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Investors' Reaction To The Passing Of The Indian Companies Act, 2013

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Abstract

This research seeks to determine whether mandated corporate social responsibility (CSR) is value relevant to investors, specifically investors of Indian companies affected by the Companies Act, 2013 which requires companies meeting specific financial criteria to spend 2% of their three-year average net profits towards "social initiatives." Recommended social initiatives include the development and implementation of environmentally sustainable business practices. Using the event study methodology, this study compares the cumulative abnormal returns (CAR) of companies recognized as CSR-active on the Bombay Stock Exchange (BSE) with those not recognized as CSR-active. Recognized CSR-active companies were determined through the use of the BSE Greenex and Carbonex indices which track firms' sustainability policies, strategies and accomplishments. This research has found that affected companies recognized as CSR-active are impacted significantly less negatively in terms of CAR than other affected companies. This finding suggests that mandating CSR is relevant to investors concerned with CSR involvement, specifically environmental sustainability.

Chapter 1: Introduction

On August 29, 2013, the Indian government signed into action the Companies Act, 2013 (No. 18 of 2013), aimed at reforming and revamping public company law in India and thereby superseding the old Companies Act of 1956. Of particular interest in the new legislation is Section 135, which mandates public company participation in corporate social responsibility (CSR) through the formation of a Corporate Social Responsibility Committee of the Board (CSR Committee). Section 135 Paragraph 3 states the following regarding the CSR Committee's role:

> "The Corporate Social Responsibility Committee shall, — (a) formulate and recommend to the Board, a Corporate Social Responsibility Policy which shall indicate activities to be undertaken by the company as specified in Schedule VII; (b) recommend the amount of expenditure to be incurred on the activities referred to in clause *(a)*; and (c) monitor the Corporate Social Responsibility Policy of the company from time to time. (Ministry of Law and Justice, 2013)"

The passing of this act signifies a growing international concern for public company involvement in corporate social responsibility, a traditionally voluntary activity. India now joins Indonesia in mandating their publicly traded companies to engage in CSR activities but is the first nation in the world to require annual fulfilment of a numerical threshold. As stated in Paragraph 5, each company's CSR Board must "ensure that the company spends, in every financial year, at least two per cent. of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy", information which must be presented in the company's annual report (Ministry of Law and Justice, 2013). This 2% requirement represents a substantial expenditure of funds and may have large implications on the company's bottom line, thereby affecting investors' valuation of

the company's stock value. Under traditional voluntary CSR involvement, management invests in CSR only the necessary amount to maximize shareholder wealth, therefore mandating a set amount of CSR expenditures may lead management to over-invest and may be counterproductive to shareholder value maximization. In the interest of understanding how investors view this mandatory increase in cash outflow, this paper seeks to analyze further the capital market reactions of the affected companies' stocks.

The aforementioned Schedule VII refers to the activities explicitly recognized by the Indian government as CSR activities that may be included in a company's CSR. The listed activities include social initiatives aimed at improving national and humanitarian welfare. It is interesting to note that while other nations continue to wrestle with whether or not individual companies should be engaging in corporate social responsibility, India has proved to be very bold in pioneering quantifiable reporting of CSR. This may be a product of national differences in business culture ultimately reflected in national legislation. While individual companies in some nations may be more mindful of the market benefits of CSR (despite the persisting debate on the nature and magnitude of these benefits), companies in other nations may be more attuned to other market needs, such as low prices or high distribution. Because of a prevailing cultural consciousness of social welfare in India, the new Companies Act may be the result of the strong ethical environment Arora and Mahajan claim India possesses (2010). Alternatively, the legislation could be the result of a corporation's lack of involvement in social initiatives and an accompanying lack of pressure from market consumers thereby necessitating the legislation. In an ideal free market environment, the private sector would be driven by the dictates of free market investors. Whatever the cause of this push for national-level CSR, this study will focus

on the reactions of Indian company investors only as seen through the Bombay Stock Exchange (BSE).

The underlying concept of CSR stems from R. Edward Freeman's discussion on stakeholders and their significance to corporate decision making. The idea that stakeholders' rights deserve to be valued during the process of corporate strategy has eventually blossomed into the position that stakeholder demand for CSR is integrated into market demand (McWilliams & Siegel, 2001) and that this provides management with a unique opportunity for strategic investment (Foote, Gaffney & Evans, 2010). Because each company is unique in its managerial mindset regarding CSR and the accompanying profitability and risk, each company is sure to be affected uniquely by the required increase in expenditures.

Taking an empirical approach to the Indian Companies Act, 2013, this study seeks to contribute to the growing body of CSR literature by reexamining the ideas that investors value CSR involvement and that the uniqueness of each company's CSR investment needs and capabilities affect how its investors perceive the value of such CSR expenditures in a regulated environment. As such, this research will seek to answer the following questions: 1) Did investors of Indian companies react to government legislation mandating CSR expenditures? 2) Was there significant difference in the reaction of investors of companies that meet the legislation requirement? 3) Was there a significant difference in the reaction of investors of companies considered active in CSR and companies considered less active in CSR? The findings of this research may shed light upon the market effect on the passing of mandatory CSR legislation.

Chapter 2: Literature Review

What is CSR?

Corporate social responsibility is broadly understood to be the voluntary efforts taken by companies to comply with ethical standards and to contribute some kind of social good to society beyond legal requirements. CSR activities may include investments of time, labor or funds to initiatives such as educational grants or sponsorships, promotion of gender and race equality, improvement of infant and maternal health, vocational training, and the development of environmentally friendly business and operational practices. The term also encompasses any contribution of firm assets toward furthering relationships with the communities in which they operate in, improving underdeveloped communities and classes, and mitigating potential environmental or social fallout that occur as a result of their business operations.

As mentioned above, CSR concepts have evolved from merely being seen as an added burden to profit to its treatment as a strategic opportunity to achieve better stakeholder-aligned profitability. Thus, CSR involvement has traditionally been a voluntary, self-regulated decision based upon management discretion (Bowie, 1991). Because of its potentially significant effect on the income statement and the mostly nonfinancial nature of its benefits, management must necessarily examine and reexamine the worth of these activities. Thus, because CSR expenditures have historically been highly variable and tailored to each company's strategic goals and policies, the rigid nature of legislation may cause uncertainty as it will affect each company's level of CSR expenditures differently.

Despite its voluntary tradition, however, it is important to note that CSR involvement may also be dictated by industry as certain industries may require a certain minimum level of CSR involvement to maintain business permits or licenses. India can boast many different

environmental regulations, among them the primary Environment Act, 1986, the Water Act. 1974 and the Air Act, 1981 which serve as key legislation relating to other environmental regulations relating to forest conversation, wildlife protection, biological diversity and hazardous substance management. Despite the number of environmental regulations, the ineffectiveness of these regulations may be a driver for the Companies Act, 2013. Findings by Greenstone and Hanna (2011) suggest that of the two major Water and Air Acts, only the Air Act can be seen as having successfully decreased air pollution. Thus, CSR involvement may be made mandatory by virtue of prevailing environmental regulations on certain industries but still be regarded as ineffective thereby necessitating specific CSR legislation.

Shareholder and Stakeholder Theory

CSR holds roots in two key schools of thought: shareholder theory and stakeholder theory. Shareholder theory, as espoused by Milton Friedman in his book *Capitalism and Freedom* (1962) and his article "The Social Responsibility of Business is to Increase its Profits" (1970), claims that the only true social responsibility a corporation has is to its investors to create as much wealth as possible. According to Friedman, all ethical responsibility is rolled into the understanding that investors' expectations for a firm represent larger societal expectations too. As such, whatever wealth is accumulated by the investors as a result of corporate success ultimately contributes to the broader societal wealth. By this view, any CSR expenditure is ultimately aimed at increasing company wealth and should eventually produce a return on investment. It is notable, however, that Friedman's view of maximizing profit in a free competitive environment without use of fraud does not equal maximizing profit in accordance with society's legal *and* ethical standards (Carson, 1993).

On the other hand, stakeholder theory, as put forth by R. E. Freeman in his book *Strategic Management: A Stakeholder Approach* (1984) revolutionized a corporation's place in society. Stakeholders are identified as groups of individuals affected by and who in turn a company in the normal course of business, among them, company employees, suppliers or vendors, customers, and governmental agencies in addition to a company's investors and creditors. According to Freeman, management's challenge is to direct business operations in a way that takes into account the broader perspective of society, not merely the rules and regulations regarding corporate conduct. By this view, CSR is viewed as more than just a strategy to induce financial performance, but as a way to cultivate relationships with the communities in which and with which the company operates. Accordingly, growth in consumers' standard of living, preservation of the natural environment, growth in quality of employees' lives, and other increases in societal welfare would have positive impact on the sustainable growth of business. From a stockholder theory standpoint, the societal environment would be seen as a mean to an end, while from a stakeholder theory standpoint, the welfare of a company's stakeholders, are made the ends of business operations.

It is possible that private enterprises in free markets view their stakeholders as tools for increasing stockholder value maximization instead of as the ends to their business operations. This kind of thinking would influence company CSR involvement in that they would prioritize investor share returns and maximize activities benefiting other stakeholder groups only if they will have a positive impact for investors. Therefore, despite developments in widespread stakeholder consciousness, practical market applications would still appear to favor investor groups over all other stakeholder groups (Carson, 1993).

Efficient Market Hypothesis

The foundation of this research lies in the assumption that all actors in the market operate rationally and make decisions aimed at maximizing their utility, or benefit. In turn, this understanding means that all rational actions taken by market actors, including legislators working on behalf of their constituents, will affect other market actors, thereby prompting other market actors to make their own rational reaction. Eugene Fama, in his pioneering study of stock market prices, examined how investors react to new development in the market (1965). His efficient market hypothesis (EMH) hold that there are enough investors active within the current market conditions, buying and selling stocks for profit maximization and making decisions based upon available information to influence the movement of stock prices significantly. While studies have found EMH to be empirically sound, there is growing literature suggesting that market price movement is not wholly efficient (Riahi-Belkaoui, 2005).

The weak form of the EMH holds that historical data provides no valuable information for investors therefore market prices follow a "random walk", meaning that the market cannot be predicted (Riahi-Belkaoui, 2005). The strong form holds that the current market equilibrium fully reflects all information available, meaning that all new information, including information not made publicly available, immediately cause reactions in the market (2005). The semi-strong form of the efficient market hypothesis, however, holds that the market equilibrium fully reflects such information that is made publicly available; therefore, no excess return can be gained from acting on public information (2005). This form of the efficient market hypothesis is most crucial to accounting research as financial statements are part of public information and may perhaps be the most important form of financial information made available to investors regarding their investments (2005). Operating upon the semi-strong assumption, much of market research is

aimed at viewing how quickly market prices adjust to events (when new information is made available) or the magnitude of market price changes in reaction to the event.

CSR and Profitability

Ongoing discourse regarding CSR is examining how engagement in CSR may increase company profits and long-term stakeholder value along with exactly how much CSR companies should be investing in for the most benefit. Recent studies have found that because investors do value companies perceived to be involved in CSR, it is beneficial for companies to voluntarily invest in such activities (Vasal, 2009). Others believe that the benefits to the stakeholders and, in the reflection, the company are such that CSR should be made widespread, mandatory part of business (Bowen, 1988). In closer examination of CSR's benefits to the company, several researchers have found a positive relationship between CSR involvement and company financial performance (Balabanis, Phillips, & Lyall, 1998; Flammer, 2013) or between CSR involvement and company share price performance (Powell and Weaver, 1995; Vasal, 2009). Some researchers found no relationship between managerial mindset regarding CSR and their company's profitability (Aupperle, Carroll & Hatfield, 1985) while others have found that while there may be some positive relationship between CSR involvement and company performance, either financially or market-based, most of share price return benefits enjoyed by investors from CSR involvement diminish as the investors' perceived need for the company's CSR involvement decreases (Becchetti et al., 2012; Groening & Kanuri, 2013). McGuire, Sundgren and Schneeweis (1988) particularly believe that a company's CSR efforts serve it best by reducing risk and making it a more attractive company in which to invest.

Regarding the crucial element of how much to spend on CSR, Aupperle et al. (1985) found that there is really no sweet spot in order to maximize profitability through CSR

investment, as there is no real relationship between the two. While Bowen (1988) believes that companies should be required to engage in CSR activities, McWilliams and Siegel (2001) find that the ideal level of CSR is necessarily unique to each company, its mindset towards CSR and its needs and capabilities. Questions raised by these researches reveal tensions surrounding the choice to engage in CSR and the extent to which a company should engage have only intensified management's need to understand how investments in CSR should be treated as an investment and strategic decision.

Mandated CSR

Traditionally, U.S. companies are not required by law to engage in CSR expenditures but are bound by the Sarbanes-Oxley Act of 2002 to be transparent and honest in their financial statements. This requires disclosures regarding the nature and valuation of certain transactions, assets and liabilities, including those that do not appear in the financial statements, thereby enforcing fiduciary responsibility among companies (Sarbanes-Oxley Act, 2002). This transparency mandate has generally been viewed as a best practice for both public and private companies (Joffe & Titus, 2004). In 2008, Denmark passed legislation requiring its 1,100 largest companies, investors and state-owned investors to disclose their CSR policies, implementation, results and expectations in their financial reports. While CSR involvement remains voluntary among Danish companies, this legislation requires companies to not only disclose their CSR policies but also disclose whether or not they have an active CSR policy in the interest of encouraging CSR involvement (Danish Business Authority, 2013).

The first instance of mandated CSR appears in Indonesia's Limited Liability Companies Act of 2007 in which Indonesian companies are required to implement a corporate social and

environmental responsibility policy that includes disclosure of CSR budgeting and expenditures (House of Representatives, The Republic of Indonesia, 2007). This legislation is the first in the world to require CSR expenditures of some amount and was likely part of a government effort to prevent and mitigate environmental and social damage caused by foreign companies' business operations. Early research on mandated CSR by Erich (2014) reveals that mandated CSR may have positive effects on share price returns but only for companies operating in high-risk, environmentally-related industries, such as mining and construction. This suggests that investors view mandated CSR as value-creating to their companies when it can mitigate the high risk inherent in their industry, but not value-creating when their companies operate in low-risk industries. Following in the footsteps of Indonesia, the Indian Companies Act refines this approach to mandated CSR by placing a minimum amount on such CSR expenditures, thereby providing an opportunity for expanded research into mandated CSR.

This trend towards government-mandated CSR reveals an interesting development in both governmental and management-driven corporate thought. While most arguments in favor of CSR are usually viewed in terms of its financial value for companies, the rationale behind mandating CSR may also be motivated by broader concepts such as customer and investor satisfaction. By mandating CSR, governments can ensure a more uniform level of corporate compliance and also mitigate much of NGO complaints regarding companies' societal involvement. From another point of view, firm CSR expenditures may be a way to privatize government community projects. In developing countries, CSR legislation may be used by governments to keep company environmental business practices in line. As in the case of Indonesia's Limited Liability Act, mandated CSR may have been a way to curb companies' unregulated exploitation of local environmental and labor resources (Erich, 2014).

CSR legislation may also be driven by consumer inability to pressure corporations into becoming more CSR-friendly. Consumers in Indonesian and India may not have the power to dictate much of corporate action due to a lack of buying power. In such nations with low per capita income, price competitiveness often takes priority over CSR-friendly processes and products. As such, consumers may not be able to push companies into more CSR involvement based on market demand.

It is interesting to note that while the United States is typically viewed as a global leader in change, both pioneering CSR legislations were passed by Asian countries. One factor that may account for this trend is the more collective nature of business culture in India and Indonesia. Asian countries typically espouse business practices that places emphasis on group priorities than individual priorities. As such, collective countries would typically lean more towards socialist government. While both countries have gradually shed socialist economic structures, much of the underlying thought regarding sharing resources, cooperation and relationship networks persist in both Indian and Indonesian day to day life. The United States, on the other hand, is generally characterized by a high level of individualism causing companies to be motivated by company-specific goals and priorities. In India's case, Arora & Mahajan's review of Indian business culture suggests that the country holds a strong ethical atmosphere due to its history of ethics thinkers, most notably among them Mahatma Gandhi (2010).

These factors, while not the focus of this research, should be expected to influence the reactions of management and investors towards legislation and may be suggestive of potential differences in results between culturally different regions.

Hypotheses

The voluntary nature of traditional CSR involvement is a key issue in regards to the Companies Act and its potential effects. Voluntary CSR involvement implies that such expenditures are deemed by each individual company's management and, indirectly, by their investors as constructive to company value (Bowie, 1991; Vasal, 2009). Financial performance, a key goal of both management and investors, has also been traced to correlation with CSR expenditures (Balabanis et al., 1998; Flammer, 2013). CSR-involved companies may also be perceived as more attractive investments due to reduced market risk resulting from conscientious CSR expenditures but only to a certain degree (Erich, 2014; McGuire et al., 1988).

In light of this, investors in the BSE market would be expected to revise their investment portfolio upon the Indian government making CSR involvement mandatory. Investors in companies that will be forced to over-invest in CSR activities (most likely, these are companies that may not be widely known to be leaders in CSR involvement) will divest their holdings while investors in companies that are widely known to be leaders in CSR involvement may be minimally impacted. This expectation is expressed in the following null forms:

H_{01}: The mean cumulative abnormal return during the window period is equal to zero.

H_{02}: The mean cumulative abnormal return for companies affected by the legislation does not differ from the mean cumulative abnormal return for companies not affected by the legislation.

H_{03}: The mean cumulative abnormal return for companies recognized as CSR-active does not differ from the mean cumulative abnormal return for companies not recognized as CSR-active.

Chapter 3: Methodology

The event study was pioneered by Fama's 1965 study of U.S. market stock splits but popularized by Ball and Brown's study of share price returns due to changes in accounting numbers (1968). Since then, accounting-based market research has bloomed due to greater transparency and reliability in share prices. This methodology is highly versatile but is specifically attuned to capital market studies in which the event study methodology is highly acclaimed and widely used. Capital market studies often vary on the abnormal return derivation models but the steps used in collect, calculation and analysis are similar and highly reliable (Riahi-Belkaoui, 2005).

Using the event study, this research will measure investor reactions towards the Companies Act by recording cumulative abnormal returns (CAR) of company share prices. The event study methodology as described by Riahi-Belkaoui (2005) requires the following seven elements: (1) definition of the event and the event window, (2) definition of selection criteria for a sample of companies, (3) derivation of normal and abnormal returns, (4) *beta* estimation procedure, (5) definition of the null and alternative hypotheses, (6) presentation of data, and (7) interpretation and conclusion of the data. These elements are outlined below:

1) The event is defined as Thursday, August 29, 2013 (Day 0), the date of the legislation's passing (announcement), and the event window will encompass the day preceding the announcement, Wednesday August 28, 2013 (Day -1) through the day succeeding the announcement, Friday, August 30, 2013 (Day +1).

2) The legislation is applicable to companies with either of the following three criteria: 1) net worth exceeding Rs. (rupees) 5 billion, 2) sales turnover exceeding Rs. 100 billion, or 3) net profit exceeding Rs. 50 million. We obtained a listing of all companies listed on the Bombay Stock Exchange in 2010 to account for availability of monthly data at the beginning of the *beta* estimation. To find the most complete population sample size possible, the financial statements of each of the 1,203 listed companies will be checked that they fall under the provisions of the legislation. Each company must have daily share price data for the event window and monthly share price data for the *beta* estimation period available through the BSE. Companies will also be screened for other significant company events during the event window that may incite abnormal returns, such as bankruptcy and change in management.

3) To calculate the normal, or expected, return (ER) of a stock ($E(R_{jt})$), Sharpe's Capital Asset Pricing Model (CAPM), also called the market model, as delineated by Riahi-Belkaoui (2005) is used:

$$E(R_{it}) = R_{ft} + \beta[E(R_{mt}) - R_{ft}]$$

where:

$E(R_{it})$ = the expected return of security i in period t

R_{ft} = the return on a riskless (risk-free) asset in period t; in this case, the Indian Reserve Bank (IRB) repo rate (key interest rate) which stands at 7.25% or 0.0725

$E(R_{mt})$ = the expected return on the market portfolio in period *t*; in this case, the actual market returns of the S&P BSE Index on each day of the event window: 0.001562 (Day -1), 0.022499 (Day 0), and 0.011884 (Day +1)

β = the risk coefficient

Beta measures a company's sensitivity to market performance is a crucial variable in the CAPM. *Beta* will be calculated using the following formula:

$$\beta = \frac{\sigma(R_{it}, R_{mt})}{\sigma^2(R_{mt})}$$

where:

$\sigma (R_{it}, R_{mt})$ = the covariance between R_{it} and R_{mt}

$\sigma^2 (R_{mt})$ = the variance of the return on the market portfolio

Actual realized return can be calculated as follows:

$$\frac{R_{it} = (P_{it} - P_{it-1})}{P_{it-1}}$$

where:

R_{it} = the return of security *i* in period *t*

P_{it} = the price of security *i* at period *t*

P_{it-1} = the price of security *i* at period *t – 1*

Abnormal return (AR) is then calculated as the difference between the realized return and the expected return (ER) as follows:

$$AR_{it} = R_{it} - E(R_{it})$$

To measure the cumulative reaction of the market, cumulative abnormal returns (CAR) during the event window *j* is calculated as follows:

$$CAR = \sum AR_{itj}$$

Companies with extreme CAR were excluded from the sample to control for outliers.

4) The original target for the *beta* estimation period was 48 months, however, was reduced to 36 months starting from August 2010 through August 2013, thus excluding 2009 during which the capital market experienced sharp recovery from the 2007 recession. By excluding this period, we are able to ensure that *beta* estimation is based on a more normalized period. We collected monthly share price data to reduce daily noise and excluded companies with extreme *betas* to control for outliers.

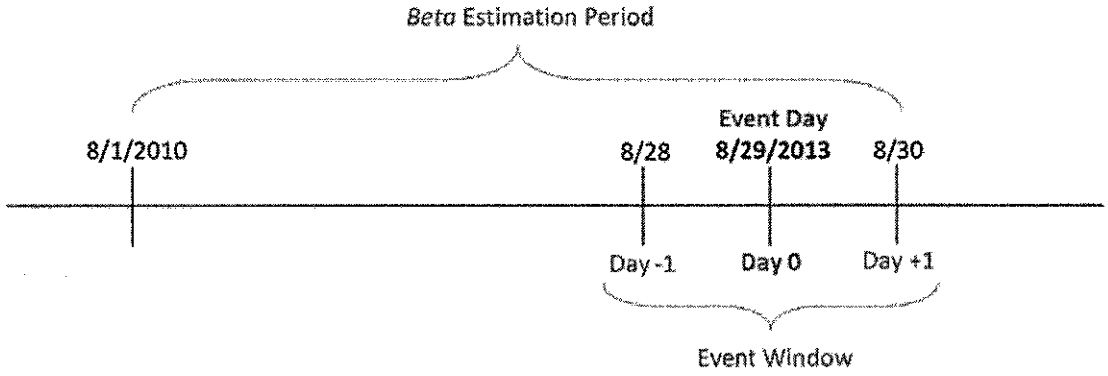

Figure 1: Event Study Timeline

5) To answer the first research question—Did investors of Indian companies react to government legislation mandating CSR expenditures?—the first null hypothesis (H_{01}), that the MCAR during the window period is equal to zero, will be tested against the alternative hypothesis (H_{a1}), that the MCAR during the window period is not equal to zero. The null and alternative hypotheses are expressed in the following equations:

$$H_{01}: MCAR_{itj} = 0$$

$$H_{a1}: MCAR_{itj} \neq 0$$

where $MCAR_{itj}$ indicates mean cumulative abnormal returns (MCAR) during the event window. If the null hypothesis is rejected, we will accept the alternative hypothesis, indicating that investors of Indian companies do react towards mandated CSR.

To answer the second research question—was there significant difference in the reaction of investors of companies that meet the legislation requirement?—the second null hypothesis (H_{02}), that MCAR for companies affected by the legislation does not differ from the MCAR for companies not affected by the legislation, will be tested against the alternative hypothesis (H_{a2}), that MCAR for companies affected by the legislation does differ from the MCAR for companies not affected by the legislation. The null and alternative hypotheses are expressed in the following equations:

$$H_{02}: MCAR_{Aj} = MCAR_{Uj}$$

$$H_{a2}: MCAR_{Aj} \neq MCAR_{Uj}$$

where $MCAR_{Aj}$ indicates MCAR of affected companies during the event window and $MCAR_{Uj}$ indicates MCAR of unaffected companies during the event window. If the null hypothesis (H_{02}), that MCAR for companies affected by the legislation does not differ from the MCAR for companies not affected by the legislation, is rejected, we will accept the alternative hypothesis (H_{01}), that MCAR for companies affected by the legislation does differ from the MCAR for companies not affected by the legislation, indicating that investors of companies required to comply with the minimum CSR expenditures and investors of companies not required to produce CSR expenditures reacted to the legislation differently.

To answer the third research question—Was there a significant difference in the reaction of investors of companies considered active in CSR and companies considered less active

in CSR?—this study tests the third null hypothesis (H_{03}), that MCAR for companies recognized as CSR-active does not differ from the MCAR for companies not recognized as CSR-active, will be tested against the alternative hypothesis (H_{a3}), that MCAR for companies recognized as CSR-active does differ from the MCAR for companies not recognized as CSR-active. The null and alternative hypotheses are expressed in the following equations:

$$H_{03}: MCAR_{Gj} = MCAR_{Nj}$$

$$H_{a3}: MCAR_{Gj} \neq MCAR_{Nj}$$

where $MCAR_{Gj}$ indicates MCAR of companies recognized by the BSE Greenex or Carbonex indices as companies with environmentally friendly business operations strategies and implementation policies. These indices were utilized to differentiate companies already engaging in CSR expenditures and companies that are not. Rejection of the null hypothesis (H_{03}), will lead to accepting the alternative hypothesis (H_{a3}) which indicates that the investors of companies recognized as CSR-active and investors of companies not recognized as CSR-active react differently to the legislation.

For extended analysis, $MCAR_{AGj}$, MCAR of affected companies already engaging in CSR, is compared against $MCAR_{ANj}$, MCAR of affected companies not already engaging in CSR, to more robustly test for differences between levels of voluntary CSR expenditures. Since companies already voluntarily spending cash towards CSR will be less pressured to budget for CSR, it would be expected that investors of these companies to react in a more positive manner towards the legislation as compared to investors of companies now forced to increase costs for this mandated CSR.

6) To test the first null hypothesis (H_{01}), this study uses a one-sample t-test to test for MCAR equality to zero using a 95% confidence interval. To test the second null hypothesis (H_{02}), an independent sample t-test to test for equality of means is used with a 95% confidence interval. To identify the separate samples, this study identified the companies having net worth, sales turnover or net profit exceeding the legislation's criteria (affected companies) and the companies not meeting the legislation's criteria (unaffected companies). MCAR for each category are then calculated and tested for equality. To test the third null hypothesis (H_{03}), an independent sample t-test to test for equality of means was used with a 95% confidence interval. To identify the separate samples, companies listed on the Greenex or Carbonex indices were identified and noted. MCAR was calculated for companies listed on the Greenex or Carbonex and for companies not listed and then tested for equality. Furthermore, companies that were both affected and listed on the Greenex or Carbonex were differentiated from companies that are affected and but not listed on the Greenex or Carbonex, and their respective MCARs were tested for equality.

7) Visual representation of the findings will be presented through simple line charts. The implications of the findings will be examined and will hopefully serve as resources to policymakers exploring similar CSR legislation.

Chapter 4: Findings and Analysis

As of 2010, there were 1,203 companies listed on the BSE. Of this number, 2013 and 2014 financial statement data was collected for 1,132 companies for which data was available. Monthly share price data was collected for the 36-month *beta* estimation period, from approximately August 1, 2010 through August 1, 2013. These were used to estimate each company's *beta* using the formula noted in the methodology chapter. Daily share prices were then collected for each company for each day in the event window, August 28 through August 30. Using each company's *beta* estimate, ER was calculated using the formula noted in the methodology chapter and subtracted from actual returns, thereby obtaining each company's AR. By summing the AR over the three days of the event window, CAR can be derived to be used in statistical testing. Twenty companies were excluded due to missing daily share prices for AR calculation or inadequate monthly share price data for *beta* calculation, excluded five companies due to extreme *beta* values, and excluded four companies due to extreme CAR values. Of the remaining 1,103 companies qualifying for analysis, we noted that 817 companies were affected by the legislation by virtue of exceeding the legislation's net worth, sales turnover and net profit criteria.

Upon collection of data, it was noted that the largest abnormal returns occurred on Day 0, August 29, 2013, the day of the passing of the legislation, with average negative AR of -1.6048%. Negative average abnormal returns of -1.0073% and -1.0133% were also noted on Day -1 and Day +1 respectively (see Figure 2). The first null hypothesis (H_{01}), that the mean cumulative abnormal return during the window period is equal to zero, was tested using a one-sample t-test of difference.

The SPSS printout of this test is presented in Appendix A and the summary is presented in Table 1 and Figure 2. The sample of 1,103 companies was found to have MCAR of -0.036547. The t-test reveals that H_{01} can be rejected with 95% confidence as the probability of error, 0.000, is lesser than the tolerable error, α, of 0.05. This indicates that the Companies Act produced significant, negative reactions from investors.

Table 1. MCAR Equality to Zero

	n	Mean	t-stat	Sig. (2-tailed)
CAR - 3 days	1103	-0.03655	-22.862	0.000

Because Section 135, the section of the legislation containing the CSR requirement, is only part of the Companies Act, 2013, this finding alone cannot be used as a basis to conclude that the CSR mandate drives the negative reaction during the window period. The sample was thus categorized between companies that are affected by the CSR legislation and companies not affected by the CSR legislation in order to view its effect on relevant investors. MCAR of both affected and unaffected companies were tested for equality to zero then compared using a two-sample independent t-test for equality of MCAR to test H_{02}, that the mean cumulative abnormal return for companies affected by the legislation does not differ from the mean cumulative abnormal return for companies not affected by the legislation.

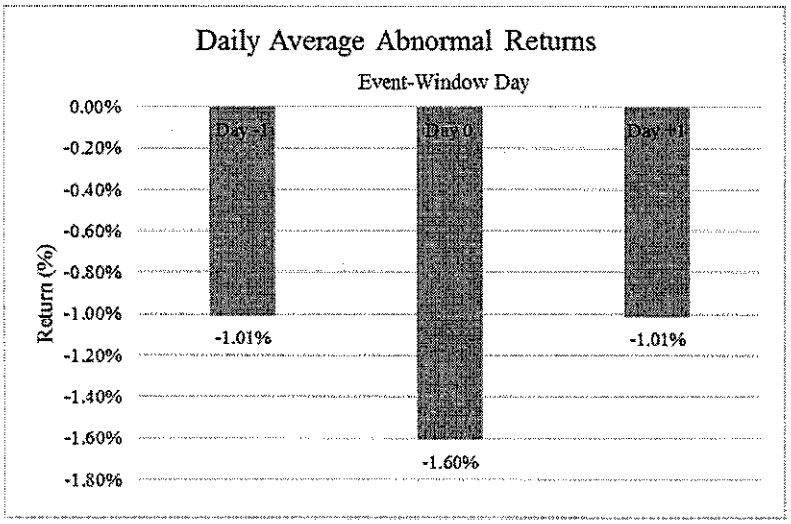

Figure 2: Average abnormal returns for qualifying companies were -1.01% on Day -1, -1.60% on Day 0, and -1.01% on Day +1.

The SPSS printout of this test is detailed in Appendix B and the summary of the findings is presented in Table 2 and Figure 3. Of the pool of 1,103 companies, 817 companies were affected and 286 companies were not affected. Affected companies were found to have MCAR of -0.034626 while unaffected companies were found to have MCAR of -0.042036. The test for equality of MCAR to zero suggests that the MCAR of both affected and unaffected companies are equal to zero with t-statistic -19.49 (sig. 0.00) and-12.059 (sig. 0.00) respectively. These findings indicates that both groups were affected negatively by the passing of the legislation, though the legislation affected the unaffected companies slightly more negatively.

Table 2. Test for equality of MCAR to zero and two-sample t-test for equality of MCAR

	n	Mean	t-stat	Sig. (2-tailed)	Levene's Test for Equality of Variance	t-statistic Equal Variance Not Assumed	Sig. (2-tailed) Equal Variance Not Assumed
Affected	817	-0.03462	-19.49	0.000	0.003	1.894	0.059
Unaffected	286	-0.04204	-12.059	0.000			

Levene's test for equality of variance shows a significance value lesser than 0.05 indicating that the assumption that both groups have equal variance was not met. The H_{02} is then tested assuming unequal variance, where the significant value is compensated to allow for reliable conclusion. The test of equality of MCAR of affected companies and unaffected companies failed to reject H_{02} because the probability of error is 0.059 which exceeds the

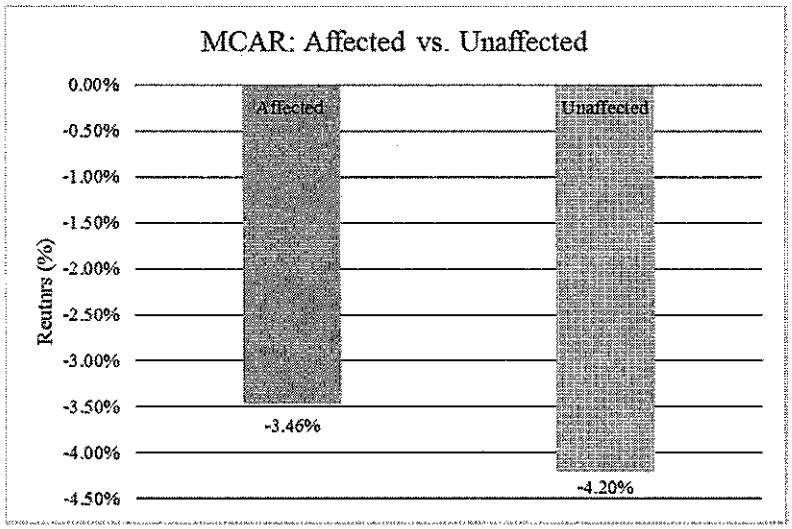

Figure 3. MCAR of affected companies is less negative than that of unaffected companies.

tolerable error of 0.05. It is therefore concluded that the MCAR of affected and unaffected companies are not different.

This finding indicates that, in general, companies that are affected by the CSR mandate as regulated in the Companies Act are affected in a similar way to companies that are not affected by the CSR rules. Investors in both group of companies react negatively to the Company Act and, therefore, failed to help isolate the differential effect of Section 135 on CSR-concerned investors. The sample is therefore further grouped into companies that are recognized to be involved in CSR activities and companies that are not. The BSE recognizes companies as involved in CSR by listing them in the BSE Greenex and BSE Carbonex indices.

The legislation's effect on investors is thus further tested by testing for H_{03}, the mean cumulative abnormal return for companies recognized as CSR-active does not differ from the mean cumulative abnormal return for companies not recognized as CSR-active. A two-sample independent t-test for equality of MCAR was used to test H_{03}. The SPSS printout of this test is presented in Appendix C and the findings summarized in Table 3 and Figure 4.

Table 3. Test for equality of MCAR to zero and two-sample t-test for equality of MCAR

	n	Mean	Levene's Test for Equality of Variance	t-stat	Sig. (2-tailed) Equal Variance Assumed
Greenex-Carbonex Firms	91	-0.02083	0.995	2.96	0.003
Non-Greenes-Carbonex Firms	1012	-0.03796			

Table 3 reveals that out of 1,103 companies, 91 companies were listed on either the Greenex or Carbonex indices and 1,012 companies were not. Companies listed in Greenex or Carbonex indices were found to have MCAR of -0.02083 while companies not listed in the Greenex or Carbonex indices were found to have MCAR of -0.03796. Levene's assumption test

reveals that both groups have equal variances and, therefore, H_{03} is tested assuming equal variance. The test were able to reject H_{03} at 95% confidence level because the probability of error, 0.003, is lower than α of 0.05. This test reveals that the MCAR of companies recognized to be CSR-active are significantly different from companies that are not recognized to be CSR-active.

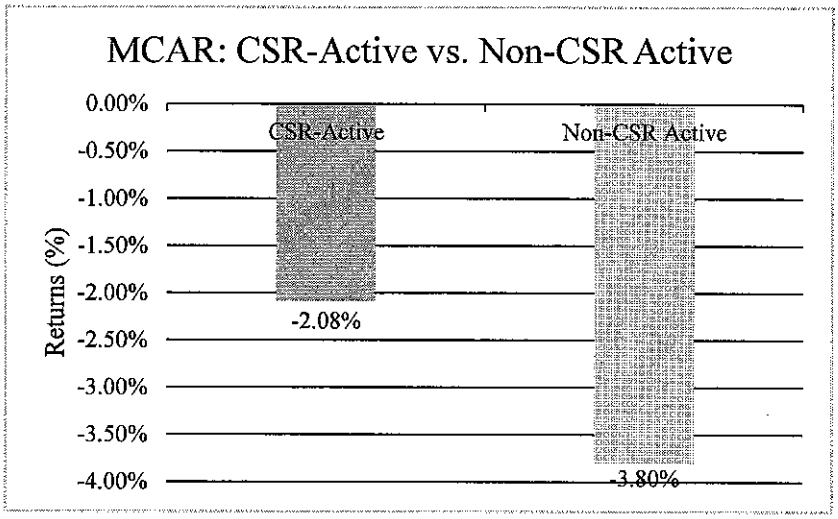

Figure 4: MCAR of CSR-active companies is less negative than that of non-CSR active companies.

This approach seemed to help isolate the CSR rule effect from the remaining legislation contained in the Companies Act. Both groups of companies are generally still negatively affected by the requirement of the Companies Act, however, the firms recognized to be CSR-active are affected less severely compared to firms not recognized to be CSR-active. This finding is consistent with prior research that CSR engagement may result in higher profitability (Balabanis et al., 1998; Flammer, 2013; Powell and Weaver, 1995; Vasal, 2009) and reduce risk (McGuire et al., 1988), thereby creating value for investors. This supports the reasoning that CSR spending prescribed by the legislation will affect each company differently depending on their current CSR involvement. As such, companies already recognized as being CSR-active would be less impacted by the CSR requirement, while companies not recognized as engaging in CSR expenditures will face more negative investor reactions due to their increased liability.

Furthermore, companies that may have to spend more than their discretionary level of CSR would see more negative returns due to the forced increase in cash outlay. This notion is

based on the argument that on voluntary basis, management of each company determines the optimum value-maximizing level of CSR, and any additional expense required by the Companies Act would constitute a relocation of funds from other strategic initiatives, triggering negative investor reactions.

To further analyze the results of H_{03}, the 817 companies that meet the Companies Act criteria for mandated CSR were grouped into companies that are recognized as CSR-active and companies that are not recognized as CSR-active. As in the first test of H_{03}, companies that are recognized as CSR-active are companies listed in the BSE Greenex or BSE Carbonex indices. The SPSS printout of this test is presented in Appendix D and summarized in Table 4 and Figure 5. Of the 817 affected companies, 90 companies were listed on the Greenex or Carbonex indices while 727 were not. It was found that the Greenex or Carbonex listed companies had MCAR of -0.02077 and companies not listed in the Greenex or Carbonex indices had MCAR of -0.03634.

Table 4. Test for equality of MCAR to zero and two-sample t-test for equality of MCAR

	n	Mean	Levene's Test for Equality of Variance	t-stat	Sig. (2-tailed) Equal Variance Assumed
Affected Greenex-Carbonex Firms	90	-0.02077	0.48	2.756	0.006
Affected Non-Greenes-Carbonex Firms	727	-0.03634			

Levene's test for equality of variance indicates that conclusion can be reliably made assuming for equal variance. The results indicate that it can be concluded with 95% confidence, as the probability of error, 0.006, is lower than α, of 0.05, that the MCAR of companies both affected by the legislation and listed in the Greenex or the Carbonex are significantly different from MCAR of companies affected by the legislation but not listed in the Greenex or Carbonex indices.

This finding further supports the expectation that investors in companies with recognized established policy of CSR involvement and are affected by the CSR requirement of the Companies Act were significantly less negatively affected compared to investors in companies with less recognized policy of CSR involvement. It is interesting to note that the results for this test are very similar to the test result for H_{03}, indicating that almost all of the companies recognized as actively engaging in CSR are also affected by legislation.

The fact that investors in all companies, whether affected by the CSR requirements of the Companies Act or not, or recognized to be CSR-active or not, were affected negatively in the window period indicates that, as a whole, the Company Act was perceived negatively by investors. However, despite the overall negative reactions, investors of companies recognized to be CSR-active, therefore having significantly higher CSR expenditures, find the mandated CSR legislation to be less burdensome on their companies.

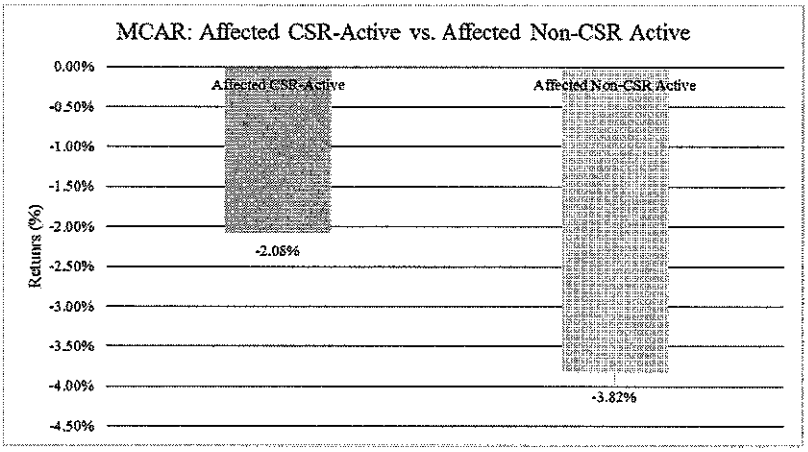

Figure 5: MCAR of CSR-active companies is less negative than that of non-CSR active companies.

Chapter 5: Conclusion and Recommendations

This study was aimed at determining whether investors view legislation-mandated CSR to be value-creating to their companies. To accomplish this, this study observed the reaction of investors of Indian companies towards the passing of the Indian Companies Act, 2013 which requires all public companies to spend at least 2% of their average net profits of the past three years on CSR-related activities. This study concludes that as a whole, the Indian Bombay Stock Exchange reacted negatively to this legislation, indicating that investors do not find this valuable for their companies. Furthermore, it be can be concluded that while investors of CSR-active companies did not react as negatively compared to non-CSR active companies, these investors still do not necessarily view mandated CSR as value-creating to their companies. Thus, the results of this research show that while CSR involvement may be valuable to investors, mandating CSR universally may not be appropriate.

While the purpose of this study was not to advance arguments for or against corporate social responsibility, it must also consider the important implications posed for nations considering adopting similar legislation. Firstly, mandating a minimum amount of CSR spending may result in decreased profitability for companies who now have to spend more than their strategic optimum level of CSR. Secondly, mandated CSR may only be valuable in certain situations, as in situations in which companies are not appropriately addressing incidents of corporate irresponsibility. Thirdly, if the motive of the legislation was to generate financial support for social welfare projects, mandating that companies make CSR endeavors may not be the most effective method of accomplishing those goals. Because the legislation allows companies to direct their CSR expenditures according to their own discretions, government-targeted social initiatives may not receive as much funding as expected. However, if the motive

of the legislation is to stimulate homegrown initiatives, the Companies Act, 2013 may push companies to take better care of the communities and locations in which they operate, thereby contributing to societal improvement in India.

Future CSR research should also include Indian companies that invest in other forms of social initiatives other than investments in the natural environment. Since CSR has been suggested as being valuable in high-risk business environments, future research should also seek to confirm whether Indian companies respond to mandated CSR based on their companies' risk profiles. Furthermore, the Companies Act, 2013 is the first legislation in the world to provide a quantitative floor for CSR spending, thereby providing a prime opportunity to understand how companies with varying original levels of voluntary CSR involvement react, in terms of share price returns and/or financial performance.

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Appendix A: One-Sample T-Test for Difference from Zero

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
CAR3	1103	-.036547	.0530920	.0015986

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
CAR3	-22.862	1102	.000	-.0365474	-.039684	-.033411

Appendix B: Two-Sample Independent T-Test for Equality of Means

Group Statistics

	AFFECTED	N	Mean	Std. Deviation	Std. Error Mean
CAR3	1.00	817	-.034626	.0507801	.0017766
	.00	286	-.042036	.0589527	.0034859

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
CAR3	Equal variances assumed	8.966	.003	2.034	1101
	Equal variances not assumed			1.894	441.862

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence ... Lower
CAR3	Equal variances assumed	.042	.0074094	.0036428	.0002823
	Equal variances not assumed	.059	.0074094	.0039125	-.0002801

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the ...	
		Upper	
CAR3	Equal variances assumed	.0145565	
	Equal variances not assumed	.0150989	

Appendix C: Two-Sample Independent T-Test for Equality of Means

Group Statistics

	GREENCARBON	N	Mean	Std. Deviation	Std. Error Mean
CAR3	1.00	91	-.020825	.0498332	.0052239
	.00	1012	-.037961	.0531711	.0016714

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
CAR3	Equal variances assumed	.000	.995	2.960	1101
	Equal variances not assumed			3.124	109.268

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence ... Lower
CAR3	Equal variances assumed	.003	.0171364	.0057901	.0057756
	Equal variances not assumed	.002	.0171364	.0054848	.0062660

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the ...	
		Upper	
CAR3	Equal variances assumed	.0284972	
	Equal variances not assumed	.0280068	

Appendix D: Two-Sample Independent T-Test for Equality of Means

Group Statistics

	GREENCARBON	N	Mean	Std. Deviation	Std. Error Mean
CAR3	1.00	90	-.020766	.0501092	.0052820
	.00	727	-.036342	.0506330	.0018779

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
CAR3	Equal variances assumed	.499	.480	2.756	815
	Equal variances not assumed			2.779	112.700

Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence ... Lower
CAR3	Equal variances assumed	.006	.0155760	.0056516	.0044827
	Equal variances not assumed	.006	.0155760	.0056059	.0044695

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the ...	
		Upper	
CAR3	Equal variances assumed	.0266894	
	Equal variances not assumed	.0266826	