulative Returns Measured by Market Model Returns

Holding Period	No. of Obs.	CSR firms (sample firms) Mean CAR	t-stat.	Sign z-stat.	No. of Obs.	Non-CSR firms (control firms) Mean CAR	t-stat.	Sign z-stat.	Difference (sample-control) Mean	t-stat
(−1, −1)	190	−0.65%	−2.727***	−1.606	190	−0.69%	−3.247***	−3.215***	0.04%	0.12
(0,0)	190	−0.69%	−2.525***	−3.349***	190	−1.72%	−4.735***	−4.377***	1.03%	2.26***
(−1,0)	190	−1.34%	−3.621***	−3.349***	190	−2.41%	−5.146***	−5.684***	1.07%	1.79*
(−3,0)	190	−1.56%	−3.412***	−3.204***	190	−2.86%	−4.676***	−5.539***	1.30%	1.70*

Note: We followed the traditional market model to estimate the short-term announcing stock reaction in the market. The model was specified as follows:

$$E\left(R_{jt}\right) = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt},$$

where R_{jt} is the rate of return of the common stock of the j^{th} firm on day t; R_{mt} is the rate of return of a market index on day t; ε_{jt} is a random variable that, by construction, must have an expected value of zero, and is assumed to be uncorrelated with R_{mt}, uncorrelated with R_{kt} for $k \neq j$, not autocorrelated, and homoskedastic. β_j is a parameter that measures the sensitivity of R_{jt} to the market index. We define the *abnormal return (or prediction error)* for the common stock of the j^{th} firm on day t in the following equation:

$$A_{jt} = R_{jt} - \left(\hat{\alpha}_j + \hat{\beta}_j R_{mt}\right),$$

where the coefficients $\hat{\alpha}_j$ and $\hat{\beta}_j$ are ordinary least squares estimates of α_j and β_j. The average abnormal return AR_t is the sample mean:

$$AR_t = \frac{\sum_{j=1}^{N} A_{jt}}{N},$$

where t is defined in trading days relative to the event date. The cumulative average abnormal returns were also calculated:

$$\mathrm{CAR}_{T1,T2} = \sum_{t=T1}^{T2} AR_t,$$

where $\mathrm{CAR}_{T1,T2}$ is the cumulative average abnormal return over an interval of two or more trading days beginning with day $T1$, and ending with $T2$. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

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CSR firms, there were negative abnormal returns around SEOs in all windows as well (ranging from −0.64% for the (−1, −1) window to −2.36% for the (−3,0) window). Panel B also shows similar results. Thus, the short-term performance of non-CSR firms was more distressed in comparison to CSR firms under both the market adjusted and market models. Table 3 also shows the difference in CARs between CSR and non-CSR firms around SEO events. We found that firms that did not adopt CSR may have suffered from distressed market performance around SEO events in the short-term. Under the market-adjusted model in Panel A, the average CAR in the (0,0) window is 0.93% higher for CSR firms than for non-CSR firms. Again, the results for CARs were significantly higher for CSR firms compared to their peers under the market model in Panel B (1.03% for window (0,0), 1.07% for window (−1,0), and 1.30% for window (−3,0); all were significant at 1% or 10% level).

The results in Table 3 can be interpreted in two ways. First, as proposed by Gelb and Strawser (2001), firms undertaking corporate social responsibility may have better and increased information disclosure. Moreover, increased quality of information disclosure around an SEO event may also be associated with a lower degree of underperformance. If firms committed to CSR are considered fair, and possess enhanced information disclosure quality, then the results with lower percentages of negative CARs for CSR firms actually corroborate the arguments presented in the two studies mentioned above. Secondly, the compelling results of lower underperformance for CSR firms surrounding SEO announcements may imply that market participants recognized the efforts of CSR firms to be socially responsible, thus leading to less negative CARs.

To further distinguish the attributes of CSR that might attract investors around SEOs, we developed the predummy value method to place each CSR firm into one of seven categories. Table 4 presents the CARs for CSR firms classified according to the seven focuses. From Panel A, we can see that the ENV and COM firms generally performed less negatively in comparison to their non-CSR peers. For the ENV group, in the window (−1,0) there was an average −0.43% CAR, while their non-CSR peers generated −2.97% CAR. The ENV group outperformed its peers by 2.54% (T-stat: 2.03) in window (−1,0). For the COM group, in the window (−1,0) there is average −1.01% CAR for CSR firm, and their non-CSR peers generated −3.26% CAR. The COM group outperformed its peers by 2.26% (T-stat: 1.93) in window (−1,0). In Panel B, for CAR (−3,0) window, the GOV group

Table 4: Announcement abnormal cumulative returns of SEOs for seven CSR focuses measured by market model returns, 1991–2008 — CSR firms in comparison to non-CSR Firms

Panel A. Holding Period: CAR (−1,0)

	No. of	CSR firms			No. of	Non-CSR firms			Difference (CSR - Non-CSR)	
CSR Categories	Obs.	Mean CAR	t-stat.	Sign z-stat.	Obs.	Mean CAR	t-stat.	Sign z-stat.	Mean	t-stat
Environment (ENV)	19	−0.43%	−0.760	−2.332**	19	−2.97%	−2.666***	−1.448	2.54%	2.03**
Community (COM)	31	−1.01%	−1.472	−2.406**	31	−3.26%	−3.451***	−3.099***	2.26%	1.93*
Employee (EMP)	29	−2.52%	−2.202**	−2.516**	29	−1.42%	−1.090	−2.961***	−1.10%	−0.64
Diversity (DIV)	39	−2.02%	−1.667*	−1.559	39	−4.13%	−3.884***	−2.736***	2.12%	1.31
Product (PRO)	20	−0.21%	−0.185	1.557	20	1.25%	0.501	1.113	−1.46%	−0.53
Governance (GOV)	16	−1.42%	−1.343	−0.830	16	−3.50%	−4.000***	−2.822***	2.09%	1.52
Others (OTH)	36	−1.08%	−2.114**	−1.053	36	−1.45%	−1.820*	−0.402	0.36%	0.38

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Panel B. Holding Period: CAR: (−3,0)

QIA Categories	No. of Obs.	CSR firms Mean CAR	t-stat.	Sign z-stat.	No. of Obs.	Non-CSR firms Mean CAR	t-stat.	Sign z-stat.	Difference (CSR - Non-CSR) Mean	t-stat
Environment (ENV)	19	0.40%	0.399	−0.036	19	−1.25%	−0.809	−0.529	1.65%	0.90
Community (COM)	31	−1.55%	−1.916*	−1.687*	31	−4.65%	−3.713***	−3.458***	3.10%	2.08**
Employee (EMP)	29	−2.26%	−1.723*	−1.772*	29	−1.02%	−0.480	−1.475	−1.23%	−0.49
Diversity (DIV)	39	−2.24%	−1.498	−2.841***	39	−4.35%	−4.086***	−3.057***	2.10%	1.14
Product (PRO)	20	−0.07%	−0.060	0.662	20	2.65%	0.829	−0.230	−2.73%	−0.79
Governance (GOV)	16	−1.48%	−1.188	−0.330	16	−6.26%	−4.555***	−2.322***	4.78%	2.58**
Others (OTH)	36	−2.36%	−2.844***	−2.722***	36	−2.82%	−3.678***	−3.071***	0.46%	0.41

Note: We classified our CSR samples into seven categories, or focuses from three pillars (Environment, Social and Governance) according to definitions in the MSCI ESG STATS ratings. In order to assign each CSR firm into a more specific focus, we first computed the ratio of strengths (concerns) to the number of total strengths (concerns) for each CSR firm in each category. Then we took the difference between the two ratios under each category. The value generated by the difference was designated as the predummy value. When the predummy value is positive, it shows that the firm has strengths that outweigh concerns for that particular category. We further compared the predummy value in each category for each firm. The proxy that had the highest ratio in estimated predummy value represents the focus of that particular firm. Therefore, each CSR firm was assigned seven predummy values, and these were allocated to a specific focus under the highest predummy value.

$$\text{predummy value} = \frac{\text{number of strength classfied as l}}{\text{total number of strength}} - \frac{\text{number of concerns classfied as l}}{\text{total number of concerns}}.$$

outperformed its peers by 4.78% (T-stat: 2.58). The COM group outperformed its peer by 3.10% (T-stat: 2.08). The CSR firms with COM and GOV focuses outperformed their non-CSR peers in the announcement period (−3,0) window.

Overall, the results in Table 4 confirm the results in Table 3, which show that in the short-term CSR firms emerged with less negative CARs during SEO events. This was particularly noticeable for CSR firms with the focuses ENV, COM, and GOV. These results are not surprising, since market participants may pay more attention to the welfare of a company's stakeholders. Moreover, stakeholders may also trade shares in the market, and hence are able to echo SEO events, based on their perception of a firm's CSR performance, particularly those that focus on activities related to the environment, community, and governance.

Table 5 shows how CSR firms are recognized in relation to non-CSR firms around SEO events.[3] After controlling for size, B/M ratio, capital expenditure, volatility, year dummy, and industry dummy, we found a significant positive association between the CSR dummy (The CSR dummy took the value of 1 if the sample firm was included in the MSCI KLD 400) and short-term abnormal returns. (Model 1: 0.0151, Model 2: 0.0157, Model 3: 0.0163, Model 4: 0.0166). Models 1 to Model 4 are different in terms of with or without controlling for the year effects or industry effects. These results are also consistent with the findings presented in Table 3. Furthermore, we narrowed down the sample into a subsample, in order to test which CSR focus outperforms non-CSR peers in terms of announcement returns in Model 5 to Model 7. According to the empirical results, which are shown in Table 4, only CSR firms with a focus on ENV, COM and GOV showed a significant difference in announcement returns around SEOs. We conducted a similar test in Model 5, Model 6, and Model 7 for the same three focuses and found that firms with a GOV focus exhibited less negative market reactions around SEO events. Among these three focuses, firms with a GOV focus showed a statistically significant positive association with announcing returns in comparison to non-CSR peers in further regression analysis. From the above results, we can conclude that

[3]To save space, we present regression results using CAR (−3,0) only. Results using CAR (−1,0) as a dependent variable showed consistent empirical findings that the CSR dummy variable was significant and positively associated with the announcing returns, but not all the models reached the significance level.

Table 5: Multivariate analyses on short-term stock performance

	Models: CAR(−3,0)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	−0.0105	−0.0067	−0.0420	−0.0361	0.1013	0.1793	−0.3699
	(−0.22)	(−0.13)	(−0.69)	(−0.57)	(0.66)	(0.61)	(−1.30)
	0.0151	0.0157	0.0163	0.0166			
	(1.78)*	(1.75)*	(1.90)*	(1.81)*			
ENV					0.0171		
					(0.73)		
COM						−0.0013	
						(−0.04)	
GOV							0.0747
							(1.93)*
SIZE	−0.0011	−0.0014	−0.0005	−0.0012	−0.0028	−0.0103	0.0111
	(−0.31)	(−0.39)	(−0.14)	(−0.30)	(−0.26)	(−0.56)	(0.61)
B/M	−0.0081	−0.0069	−0.0053	−0.0074	−0.1606	−0.1279	−0.0432
	(−0.67)	(−0.56)	(−0.39)	(−0.55)	(−0.16)	(−1.19)	(−0.34)
CAPX	0.0004	0.0014	−0.0007	0.0004	−0.0023	0.0153	0.0010
	(0.16)	(0.50)	(−0.24)	(0.13)	(−0.26)	(1.34)	(0.07)
Volatility	−0.0004	−0.3110	0.0428	0.3271	−1.7054	−0.9602	−1.6269
	(0.00)	(−1.47)	(0.21)	(1.51)	(−0.96)	(−1.40)	(−0.80)
Year dummy	No	Yes	No	Yes	Yes	Yes	Yes
Industry dummy	No	No	Yes	Yes	Yes	Yes	Yes
R-square	0.01	0.10	0.03	0.12	0.73	0.58	0.80
Obs.	319	319	319	319	38	42	30

Note: This table shows result using abnormal returns estimated from window (−3,0) regressed on independent variables, including the CSR dummy, SIZE, B/M, CAPX, Volatility, Year dummy and Industry dummy. The CSR dummy takes the value of 1 if the sample firm is included in the MSCI KLD 400. SIZE equals the natural logarithm of stock price multiplies shares outstanding at the first day of announcing month of SEO. B/M equals the book value of equity divided by the market value of equity at fiscal year end of $t-1$. CAPX is the natural logarithm of capital expenditure at the fiscal year end of $t-1$. Volatility is the standard deviation of daily close-to-close returns over past 30 to 11 days prior to the offer of SEO. Two dummy variables, year- and industry-dummy, vary across different models of specification. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

investors showed significant preference for CSR firms in the announcing period of SEOs. Moreover, Tables 4 and 5 show that there was a tendency for investors to favor the ENV, COM, and GOV categories. These three categories demonstrated the degree of CSR firms' information transparency and the relation of CSR firms to their various stakeholders and commitments such as community services, environment, and governance.

Our empirical results did not show significant differences in the EMP

category, which might be linked to recent legislation that has enforced reform of firms' compensation structure and reporting, which has narrowed the information transparency gap between CSR firms and non-CSR firms. Moreover, because these new rules are applicable to all publicly listed firms, these factors do not result in significantly different messages for CSR and non-CSR firms. In addition, due to regulatory reforms regarding compensation design and financial reporting, including the SEC compensation disclosure rule reforms of 2003 and 2006, the degree of information transparency in compensation design for public firms improved. Hence we did not find significant differences in terms of CAR for firms with this focus. As for the DIV category, the results might be explained by legislation that has protected minorities within firms' workforces, which is applicable to all firms. Interestingly, the market offers higher abnormal returns to non-CSR peers in the PRO category, but this is insignificant in comparison to CSR firms. However, within the seven CSR categories, firms that focus on the ENV and PRO activities generated relatively higher abnormal returns during the announcement period compared to other categories. Our findings imply that these two characteristics serve as important determinants in announcement period CARs.

Table 6 presents the empirical results of long-term cumulative abnormal returns and buy-and-hold returns (1 to 3 years) after SEOs by applying control-firm adjusted returns, and skewness T-statistics for robustness purposes. Table 6, Panel A, shows long-term performance measured by value-weighted market-adjusted returns and control-firm adjusted returns (matched by market capitalization at the beginning of the month when an SEO commences as well as B/M ratio and 1-digit SIC industrial code).

In Table 6, Panel A, we see that one year after SEO events CSR firms underperformed the market by −0.12%, and two years after SEOs CSR firms underperformed the market by −1.04%. Three years after SEOs CSR firms underperformed the market by −1.21%, which was not significantly different from zero. Similarly, one year after SEO events CSR firms underperformed their peers by −3.92%, two years after SEOs CSR firms underperformed their peers by −4.97%, and three years after SEOs CSR firms underperformed their peers by an even larger margin, −4.82%, which was not significantly different from zero.

We also report the long-term performance measured by the buy-and-hold abnormal returns of CSR firms in Table 6, and Panel B exhibits similar results to Panel A. In particular, with regard to the Value-Weighted Market-

Table 6: Long-term (three-year) stock performance measured by cumulative abnormal returns and buy-and-hold returns using different benchmarks, 1991–2008

	Panel A: Cumulative Abnormal Returns		Panel B: Buy-and-Hold Abnormal Returns	
Holding	Value-Weighted Market-Adjusted	Control-Firm-Adjusted	Value-Weighted Market-Adjusted	Control-Firm-Adjusted
period (Year)	Mean CAR	Mean CAR	Mean BHAR	Mean BHAR
1	−0.0012	−0.0392	−0.0171	−0.0495
	(−0.046)	(−1.236)	(−0.669)	(−1.476)
2	−0.0104	−0.0497	−0.0437	−0.0685
	(−2.282)*	(−1.082)	(−1.054)	(−1.145)
3	−0.0121	−0.0482	−0.0650	−0.1441
	(−0.287)	(−0.907)	(−1.005)	(−1.432)
N	190	190	190	190

Note: Long-term stock performance is measured by cumulative abnormal returns (CAR) and buy-and-hold abnormal returns (BHAR) using both value-weighted market index, and matched firms screened by size, book-to-market ratio and 1-digit SIC code as benchmarks. Holding-period stock returns are calculated for different post-offer period lengths, ranging from one to three years, with our computation of the returns based on the CRSP monthly returns file. CAR_T, the cumulative mean abnormal return at month T, is defined as the sum of monthly abnormal returns over T months. The cumulative mean abnormal returns (CAR) were defined in according to the following equation:

$$\mathrm{CAR}_T = \sum_{i=0}^{T}\left[\frac{1}{N}\sum_{t=1}^{N}\left(R_{i,t} - R_{benchmark,t}\right)\right],$$

where $R_{i,t}$ and $R_{benchmark,t}$ are previously defined. The long-run mean buy-and-hold abnormal returns on security i over the holding period T are defined:

$$\mathrm{BHAR}_T = \frac{1}{N}\sum_{t=1}^{N}\left[\prod_{t=0}^{T}\left(1 + R_{i,t}\right) - \prod_{t=0}^{T}\left(1 + R_{benchmark,t}\right)\right],$$

where $R_{i,t}$ is the monthly raw return for firm i in month t, and $R_{benchmark,t}$ is the monthly raw return for the benchmark in month t. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

Adjusted Mean BHAR, CSR firms underperformed the market by −1.71% one year after SEO events, underperformed the market by −4.37% two years after SEOs, and underperformed the market by −6.5% three years af-

ter SEOs. None of these results are statistically significant. We also find similar patterns in terms of sign and significance when the measure of Control-Firm-Adjusted Mean BHAR is used.

Our findings lend support to previous theories regarding SEOs, which state that over the long-term after SEO events, the underperformance that firms may experience increases significantly as time passes. In addition, in contrast to the reduced number of negative results that emerge in the short-term, CSR firms do not exhibit unusual long-term performance in comparison to their peer matched firms. The results for both CSR and non-CSR firms echo the findings from the SEO literature, in that they show negative long-term performance.

Nevertheless, these results need to be assessed by other methods in order to affirm the primary conclusion. Therefore, we also applied a value-weighted market index in estimating the Fama and French (1993) three-factor and Carhart (1997) four- factor models, which further enhanced the robustness of our empirical findings.[4] To assess the robustness of the long-term performance of firms after SEOs for CSR and non-CSR firms, Table 7 presents the abnormal stock returns measured by the Fama and French (1993) three-factor and Carhart (1997) four-factor models.

Table 7 demonstrates the long-term performance under the Fama and French (1993) model adopting the OLS (ordinary least squares) and WLS (weighted least squares) methods. The monthly abnormal returns of the OLS model for CSR firms one year after SEOs was −0.29% (annualized at −3.48%); yet, while it was negative, it was not significant. Two years after SEOs the return was −0.42% (annualized at −5.04%), which was significant at the 10% level. Three years after SEOs there was a −0.29% abnormal return (annualized at −3.48%), which was also not significant.

For non-CSR firms, the monthly abnormal returns of the OLS model one year after SEOs was 0.02% (annualized at 0.24%), which was not significant. Two years after SEOs the return was −0.02% (annualized at −0.24%), which was not significant. Three years after SEOs there was a 0.00% abnormal return (annualized at −0%), which was not significant. The evidence in WLS column shows almost the same pattern as observed in OLS.

[4]Fama (1998) indicated that equal-weight portfolio returns give more weight to small stocks, yet poor model problems are more severe in inferences from equal-weight. To save space, we present value-weighted results only.

Table 7: Table Long-term (three-year) performance of abnormal stock returns measured by the Fama-French three-factor and Carhart four-factor model (Value-Weighted), 1991–2008

	Fama-French three-factor model				Carhart four-factor model			
	OLS		WLS		OLS		WLS	
Holding period (Year)	CSR firms	Non-CSR firms	CSR firms	Non-CSR firms	CSR firms	Non-CSR firms	CSR firms	Non-CSR firms
1	−0.0029	0.0002	−0.0020	0.0029	−0.0029	0.0003	−0.0017	0.0026
	(−0.92)	(0.04)	(−0.66)	(0.90)	(−0.89)	(0.09)	(−0.55)	(0.82)
2	−0.0042	−0.0002	−0.0034	−0.0001	−0.0027	0.0004	−0.0018	0.0003
	(−1.90)*	(−0.08)	(−1.54)	(−0.03)	(−1.21)	(0.15)	(−0.84)	(0.13)
3	−0.0029	0.00	−0.0029	−0.0003	−0.0012	0.0009	−0.0010	0.0002
	(−1.48)	(0.02)	(−1.52)	(−0.19)	(−0.60)	(0.42)	(−0.55)	(0.12)
N	190	190	190	190	190	190	190	190

Note: This table presents the long-term (three-year) performance abnormal stock returns based on the Fama and French (1993) three-factor and Carhart (1997) four-factor model. Time-series regression coefficients were estimated in calendar time using the following models:

$$R_{p,t} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft}\right) + s_p \mathrm{SMB}_t + h_p \mathrm{HML}_t + \varepsilon_{p,t},$$

$$R_{p,t} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft}\right) + s_p \mathrm{SMB}_t + h_p \mathrm{HML}_t + p_p \mathrm{PR1YR}_t + \varepsilon_{p,t},$$

where $R_{p,t}$ is the return on portfolio p in month t, R_{ft} is the return on one-month Treasury bills in month t, R_{mt} is the return on a market index in month t, SMB_t is the difference in the returns of a portfolio of small and big stocks in month t, and HML_t is the difference in the returns of a portfolio of high book-to-market stocks and low book-to-market stocks in month t, PR1YR is the one year momentum in stock returns in month t, and $\varepsilon_{p,t}$ is the error term for portfolio p in month t. Portfolio returns are value-weighted. The estimate of the intercept coefficient (α_p) provides a test of the null hypothesis of zero average abnormal return. The estimate of the intercept coefficient (α_p) provides a test of the null hypothesis of no abnormal performance. The regression coefficients are estimated using weighted least squares to correct for heteroskedasticity. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

Since Loughran and Ritter (2000) claimed that the three-factor model might lack statistical power when assessing abnormal returns, we further applied the Carhart (1997) four-factor model to ensure the robustness of this result. Table 7 presents the Carhart (1997) four-factor model between 1991 and 2008. The results of the Carhart (1997) four-factor model were not only consistent with the Fama and French (1993) three-factor model, but they also confirmed the general consensus of previous studies on SEO events over the long-term. Again, the evidence in the WLS column in the four-factor model shows almost the same pattern as observed in OLS.

In summary, our empirical results showed that in the short-term CSR firms generated less negative abnormal returns in comparison to the non-CSR peer group around the (−1,0) and (−3,0) SEO announcement date windows. In the long-term, CSR firms and non-CSR firms showed insignificant performance under various models within three years after SEO events. Our results for all firms are consistent with prior SEOs studies, which show that there is negative long-term performance after SEOs. This implies that CSR firms benefit from the certification effect in the announcing period, particularly in the categories where less negative abnormal returns are generated. On the other hand, in the long-term, our empirical results are more consistent with previous findings in SRI research (i.e., Galema, Plantinga, and Scholtens (2008)), which show that CSR firms do not outperform in comparison to non-CSR firms. In fact, our results show that both CSR and non-CSR firms showed negative long-term performance, which is consistent with the SEO literature.

Table 8 presents the determinants of short-term CARs for the seven sub-CSR focuses. Table 8, Panel A, shows the results of CAR (−1,0) as dependent variables, yet there was no significant relation. Since information leakage is a commonly observed practice in some major corporate announcements, we also used CAR (−3,0) as a dependent variable, in addition to CAR (−1,0). Table 8, Panel B, shows the results of CAR (−3,0) under the market model as the dependent variable instead of CAR (−1,0). We found that ENV had a significantly positive relation to the short-term performance of SEO events (Model 1: 0.0225, Model 2: 0.0229). We can conclude that the activities of firms with an environment focus are closely linked with announcing returns. Furthermore, investors recognize these firms' efforts in SEO events. Nevertheless, the remaining six categories did not show significant results in the regression analysis (see Table 8), which might be attributable to sample size limitations. Results showed a significant relation

Table 8: Multivariate analyses on short-term stock performance — different models of specification using different CSR focus dummy

Panel A: Dependent variable: CAR (−1,0)

	Intercept	ENV	COM	OTH	EMP	DIV	PRO	GOV	SIZE	B/M	CAPX	Volatility	Year dummy	Industry dummy	R-square	Obs.
Model 1	0.1002 (2.25)**	0.0109 (1.00)							−0.0099 (−2.76)***	−0.0227 (−2.27)**	0.0074 (2.39)**	0.3436 (2.11)**	No	No	0.0804	162
	0.1031 (2.30)**		−0.0010 (−0.10)						−0.0099 (−2.76)***	−0.0231 (−2.29)**	0.0073 (2.37)**	0.3252 (2.00)**			0.0746	162
	0.1014 (2.28)**			0.0061 (0.69)					−0.0099 (−2.76)***	−0.0234 (−2.33)**	0.0073 (2.37)**	0.3333 (2.05)**			0.0774	162
	0.1030 (2.31)**				−0.0035 (−0.37)				−0.0099 (−2.77)***	−0.0229 (−2.28)**	0.0074 (2.39)**	0.3233 (1.99)**			0.0753	162
	0.0871 (1.92)*					−0.0151 (−1.57)			−0.0088 (−2.41)**	−0.0203 (−2.01)**	0.0073 (2.37)**	0.3505 (2.16)**			0.0890	162
	0.1001 (2.25)**						0.0134 (1.20)		−0.0099 (−2.76)***	−0.0225 (−2.25)**	0.0074 (2.40)**	0.3168 (1.96)*			0.0830	162
	0.1112 (2.43)**							−0.0096 (−0.79)	−0.0104 (−2.86)***	−0.0242 (−2.39)**	0.0073 (2.36)**	0.3294 (2.03)**			0.0782	162
Model 2	−0.0275 (−0.48)	0.0083 (0.72)							−0.0063 (−1.61)	−0.0163 (−1.60)	0.0065 (2.09)**	0.4255 (2.56)**	Yes	No	0.2600	162
	−0.0299 (−0.52)		−0.0048 (−0.44)						−0.0062 (−1.56)	−0.0164 (−1.60)	0.0066 (2.11)**	0.4142 (2.50)**			0.2583	162
	−0.0273 (−0.47)			0.0002 (0.02)					−0.0063 (−1.62)	−0.0161 (−1.58)	0.0066 (2.12)**	0.4087 (2.47)**			0.2573	162
	−0.0241 (−0.42)				−0.0107 (−1.03)				−0.0065 (−1.67)*	−0.0151 (−1.49)	0.0068 (2.19)**	0.4035 (2.45)**			0.2629	162
	−0.0298 (−0.52)					0.0068 (0.63)			−0.0065 (−1.65)	−0.0165 (−1.62)	0.0066 (2.13)**	0.4039 (2.45)**			0.2594	162
	−0.0249 (−0.43)						0.0092 (0.82)		−0.0065 (−1.66)*	−0.0158 (−1.56)	0.0067 (2.17)**	0.3960 (2.40)**			0.2608	162
	−0.0173 (−0.29)							−0.0087 (−0.70)	−0.0070 (−1.73)*	−0.0171 (−1.67)*	0.0067 (2.14)**	0.4134 (2.51)**			0.2599	162

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Panel A: Dependent variable: CAR (−1,0)

	Intercept	ENV	COM	OTH	EMP	DIV	PRO	GOV	SIZE	B/M	CAPX	Volatility	Year dummy	Industry dummy	R-square	Obs.
Model 3	0.0149	0.0056							−0.0084	−0.0116	0.0064	0.3273	No	Yes	0.2224	162
	(0.29)	(0.52)							(−2.21)**	(−1.15)	(1.78)*	(2.11)**				
	0.0135		0.0038						−0.0083	−0.0111	0.0063	0.3166			0.2217	162
	(0.26)		(0.37)						(−2.18)**	(−1.08)	(1.76)*	(2.06)**				
	0.0147			−0.0006					−0.0083	−0.0116	0.0063	0.3175			0.2210	162
	(0.28)			(−0.07)					(−2.20)**	(−1.14)	(1.75)*	(2.06)**				
	0.0163				−0.0047				−0.0083	−0.0112	0.0064	0.3173			0.2223	162
	(0.31)				(−0.51)				(−2.20)**	(−1.10)	(1.77)*	(2.06)**				
	0.0122					−0.0038			−0.0082	−0.0114	0.0064	0.3246			0.2218	162
	(0.23)					(−0.39)			(−2.15)**	(−1.12)	(1.78)*	(2.10)**				
	0.0047						0.0149		−0.0081	−0.0120	0.0060	0.3081			0.2305	162
	(0.09)						(1.36)		(−2.14)**	(−1.19)	(1.67)*	(2.01)**				
	0.0190							−0.0160	−0.0085	−0.0140	0.0054	0.3221			0.2298	162
	(0.37)							(−1.30)	(−2.25)**	(−1.37)	(1.50)	(2.10)**				
Model 4	−0.0724	0.0056							−0.0067	−0.0090	0.0071	0.3804	Yes	Yes	0.3366	162
	(−1.09)	(0.48)							(−1.55)	(−0.85)	(1.85)*	(2.34)**				
	−0.0763		−0.0024						−0.0065	−0.0091	0.0070	0.3733			0.3357	162
	(−1.13)		(−0.21)						(−1.50)	(−0.85)	(1.82)*	(2.30)**				
	−0.0727			−0.0058					−0.0066	−0.0085	0.0072	0.3628			0.3375	162
	(−1.10)			(−0.64)					(−1.54)	(−0.80)	(0.19)*	(2.24)**				
	−0.0684				−0.0077				−0.0067	−0.0078	0.0071	0.3665			0.3381	162
	(−1.03)				(−0.73)				(−1.55)	(−0.73)	(1.87)*	(2.27)**				
	−0.0807					0.0124			−0.0065	−0.0091	0.0067	0.3616			0.3419	162
	(−1.22)					(1.14)			(−1.51)	(−0.86)	(1.76)*	(2.25)**				
	−0.0803						0.0125		−0.0064	−0.0091	0.0068	0.3546			0.3413	162
	(−1.21)						(1.08)		(−1.50)	(−0.86)	(1.77)*	(2.19)**				
	−0.0681							−0.0135	−0.0069	−0.0105	0.0064	0.3764			0.3409	162
	(−1.03)							(−1.04)	(−1.60)	(−0.99)	(1.65)*	(2.33)**				

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Panel B. Dependent variable: CAR (−3,0)

	Intercept	ENV	COM	OTH	EMP	DIV	PRO	GOV	SIZE	B/M	CAPX	Volatility	Year dummy	Industry dummy	R-square	Obs.
Model 1	0.0801	0.0225							−0.0087	−0.0245	0.0074	0.3531	No	No	0.0657	162
	(1.46)	(1.67)*							(−1.97)**	(−1.99)**	(1.95)*	(1.76)*				
	0.0867		−0.0037						−0.0088	−0.0254	0.0073	0.3163			0.0495	162
	(1.57)		(−0.28)						(−1.99)**	(−2.04)**	(1.91)*	(1.57)				
	0.0856			−0.0019					−0.0088	−0.0249	0.0073	0.3110			0.0492	162
	(1.55)			(−0.17)					(−1.97)**	(−2.01)**	(1.91)*	(1.54)				
	0.0851				0.0006				−0.0088	−0.0251	0.0073	0.3139			0.0490	162
	(1.54)				(0.05)				(−1.97)**	(−2.02)**	(1.91)*	(1.56)				
	0.0610					−0.0233			−0.0070	−0.0208	0.0073	0.3540			0.0722	162
	(1.09)					(−1.98)**			(−1.56)	(−1.68)*	(1.92)*	(1.78)*				
	0.0810						0.0216		−0.0087	−0.0242	0.0075	0.3013			0.0638	162
	(1.48)						(1.57)		(−1.97)**	(−1.97)**	(1.97)**	(1.51)				
	0.0927							−0.0085	−0.0092	−0.0261	0.0073	0.3180			0.0509	162
	(1.64)							(−0.57)	(−2.04)**	(−2.08)**	(1.91)*	(1.58)				
Model 2	−0.0715	0.0229							−0.0052	−0.0142	0.0053	0.3844	Yes	No	0.3453	162
	(−1.09)	(1.73)*							(−1.16)	(−1.22)	(1.48)	(2.02)**				
	−0.0788		−0.0143						−0.0047	−0.0145	0.0054	0.3546			0.3373	162
	(−1.18)		(−1.13)						(−1.04)	(−1.23)	(1.51)	(1.86)*				
	−0.0711			−0.0064					−0.0052	−0.0134	0.0055	0.3291			0.3331	162
	(−1.07)			(−0.62)					(−1.14)	(−1.14)	(1.54)	(1.72)*				
	−0.0676				−0.0112				−0.0055	−0.0127	0.0058	0.3323			0.3354	162
	(−1.02)				(−0.93)				(−1.21)	(−1.07)	(1.60)	(1.75)*				
	−0.0710					0.0001			−0.0053	−0.0136	0.0056	0.3373			0.3312	162
	(−1.06)					(0.01)			(−1.16)	(−1.15)	(1.54)	(1.77)*				
	−0.0662						0.0182		−0.0056	−0.0132	0.0059	0.3127			0.3407	162
	(−1.00)						(1.41)		(−1.24)	(−1.12)	(1.63)	(1.64)				
	−0.0681							−0.0025	−0.0054	−0.0139	0.0056	0.3388			0.3314	162
	(−0.99)							(−0.17)	(−1.17)	(−1.17)	(1.55)	(1.77)*				

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Panel B. Dependent variable: CAR (−3,0)

	Intercept	ENV	COM	OTH	EMP	DIV	PRO	GOV	SIZE	B/M	CAPX	Volatility	Year dummy	Industry dummy	R-square	Obs.
Model 3	−0.0083	0.0156							−0.0054	−0.0108	0.0044	0.3225	No	Yes	0.1953	162
	(−0.13)	(1.17)							(−1.16)	(−0.87)	(0.99)	(1.68)*				
	−0.0092		0.0006						−0.0053	−0.0108	0.0041	0.2972			0.1878	162
	(−0.14)		(0.05)						(−1.12)	(−0.85)	(0.92)	(1.55)				
	−0.0085			−0.0080					−0.0054	−0.0101	0.0042	0.2877			0.1908	162
	(−0.13)			(−0.75)					(−1.14)	(−0.80)	(0.95)	(1.50)				
	−0.0077				−0.0039				−0.0053	−0.0105	0.0042	0.2967			0.1884	162
	(−0.12)				(−0.33)				(−1.12)	(−0.83)	(0.93)	(1.55)				
	−0.0135					−0.0071			−0.0050	−0.0104	0.0043	0.3094			0.1897	162
	(−0.21)					(−0.59)			(−1.06)	(−0.83)	(0.97)	(1.61)				
	−0.0237						0.0219		−0.0049	−0.0114	0.0036	0.2825			0.2016	162
	(−0.37)						(1.61)		(−1.05)	(−0.91)	(0.82)	(1.49)				
	−0.0051							−0.0143	−0.0054	−0.0130	0.0033	0.3009			0.1925	162
	(−0.08)							(−0.93)	(−1.15)	(−1.02)	(0.74)	(1.57)				
Model 4	−0.1217	0.0206							−0.0043	−0.0073	0.0043	0.3280	Yes	Yes	0.3993	162
	(−1.58)	(1.53)							(−0.86)	(−0.59)	(0.98)	(1.74)*				
	−0.1406		−0.0127						−0.0035	−0.0083	0.0039	0.3063			0.3930	162
	(−1.79)*		(−0.97)						(−0.68)	(−0.66)	(0.86)	(1.62)				
	−0.1242			−0.0124					−0.0041	−0.0058	0.0045	0.2748			0.3950	162
	(−1.61)			(−1.17)					(−0.81)	(0.47)	(1.01)	(1.46)				
	−0.1198				−0.0096				−0.0041	−0.0053	0.0043	0.2862			0.3915	162
	(−1.54)				(−0.78)				(−0.82)	(−0.42)	(0.97)	(1.52)				
	−0.1303					0.0071			−0.0040	−0.0067	0.0040	0.2861			0.3901	162
	(−1.68)*					(0.56)			(−0.79)	(−0.54)	(0.90)	(1.51)				
	−0.1385						0.0229		−0.0037	−0.0070	0.0037	0.2620			0.4021	162
	(−1.80)*						(1.72)*		(−0.74)	(−0.57)	(0.83)	(1.40)				
	−0.1230							−0.0079	−0.0042	−0.0075	0.0038	0.2944			0.3900	162
	(−1.58)							(−0.52)	(−0.83)	(−0.60)	(0.85)	(1.56)				

Note: Definitions for the dummy of the seven focuses are as previously defined. Size is capitalization measured at the beginning of SEO month. B/M is the ratio of book value of equity to market value of equity. CAPX is the natural logarithm of capital expenditure. Volatility is the standard deviation of daily close-to-close returns over 30 trading days ending 11 days prior to the offer. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

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of ENV with short-term CAR, which is also consistent with data shown Table 4. These results suggest that CSR firms with an ENV focus perform better than their peers around the SEO event date.

Table 9 shows the results of directly applying the predummy value of each sub category into the four regression models. Panel A uses CAR (−1,0) as a dependent variable and shows that the PRO focus CSR firms were positively associated with CARs around SEOs (Model 1:0.0668, Model 3:0.0548). In Panel B, for CAR (−3,0), our empirical results again show that the PRO focus CSR firms were positively associated with CARs around SEOs (Model 1:0.0870, Model 3:0.0691). Nevertheless, firms with a Community (COM) focus showed a negative association with CAR.

Taking the results in Table 9 and Table 8 together, ENV and PRO CSR firms had benefits that affected short-term abnormal returns, which thus gave the stock price a reduced discount. Furthermore, COM firms generated relatively less negative CAR than its non-CSR peers in Table 4, but the magnitude of the premium was not as big as other categories, such as the ENV and PRO (see Table 4, Panel B for CAR(−3,0): 0.40% for ENV, −0.07% for PRO, and −1.55% for COM). Therefore the results in Table 9 do not contradict the results in Table 4 for the COM group. In fact, Table 4 shows that the COM group, in addition to the ENV and GOV groups, outperformed its non-CSR peers. Table 8 and Table 9 demonstrate that in regard to short-term announcement returns, the focuses ENV and PRO enhance CAR, while COM may likely be lower than the CARs of CSR firms. The mean CARs obtained for the CSR firms in Table 4 (e.g. in CAR(−1,0), ENV focus: 0.4%; PRO focus: −1.17%; COM focus: −1.55%) validate this conclusion.

5 Conclusion

In this study, we examine the benefits that socially responsible firms receive in conjunction with an SEO event. We claim that a CSR firm, more specifically firms included in the KLD 400 Social Index, will have less negative abnormal returns around the announcement date of SEOs in comparison to non-CSR firms, which is due to the certification effect. Our empirical results confirm this link; in the short-term market participants generally recognize socially responsible firms. However, the long-term performance of CSR firms and non-CSR firms are in general consistent with prior research regarding SEO events.

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Table 9: Multivariate analyses on short-term stock performance — different models of specification using seven focuses predummy value

Panel A. Dependent variable: CAR (−1,0)

	Intercept	ENV	COM	OTH	EMP	DIV	PRO	GOV	SIZE	B/M	CAPX	Volatility	Year dummy	Industry dummy	R-square	Obs.
Model 1	0.0913	−0.0240	−0.0373	0.0001	−0.0000	−0.0263	0.0668	−0.0064	−0.0090	−0.0198	0.0073	0.3390	No	No	0.1504	162
	(1.78)*	(−0.91)	(−1.51)	(0.00)	(−0.00)	(−1.52)	(2.57)**	(−0.32)	(−2.24)**	(−1.94)*	(2.32)**	(2.11)**				
Model 2	−0.0524	−0.0192	−0.0481	−0.0159	−0.0253	0.0047	0.0412	0.0067	−0.0043	−0.0148	0.0061	0.4143	Yes	No	0.3043	162
	(−0.80)	(−0.67)	(−1.76)*	(−0.38)	(−1.26)	(0.24)	(1.45)	(0.33)	(−0.96)	(−1.43)	(1.88)*	(2.47)**				
Model 3	0.0179	−0.0344	−0.0210	0.0176	0.0027	−0.0165	0.0548	−0.0244	−0.0092	−0.0133	0.0057	0.3059	No	Yes	0.2711	162
	(0.33)	(−1.35)	(−0.87)	(0.43)	(0.15)	(−0.96)	(2.09)**	(−1.24)	(−2.28)**	(−1.30)	(1.59)	(1.99)**				
Model 4	−0.0942	−0.0301	−0.0420	0.0047	−0.0198	0.0081	0.0368	−0.0117	−0.0059	−0.0103	0.0060	0.3592	Yes	Yes	0.3720	162
	(−1.32)	(−1.05)	(−1.49)	(0.11)	(−0.99)	(0.42)	(1.27)	(−0.55)	(−1.26)	(−0.96)	(1.54)	(2.17)**				

Panel B. Dependent variable: CAR (−3,0)

Model 1	0.0830	−0.0232	−0.0558	0.0317	0.0240	−0.0261	0.0870	−0.0151	−0.0087	−0.0213	0.0078	0.3152	No	No	0.1398	162
	(1.32)	(−0.72)	(−1.84)*	(0.63)	(1.06)	(−1.23)	(2.73)***	(−0.62)	(−1.76)*	(−1.70)*	(2.03)**	(1.60)				
Model 2	−0.1048	−0.0130	−0.0722	0.0145	−0.0165	0.0126	0.0464	0.0120	−0.0025	−0.0123	0.0052	0.3434	Yes	No	0.3805	162
	(−1.39)	(−0.40)	(−2.29)**	(0.30)	(−0.71)	(0.56)	(1.42)	(0.51)	(−0.49)	(−1.04)	(1.39)	(1.78)*				
Model 3	0.0038	−0.0369	−0.0347	0.0590	0.0234	−0.0090	0.0691	−0.0334	−0.0073	−0.0136	0.0038	0.2615	No	Yes	0.2490	162
	(0.06)	(−1.17)	(−1.16)	(1.18)	(1.06)	(−0.43)	(2.13)**	(−1.37)	(−1.45)	(−1.07)	(0.86)	(1.37)				
Model 4	−0.1576	−0.0228	−0.0650	0.0371	−0.0128	0.0187	0.0437	−0.0067	−0.0029	−0.0090	0.0034	0.2808	Yes	Yes	0.4307	162
	(−1.91)*	(−0.68)	(−1.99)**	(0.75)	(−0.55)	(0.83)	(1.30)	(−0.27)	(−0.53)	(−0.72)	(0.76)	(1.46)				

Note: This table shows similar models of specification in Table 8, except for the inclusion of independent variables of predummy value under each ESG categories all together. Size is capitalization measured at the beginning of SEO month. B/M is the ratio of book value of equity to market value of equity. CAPX is the natural logarithm of capital expenditure. Volatility is the standard deviation of daily close-to-close returns over 30 trading days ending 11 days prior to the offer. *** Indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level.

Furthermore, our results show that firms with environment, community, and governance focuses outperform their peers in the announcing period. Among these three focuses, firms with a government focus show a statistically significant positive association with announcing returns in comparison to non-CSR peers in regression analysis. However, higher announcement period abnormal returns were generated by the environment and product focuses categories. Our findings, in terms of long-term performance, reveal that both CSR and non-CSR firms produce results that are consistent with prior SEO literature, and thus, the difference in long-term market performance between CSR firms and their non-CSR peers is not significant.

Overall, our study contributes to the CSR literature by developing a measure that further distinguishes between CSR firms according to their different focuses on various aspects of CSR. Our findings are interesting and potentially useful to various stakeholders when making investment decisions and may also aid in the development of a more in-depth understanding of CSR firms.

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市場是否偏好具有企業社會責任評比的公司? 以現金增資為例

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文獻顯示一些學者已推論出具有企業社會責任的公司 (CSR) 將表現出不同於其他公司 (non-CSR) 的特徵, 在這項研究中, 我們將研究這些特徵是如何的影響市場參與者在現金增資 (SEO) 中的投資偏好以及如何影響現金增資宣告效應和股價的長期表現。特別是, 當市場普遍對於企業社會責任的公司產生好感時, 在資訊不對稱較常存在的 SEO 活動中, 其企業社會責任的形象是否成爲一種優質的「認證」, 進而增進公司的價值? 總體而言, 我們發現在現金增資的宣告中, CSR 公司相對於 non-CSR 公司將產生較少的負異常報酬。換句話說, CSR 公司現金增資時將產生比較少的折價現象。此外, 實證研究結果顯示, 市場參與者偏好那些專注於環境, 社會和治理方面的企業社會責任公司, 因而有比較好的報酬表現。然而, CSR 及 non-CSR 公司在股票的長期表現上基本上是相似的, 在異常報酬率差異不顯著。

關鍵詞: 企業社會責任, 長期表現, 報酬率, 現金增資, 增資宣告
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