# **ROE and Corporate Social Responsibility: Is There a Return On Ethics?**

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In light of the financial crisis of 2008, this study examines the return performance of U.S. companies that exhibit high ratings for ethics and corporate social responsibility (CSR). The highly rated CSR firms are identified via Corporate Responsibility (CR) Magazine's Best 100 Corporate Citizens list for 2010, known as one of the world's top corporate responsibility ranking. We employ traditional event study methodology to assess the effects of the CSR news announcement. In our study, we find that the return performance of socially responsible firms exhibits similar time-series dynamics to that of a broad market portfolio comprising of all NYSE, Nasdaq, and AMEX stocks. While several CSR firms may provide exceptionally high returns, we find that on average, the socially responsible portfolio's risk-return profile does not differ significantly from that of the broad-based market portfolio. While we document a rise in the cumulative abnormal return for the CSR portfolio prior to the news announcement, we find that the upward drift in asset prices disappears following the announcement date and after controlling for market-wide sources of risk. This study is one of the first investigations that focuses on the return performance of CSR firms in the aftermath of the global financial crisis of 2008. Our results collectively provide evidence in support of the Efficient Markets Hypothesis and suggest that the CSR rankings announcement provided by Corporate Responsibility Magazine is indicative of good news for these firms.

## INTRODUCTION

The recent financial collapse of 2008 has led many investors to re-assess their portfolio holdings. In particular, there is increasing attention on socially responsible investing (SRI) as well as on companies that exhibit unethical leadership and corporate social irresponsibility (CSI). SRI investing attracts the attention of university endowments, foundations, pension funds, governments, as well as mutual fund managers. Approaches to SRI investing include screening stocks on the basis of social, environmental and corporate governance criteria, shareholder advocacy, and community investing. For example, community investing involves directing capital from lenders and investors to communities that are underserved by traditional financial services institutions. Recently, large institutional investors are placing a greater emphasis on investing in firms that pursue Corporate Social Responsibility (CSR) activities (Guenster et al. 2011). The financial performance of U.S. firms that have been identified as socially responsible in the post-2008 time period provides the motivation for the present study.

On the one hand, recent research has focused on the returns that accrue to investments in sin stocks. Sin stocks are defined as equity for companies that are associated with sin-type activities, such as alcohol,

adult entertainment, gaming, tobacco, and weapons manufacturing. Many financial advisors often tout these stocks as stellar investments, capable of outperforming index funds and common benchmarks. Fabozzi et al. (2008) find that a portfolio comprised of sin stocks earns an annual return of 19%, outperforming the S&P500 equity index benchmark. Hong and Kacperczyk (2009) find that sin stocks are less held by norm-constrained institutions such as pension funds when compared to mutual or hedge funds. Their study argues that sin stocks exhibit higher expected returns since they are neglected by norm-constrained investors. The incomplete information model of Merton (1987) provides additional insight with respect to the expected returns of sin stocks. Specifically, Merton (1987) shows that market segmentation is the result of an information asymmetry that allows a stock to be neglected by investors, because they are not aware of the stock. Thus, sin stocks trade at a discount because they have a smaller investor base, which implies limited risk sharing. Consistent with Merton (1987), Angel and Rivoli (1997) predict that a sin stock that investors shun has a higher expected return, and that the expected return increases with the proportion of socially responsible investors in the market.

On the other hand, recent studies examine the relationship between CSR and financial performance. For example, Derwall et al. (2011) find that while SRI stocks earn abnormal returns in the short run, their profit-generating performance do not persist in the long run. Statman (2000) examines the financial performance of socially responsible mutual funds during the 1990-1998 period and finds that the socially responsible funds achieve returns that are similar to conventional mutual funds. Similarly, Bauer et al. (2006) investigate the return performance of retail ethical funds in the Australian market, and find no evidence of significant differences in risk-adjusted returns between ethical and conventional funds during the 1992 - 2003 time period. Bello (2005) compares socially responsible stock mutual funds and randomly selected conventional funds in terms of assets held and portfolio diversification. The latter study also finds no significant differences between the two types of funds and, additionally, finds that both groups of funds underperform the Domini 400 Social Index and the S&P500 over the sample period. Renneboog et al. (2008) examine SRI funds in the US, the UK, and in many continental European and Asia-Pacific countries. Their study finds that SRI funds underperform their domestic benchmarks by-2.2 to -6.5 percent. Furthermore, with the exception of some countries such as France, Japan and Sweden, their study finds that the risk-adjusted returns of SRI funds are not statistically different from the performance of conventional funds.

While there has been a substantial amount of research reporting mixed findings for the CSR stock return effect, there has also been substantial empirical evidence suggesting otherwise. For example, Jiao (2010) finds that firms meeting the expectations of their non-shareholder stakeholders, such as employees, customers, communities, and environment, tend to be associated with positive valuation effects. Hill et al. (2007) provide evidence of positive risk-adjusted excess returns for socially responsible corporations in the US, Asian, and European markets when examining time horizons of 10 years. Kempf and Osthoff (2007) investigate an investment strategy that buys stocks with high socially responsible ratings and sells stocks with low socially responsible ratings. Their study finds that such a strategy leads to abnormal returns of up to 8.7 percent per year. In addition, the documented abnormal returns remain significant after including reasonable transaction costs. Similarly, Statman and Glushkov (2009) find that stocks of companies with high social responsibility scores yield higher returns than stocks of companies with low scores. Specifically, their results document excess returns that range from 3 percent to 6 percent when adopting an investment strategy that buys high corporate social responsibility (CSR) score stocks financed by a short position in low CSR score stocks. Recently, El Ghoul et al. (2011) find that firms with higher CSR scores have access to cheaper equity financing. In other words, CSR firms exhibit a lower equity cost of capital. Orlitzsky et al. (2003) conduct a meta-analysis of 52 studies dealing with the association between corporate social performance and financial performance and finds a determined true score correlation of 0.36.

The present study differs from prior work in important ways, and provides several contributions to the intersection of business ethics and finance. One, this paper is one of the first studies to identify companies that have been ranked as the best corporate citizens in the aftermath of the 2008 global financial collapse. Specifically, we focus on the top 100 companies that are ranked by Corporate Responsibility (CR)

Magazine in 2010. In particular, the list of the 100 Best Corporate Citizens provided by CR is known as the world's top corporate responsibility ranking based on publicly available information. In addition, it has been recognized as one of America's most important business rankings.

Second, we examine the financial performance for the identified socially responsible firms surrounding the CSR news announcement. We investigate this issue using several techniques. Specifically, we construct a portfolio with equal investment weights for the 100 identified companies, henceforth referred to as the CR100, or socially responsible portfolio. Having constructed an equity portfolio that proxies for corporate social responsibility, we then compare its annualized return dynamics to a market benchmark. Specifically, we consider a value-weighted market portfolio that comprises of all NYSE, AMEX, and Nasdaq stocks, henceforth referred to as the Market portfolio. Importantly, we examine the time-series evidence for the cumulative return performance of our CR100 portfolio in relation to the Market portfolio.

Third, our study differs from prior research in that we focus on the immediate effects of being perceived ethical in the global financial markets. While the marketing literature has provided evidence that firms use corporate social responsibility initiatives to influence consumers and differentiate product offerings (see for instance, Stanaland et al. 2011; Becker-Olson et al. 2006), the financial implications of being *perceived* ethical in real-time has received less attention. We examine this issue by examining financial returns in different event windows across time, employing techniques from traditional event study methodology. By conducting an event study on the rankings announcement, we are able to assess its impact on the value of the firms. Given rationality in the marketplace, the effects of the CSR rankings announcement will be reflected immediately in security prices. Moreover, if the CSR announcement has information content of a good news nature, the identified firms should be associated with increases in the value of the equity. Prior studies add to the mixed evidence surrounding ethics and financial performance since they differ in terms of their sample periods. In our study, we examine the financial returns in event windows following the news announcement date as well as the returns for the identified companies prior to the announcement date while simultaneously adjusting for economy-wide sources of risk. Continual upward drifts in asset prices following the CSR rankings announcement suggest that socially responsible stocks exhibit persistent abnormal profits. Tables and Figures are in the Appendix.

## SAMPLE AND METHODOLOGY

### Data sample

We identify the 100 Best Corporate Citizens using the rankings provided by the Corporate Responsibility (CR) magazine. These rankings are released on an annual basis and are an important instrument in allowing for widespread visibility of firms exhibiting high corporate social responsibility ratings. Select members of the Corporate Responsibility Officer (CRO) Association serve on a special committee devoted to developing and revising the rankings methodology. The CRO Association is comprised of business executives, government officials, and academic professors whom share the common mission statement of enhancing the status and practice of corporate responsibility.

The CRO Association considers numerous categories when ranking the companies. These categories include the Environment, Climate Change, Human Rights, Employee Relations, Governance, Philanthropy, and Financial dimensions. In particular, the categories are weighted by a certain percentage in arriving at the final standings. The percentages are 19.5, 16.5, 16, 19.5, 7, 9, and 12.5 percent, respectively. Hence, the different categories capture the various dimensions that characterize corporate social responsibility in today's global markets.

CR's 100 Best Corporate Citizens list for 2010 is the eleventh list to have been disseminated by the magazine and is especially important to study given the recent financial scandals that have pervaded Wall Street. In particular, the 2010 rankings involve revising the metric for the Financial category of the rankings methodology. In prior years, the financial metric was limited to a single point, namely the 3 year total return. For the 2010 rankings, the committee concluded that the 3 year total return is insufficient since companies such as Enron, Worldcom, and Tyco had scored well on this one metric just prior to

collapse as the result of fraud. Consequently, the 2010 rankings methodology is the first post-crisis rankings methodology to differ from that of prior years in that it incorporates 7 scandal-resistant metrics within the Financial category, thus providing the motivation for the present study.

As in previous years, the data used to rank the companies was gathered from 100-percent, publiclyavailable sources and computed by IW Financial, the Portland, Maine-based financial analysis firm serving the ESG (Environment, Social, Governance) investment community. Data in each category is of two types: true/false or numerical. "True" counts as a positive value, whereas "False" counts as a negative value, and "no answer" counts as neutral. Numerical values are compared with all of the companies' other numerical answers in order to generate a ranking.

The list of Corporate Responsibility's Best Corporate Citizens for 2010 is available online through the Corporate Responsibility website at http://www.thecro.com. Using the stock ticker symbols provided by the rankings list, we retrieve available price data for each firm using the Standard & Poor's Research Insight Database. Similar to prior event studies, the announcement date of the CR rankings, March 2, 2010, is referred to and denoted as Day 0. Using the Standard & Poor's database, we extract price data that ranges from March 2009 through the end of December 2010 for each of the sample firms.

#### **Empirical Methodology**

This study examines the financial performance of stocks that are widely perceived as socially responsible. Several approaches are employed. First, we examine the annualized return dynamics for the socially responsible portfolio in comparison to the Market portfolio, prior to and following the news announcement. Specifically, we calculate the annualized arithmetic and geometric average returns. In addition, we compute the annualized standard deviation of returns for the different portfolios. A comparison of the annualized metrics allows us to analyze the risk-return tradeoff.

Second, we conduct a CAPM time-series regression analysis for the socially responsible portfolio. Specifically, we regress the excess returns of our socially responsible portfolio (returns in excess of the risk free rate) on the excess returns of the Market portfolio for the March 2009 – December 2010 time period, as well as for the sub-periods that follow and precede the Corporate Responsibility news announcement. Similar to Hill et al. (2007), we estimate Jensen's  $\alpha$ , a proxy for the risk-adjusted excess return, as a result of the CAPM regression. In addition, we assess the market risk of the socially responsible portfolio with the estimated  $\beta$  regression coefficient. Formally, our CAPM asset pricing test is given by the following time-series regression:

$$r_p - r_f = \alpha_p + \beta_p \left( r_M - r_f \right) + e_p \tag{1}$$

where  $r_p$  is the daily return of the socially responsible portfolio,  $r_f$  is the daily return of the 30-day U.S.

Treasury bills,  $r_M$  is the daily return of the Market portfolio, and  $e_p$  is the residual.

Third, we calculate the excess standard-deviation-adjusted return, or eSDAR .This metric is a modified version of the Sharpe ratio and leverages the socially responsible portfolio to have the Market portfolio's standard deviation. In other words, the eSDAR allows us to examine the extent to which higher returns add to performance more than its higher standard deviation adding to it. Prior studies have implemented the eSDAR to compare assets with differing standard deviations. For example, Statman (1987) proposes the use of the eSDAR when examining portfolios of stocks versus bonds. Similarly, Modigliani and Modigliani (1997) calculate the eSDAR when adjusting the performance of different portfolios for risk.

Fourth, our study provides cross-sectional descriptive statistics of the daily compounded returns over different event windows for our sample stocks. Formally, the daily compounded return of stock i's return over the event window (1,*T*) is given by Eqn.(2):

$$\prod_{t=1}^{T} (1+r_{i,t}) - 1$$
(2)

where  $r_{i,t}$  is the continuously compounded return for stock *i* on day *t*. The event windows constructed for the present study range in horizon from 2 days through 251 days. Per convention, we define Day 0 as the announcement date for Corporate Responsibility (CR) Magazine's list of the 100 Best Corporate Citizens for 2010. The choice of different event windows allows for a robust analysis of the financial performance for these companies following and preceding the news announcement.

Finally, our study measures the economic impact of Corporate Responsibility's announcement by examining the cumulative abnormal return for the socially responsible portfolio via traditional event study methodology. The event study has many applications in accounting and finance research. For example, event studies have been applied to examine the effects of mergers and acquisitions, earnings announcements, and issues of new equity or debt. The focus of the majority of event studies is on the price of common equity. In the present study, we assess the information content of the Corporate Responsibility news announcement by employing a 41-day event window, comprised of 20 pre-event days, the event day, and 20 post-event days. An assessment of this event's impact requires a measure of abnormal return, which is given by the difference between the actual ex post return of the security and the model-generated expected, or normal, return over the event window. Our study considers several different models for our normal performance model. First, we consider a market model to estimate abnormal returns. The stock return,  $r_{i,t}$ , for firm *i* and period *t*, is expressed mathematically as:

$$r_{i,t} = a + br_{m,t} + e_{i,t} \tag{3}$$

where  $r_{m,t}$  is the market's rate of return during the period and  $e_{i,t}$  is the part of a security's return resulting from firm-specific events. Given the normal performance model in Eqn. (3), an estimation window is necessary to estimate the parameters of the market model. The most common choice is to use the 1 year daily data prior to the news announcement in estimating parameters *a* and *b* in Eqn. (3). The parameter *b* measures sensitivity to market risk, and *a* is the average rate of return the stock would realize in a period with a zero market return. The firm specific or abnormal return,  $e_{i,t}$ , is thus the unexpected return that follows from the event and is mathematically given by:

$$e_{i,t} = r_{i,t} - (\hat{a} + \hat{b} r_{m,t})$$
(4)

where parameters  $\hat{a}$  and  $\hat{b}$  have been estimated using the March 2009 – March 2010 estimation window. The abnormal return captures the price effects of the announcement which occur after the stock market closes on the announcement day. If the CSR announcement conveys information to investors, one would expect the announcement impact on the market's valuation of the firms' equity to depend on the magnitude of the unexpected component of the announcement. The period prior to the CSR event is also of interest: investors may acquire information about the CSR rankings prior to the actual announcement day and such would be reflected in the pre-event returns, given rationality in the marketplace.

In addition to the market model, we also estimate expected returns by incorporating the size and value risk factors of Fama and French (1993) and the momentum factor of Carhart (1997). Fama and French (1993) add firm size and book-to-market ratio to the market index to explain average returns, motivated by the observations that average returns on stocks of small firms and on stocks of firms with a high ratio of book value of equity to market value of equity have historically been higher. In the context of the present study, we augment the market model to include the Fama-French risk factors, expressed mathematically as:

$$r_{i,t} = a + b_1 r_{m,t} + b_2 r_{hml,t} + b_3 r_{smb,t} + e_{i,t}$$
(5)

In Eqn. (5),  $r_{smb,t}$  is the return on a portfolio that has a long position in small stocks, financed with a short position in the large stocks. Similarly,  $r_{hml,t}$  is the return on a portfolio that has a long position in high book-to-market ratio stocks, financed with a short position in low book-to-market ratio stocks. Augmenting the Fama-French risk factors to include the momentum factor yields Eqn. (6):

$$r_{i,t} = a + b_1 r_{m,t} + b_2 r_{hml,t} + b_3 r_{smb,t} + b_4 r_{umd,t} + e_{i,t}$$
(6)

In Eqn. (6),  $r_{umd,t}$  is the return on a portfolio that has a long position in high prior return stocks, financed with a short position in the low prior return stocks. In sum, the size, book-to-market, and momentum factors are important market-wide risk factors in explaining observed stock returns. Similar to the market model, we estimate the sensitivities to the risk factors for each company using data prior to the news announcement. Specifically, for each firm, we estimate the regression coefficients in Eqns. (5) and (6) by estimating a time-series regression using the 251 trading days prior to the news announcement as the corresponding estimation window.

Since the event windows of the included securities overlap in calendar time, the abnormal returns of our sample firms can be aggregated into a portfolio dated using event time. This approach allows for the cross correlation of the abnormal returns (MacKinlay 1997). Specifically, following the estimation of the company-specific abnormal returns, we aggregate across the different firms by taking the cross-sectional average of the daily firm-specific abnormal return at each point in time to arrive at the abnormal return for the socially responsible portfolio on a given day t, provided in Eqn. (7):

$$AR_{p,t} = \frac{1}{N} \sum_{i=1}^{N} e_{i,t}$$
(7)

Finally, the cumulative abnormal return (CAR) for our socially responsibly portfolio p through time T is then given by Eqn. (8):

$$CAR_{p,T} = \sum_{t=1}^{T} AR_{p,t}$$
(8)

In sum, the cumulative abnormal return of the CSR portfolio allows us to evaluate the impact of Corporate Responsibility magazine's news announcement. We investigate this issue in what follows.

## RESULTS

Figure 1 plots the cumulative returns for the Market portfolio and the portfolio of socially responsible firms. The time series plot provides visual confirmation that the behavior of CSR returns closely matches the market index. Specifically, for the days that follow the news announcement date of March 2, 2010, the CR100 portfolio returns increase in tandem with that of the Market portfolio: cumulative returns for the socially responsible firms closely track the Market when examining the time period extending from March 2010 through the end of December 2010. In particular, we find that towards the end of the sample period, the socially responsible portfolio earns a cumulative rate of return of 14.64 percent versus the Market portfolio's 16.56 percent. Thus the socially responsible portfolio attains a cumulative return very similar to that of the broad-based Market portfolio.<sup>1</sup>

While the return behavior of the socially responsible firms is similar to the Market portfolio following the announcement date, we also examine the return behavior preceding the rankings announcement in early 2010. In particular, Figure 1 also suggests that there is no distinguishable difference between the cumulative returns of the CR100 portfolio and the market benchmark prior to the release of the CSR rankings in January through March 2010. This finding suggests that being perceived ethical does not

immediately translate into increases in short-run financial performance. Furthermore, the evidence suggests that the CSR portfolio does not outperform a passive buy-and-hold investment strategy for the broad-based market portfolio.

Table 1 presents descriptive statistics of the annualized return dynamics for the socially responsible portfolio and the Market portfolio for different time periods. In Panel A, we report summary statistics and performance measures for the March 2009 – December 2010 time period. During this time, we find that the socially responsible portfolio earns an annualized arithmetic average return of 37.25 percent, whereas the broad-based Market portfolio attains a higher average return of 39.35 percent commensurate with its higher realized standard deviation. Dynamics for the annualized average geometric return are similar: the socially responsible portfolio earns 65.35 percent versus the Market's 68.35 percent. We find similar patterns in the average and geometric returns for the March 2009 – March 2010 and March 2010 – December 2010 sub-periods, tabulated in Panels B and C respectively: the socially responsible firms attain lower rates of return relative to the Market portfolio. This is expected given the lower realized standard deviations for the CR100 portfolio. Following the news announcement, we find that the CR100 portfolio earns an average return of 19.85 percent and a geometric return of 15.26 percent. Thus, the risk-return profile of the socially responsible firms is similar to the passive Market portfolio, providing further evidence in support of efficient markets.

In terms of portfolio risk, Table 1 presents the annualized standard deviation of returns for both the CR100 portfolio and the Market portfolio. Specifically, we find that the average returns are consistent with the risk-return tradeoff that is usually observed in the financial markets. In particular, we find that the socially responsible portfolio exhibits a lower annualized standard deviation relative to the Market portfolio across the different time periods. For example, in Panel A, we find that the CR100 and Market portfolios exhibit return standard deviations of 19.62 and 21.99 percent, respectively. Following the news announcement, we find that the CR100 portfolio exhibits a return standard deviation of 17.09 percent, whereas the Market's return standard deviation is 18.94 percent. Thus the portfolio comprising of socially responsible firms tend to exhibit lower risk, as proxied by the standard deviation.

Results of the Capital Asset Pricing Model (CAPM) pricing tests are presented in Table 1. In Panel A, we find that Jensen's  $\alpha$  is statistically indistinguishable from zero, suggesting that the CSR portfolio is neither underpriced nor overpriced. Similarly, we find that Jensen's  $\alpha$  is statistically insignificant prior to and following the news announcement in Panels B and C, respectively. Our results are in agreement with Hill et al. (2007) who report statistically insignificant estimates for Jensen's  $\alpha$  when examining U.S. CSR stocks in the short-run.

Further examination of the CAPM pricing regression suggests that the socially responsible portfolio exhibits lower market risk, as proxied by the market  $\beta$ . Consistent with the reported annualized standard deviations, we find that the CR100 portfolio's estimated CAPM  $\beta$  is less than unity across the different time periods. In particular, the socially responsible portfolio attains a market  $\beta$  near 0.88 across time, highlighting the defensive return nature of the socially responsible firms. In addition, we find that the CAPM pricing regression explains over 96 percent of the time-series variation in returns for the CR100 portfolio.

The degree to which the positive returns of the socially responsible portfolio add to its relative performance is presented in Table 1. Specifically, we find that the eSDAR of the CR100 portfolio is close to 90 basis points, suggesting that the CSR portfolio exhibits a minimal degree of higher positive returns adding to its performance when leveraged to have the Market portfolio's standard deviation over the March 2009 – December 2010 time period. Similarly, the eSDAR are near zero values in Panels B and C, further suggesting that the CSR and Market portfolios do not differ significantly in terms of their return performances when adjusting for standard deviations.

Table 2 presents cross-sectional descriptive statistics for the compounded actual rate of returns. Specifically, using Eqn. (1), realized compounded rates of returns are computed for different event windows, ranging in horizon from 2 days through 251 days. Several findings are evident in Table 2. Specifically, in the 40 days prior to the announcement date, the cross-sectional average of the daily

realized compounded returns is negative. Similarly, the cross-sectional median return is also negative. In contrast, the cross-sectional average and median returns are positive for the various event windows following the announcement date. Additionally, the mean and median compounded rates of return generally increase as the interval of the event window increases, suggesting that the CSR firms experience higher returns as time progresses in the long run. For the event window that extends from March 3, 2010 through December 31, 2010, we observe that the cross-sectional mean return amounts to 13.5 percent.

In Table 2, we observe significant dispersion in the return performance across the different firms. Specifically, the cross-sectional standard deviation conveys the extent to which the firm returns differ from one another across time. In Table 2, we observe that as the event window increases, the standard deviation increases as well. For example, while the first 50 trading days yields a standard deviation of 10.3 percent, we observe that the cross-sectional standard deviation amounts to 16.5 percent for the event window extending from March 3, 2010 through December 31, 2010. Thus, the dispersion in return performance suggests the possibility of several firms benefiting tremendously from the CSR rankings. For the identical event window, one firm experienced a positive compounded rate of return of 76 percent.

Figure 2 presents a time-series plot of the cumulative abnormal returns when adjusting for different sources of risk. The goal is to see if the release of the CSR rankings information provides information to the marketplace. Specifically, we focus on the abnormal return performance for the twenty days that precede the news announcement date as well as for the twenty days that follow the media announcement. In agreement with Derwall et al. (2011), we uncover positive abnormal returns for our socially responsibly portfolio. Specifically, we find that the cumulative abnormal return is gradually drifting upwards in days -20 through -1, reflecting the good news nature of the CSR announcement. This finding is consistent with the Efficient Market Hypothesis of Fama (1970): investors are acquiring information about the CSR rankings prior to the actual announcement and the upwards drift suggest that prices do respond to new information.

While the market model suggests continual upward drifts in asset prices after the announcement date, we find that there is no further drift in prices when adjusting for the size, value, and momentum risk factors. Thus the results provided by the market model suggest incomplete risk-adjustment (Fama and French 1993). In other words, the evidence provided in Figure 2 suggests prices reflect the new information and no further abnormal return is present following the news announcements when appropriately adjusting for risk via the size, value, and momentum factors. In a related study, Krüger (2009) finds that positive CSR-related events do not have a significant association with share price increases.

#### CONCLUSIONS

In the aftermath of the 2008 financial collapse, this paper provides one of the first investigations of return dynamics for socially responsible firms. Identifying a unique sample of firms from Corporate Responsibility Magazine, we examine the return dynamics of a socially responsible portfolio in comparison to a broad-based market portfolio as the performance benchmark. Our findings provide several contributions to the existing literature on corporate social responsibility and financial performance. First, we find that while the news announcement for CSR rankings represents good news, the CSR firms experience similar return behavior to that of a passive market index in the days that follow the news announcement. That is, we find that the socially responsible portfolio attains average returns that are commensurate with its risk relative to the market.

Second, we draw several important insights from the CAPM pricing model. Specifically, we find that the socially responsible portfolio is neither underpriced nor overpriced. In addition, we find that the estimated market  $\beta$  for the socially responsible portfolio is less than unity, suggesting that the CSR portfolio exhibits lower risk than that of the Market portfolio and thus appeals to investors who have relatively risk-averse appetites. We also find that the CAPM pricing regression explains over 96 percent of the time-series variation in the socially responsible portfolio returns.

Third, we find that the average return performance of firms increases as the length of the event window increases. These findings suggest the possibility of several firms benefiting significantly from the CSR rankings in the long-run, and that for some firms, record high financial returns are possible. However, we do not find evidence of superior positive excess standard-deviation adjusted returns for the socially responsible portfolio. This finding suggests that the CSR portfolio exhibits similar return dynamics to the Market portfolio when leveraged to have the identical return standard deviation.

Finally, we present evidence of an increase in cumulative abnormal returns prior to the CSR news announcement. Our finding is consistent with the good news nature of the announcement by Corporate Responsibility magazine. However we find that the drift in the average cumulative abnormal return stabilizes following the news announcement, suggesting that there are no further abnormal profits after adjusting for the size, value, and momentum risk factors.

Several avenues exist for further research. In particular, it is interesting to examine whether the rank ordering of the socially responsible firms may lead to higher returns. For example, one may conduct long-short investment strategies using the sample identified in the present study. Extending the CSR – return relationship documented in this paper, it is interesting to examine whether the top 50 of Corporate Magazine's 100 Best Corporate Citizens are outperforming the firms that comprise the bottom 50 spots on the list. Alternatively, the rank-ordering of the list may not matter for the purposes of evaluating financial performance among the competing firms.

Second, the role of trading volume for Corporate Responsibility Magazine's Best 100 Corporate Citizens remains to be investigated. In particular, do retail investors transact in greater trading volume levels for these stocks? Intuition suggests that a firm's increase in its social responsibility and ethical reputation may lead investors to flock to such stocks. In other words, does trading volume for these stocks subsequently increase following the release of the CSR rankings? Moreover, do the rises in trading volume lead to increased levels of volatility? We leave these topics for future research.

#### **ENDNOTE**

1. When conducting a t-test on the time-series consisting of the differenced daily returns, we are unable to reject the null hypothesis of zero average daily returns across time. Results are available from the authors upon request.

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#### APPENDIX

### FIGURE 1

We plot the cumulative returns of a portfolio comprising the Corporate Responsibility (CR) Magazine's Top 100 Corporate Citizens for 2010 (CR100) and the Market portfolio over time at the daily frequency. The Market portfolio is defined as the value-weight portfolio comprising of all NYSE, AMEX, and NASDAQ stocks. Data is obtained from Standard & Poor's Research Insight database and range from January 2010 through December 2010.



## FIGURE 2

We plot the cumulative abnormal returns for the portfolio comprising of companies that are in the Corporate Responsibility (CR) Magazine's Top 100 Corporate Citizens list for 2010 at the daily frequency for Event Days -20 through 20. Event Day 0 is the news announcement date (March 2, 2010). The market model (blue), Fama-French 3 factor model (red), and Carhart's 4-factor model (dotted black) are used to estimate the abnormal return for each stock. Data is obtained from Standard & Poor's Research Insight database.



nnualized standard deviation of return, Jensen's $\alpha$ ,	I (eSDAR) of the CR100 portfolio relative to the all NYSE, AMEX, and NASDAQ stocks. T-ratios ted as an equal weight portfolio of Corporate \$ 252 times the mean daily return. The annualized e root of 252. Price data is obtained from Standard Is A, B, and C present the performance metrics for rr 2010 time periods, respectively.	
resents the annualized arithmetic mean return, annualized geometric mean return, annua	$\beta$ and adjusted R-squared ( $\overline{R}^2$ ), and the excess standard-deviation-adjusted return (eS folio. The Market portfolio is defined as the value-weight portfolio comprising of all N PM regression estimates are in parentheses. The CR100 portfolio is constructed ity's Best Corporate Citizens for 2010. The annualized mean return is calculated as 252 viation of returns is calculated as the daily standard deviation multiplied by the square roc search Insight Database and range from March 2009 through December 2010. Panels A, 009 – December 2010, March 2009 – March 1, 2010, and March 3, 2010 – December 20	
This table	the CAPM Market pou for the C. Responsibi standard de & Poor's R the March	

: 3/2009-
Panel A

12/2010							
Indox	Annualized Arithmetic Mean Return	Annualized Geometric Mean Return	Annualized Standard Deviation of Returns	Jensen's a	САРМ В	<b>ک</b> [	eSDAR
CR100	37.25%	65.35%	19.62%	0.0001 (0.99)	0.88 (119.83)***	97%	0.009 pps
Market Portfolio	39.35	68.35	21.99	na	na	na	na
Panel B: 3/2009- Before							
CR100	53.89	51.58	21.54	0.0002 (1.33)	0.87 (81.07)***	96	0.0002
Market Portfolio Panel C: After- 12/2010	55.55	52.62	24.30	na	na	na	na
CR100	17.20	13.30	17.09	-3.2E-05 (-0.29)	0.89 (99.22)***	98	-0.003
Market Portfolio	19.85	15.26	18.94	na	na	na	na
no - not one liceblo							

na = not applicable \*\*\*,\*\*,\* denotes statistical significance at the 1, 5, and 10 percent levels, respectively

## TABLE 2

This table presents cross-sectional descriptive statistics for compounded actual rate of returns for the sample stocks. Event Window corresponds to the sample period (in days) preceding and following the announcement date of the 100 Best Corporate Citizens by Corporate Responsibility Magazine. For example, (1, 2) is for the first two return days following the announcement date; (1, 200) is for the first two hundred returns days following the announcement date. End denotes the last trading day of the sample. The announcement date is on Day 0. We present the mean, median, maximum, minimum, and standard deviation (SD). Data is obtained from Standard & Poor's Research Insight database and range from January 2010 through December 2010.

Event						
Window	(-40,0)	(1,2)	(1,50)	(1,100)	(1,150)	(1,End)
Mean	-0.001	0.003	0.045	-0.002	0.027	0.135
Median	-0.003	0.002	0.037	0.004	0.045	0.124
Maximum	0.246	0.056	0.461	0.262	0.444	0.760
Minimum	-0.220	-0.029	-0.241	-0.265	-0.350	-0.195
SD	0.077	0.013	0.103	0.104	0.140	0.165