Board Independence and the Efficiency of Social Reporting

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ABSTRACT

This paper investigates the effect of board independence on the association between CSR reporting and shareholders' welfare. Our findings suggest that independent directors promote the firm's good citizenship image through boosting societal conscience. We also show that the effect of social disclosure on the firm's risk and performance is favorably affected by the participation of independent directors on corporate boards. Accordingly, this article suggests that improved monitoring increases the efficiency of societal reporting. Independent directors may help direct part of the firm's scarce resources towards winner social projects. In addition, board independence is said to elevate the reliability of the disclosed information and amplify its signaling power regarding the firm's future prospects.

Keywords: CSR Disclosure, Board Independence, Risk, Firm Value.

1. INTRODUCTION

Is the efficiency of social reporting affected by the firm's monitoring environment? Does board independence escalate the firm's awareness towards societal issues? Would the participation of independent directors enhance the impact of social disclosure on shareholders' welfare? We attempt to answer these questions by investigating the effect of board independence on social disclosures and, consequently, the association between societal consciousness and the firm's risk and performance.

Corporate social responsibility (CSR) has lately gained more significance and has become an essential factor in most firms' business plans and agendas. Companies are being held more accountable for the welfare of their societies. Stakeholders as well as stock participants tend to seek more information regarding firm's social activities. Hence, many firms are now promoting their engagement in social activities by disseminating voluntarily social, environmental, and governance information through annual reports as well as their company websites. However, the literature offers mixed evidence on the efficacy of social disclosures and whether they amplify shareholders' well-being. (See El Ghoul, Guedhami, Kwok and Mishra 2011; Griffin and Mahon 1997; Orlitzky 2001; Orlitzky, Schmidt and Rynes 2003; Margolis and Walsh 2003; Margolis, Elfenbein and Walsh 2009; Murray, Sinclair, Power and Gray 2006.) Accordingly, in this article, we offer a further understanding of the CSR-firm value relationship by highlighting its dependence on the soundness of the firm's governance structure.

The presumptive assumption is that higher level of board independence enhances firm's governance and improves corporate decision making. Jensen (1993) highlights the superiority of independent directors in overseeing the firm activities as compared to inside board members. Extensive literature documents that board independence boosts the soundness of the firm's monitoring environment (Fama 1980; Fama and Jensen 1983;

Weisbach 1988; Borokovich, Kenneth, Parrino and Trapani 1996; Guo and Masulis 2014). On the other hand, the detriment to independent directors' involvement on corporate boards is their lack of firm-specific knowledge. This gives rise to the costs related to information asymmetry, coordination, and free rider problems.[1]

This paper hypothesizes that the association between the firm's engagement in social activities and shareholders' interests is influenced by the quality of board monitoring. That is, the value of socially-related investments depends on the participation of independent directors on corporate boards. Jo and Harjoto (2011) suggest that independent directors play a significant role in the choice of CSR activities. Specifically, independent board members prevent social over-investment and/or investing in non-productive societal activities. Jizi, Salama, Dixon and Stratling (2014) imply that independent directors are associated with higher transparency and help direct resources towards long-term value enhancing projects.

We start by investigating the implications of board independence on social disclosure. Board independence is expected to have a positive influence on the level and quality of voluntary disclosures in order to promote the firm's image as a good citizen. Ibrahim, Howard, and Angelidis (2003) propose that independent directors promote long-term sustainability projects such as engaging in and reporting on socially-responsible investments. Our findings confirm the direct relationship between the participation of independent directors and social disclosure. Firms with higher levels of board independence are spending more on socially-related activities and/or are choosing to invest in effectual social projects.[2] But is the appreciation in societal conscience, which is triggered by board independence, efficient? On the one hand, enhanced board monitoring may assist in directing resources towards value-enhancing projects. Furthermore, social disclosure sends a promising signal to investors regarding the firm's future cash flows.[3] Subsequently, higher board independence is expected to positively influence CSR's signaling power and the investors' perception towards

the reliability of the disclosed information. In contrast, the firm may be over-investing or financing invaluable social projects. In such a case, independent directors' lack of firm-specific knowledge may be inducing them to support inefficient social spending.

Accordingly, we proceed to inspect the efficacy of the documented positive relationship between board independence and social disclosure. CSR disclosure efficiency is analyzed based on its effect on the firm's risk and performance. Compared to low independence boards, our results suggest a significant converse effect of social disclosure on firm risk at high levels of board independence.[4] In addition, we observe a significant appreciation in the effect of CSR disclosure on firm value at high independence participation levels relative to low independence boards.[5] Hence, board independence encourages valuable societal reporting and spending. Amplified monitoring transmits positive signals to stakeholders regarding the firm's social activities and, thus, benefits shareholders' welfare through its advantageous impact on the firm's risk and performance.

This paper adds to the growing body of literature on CSR and its implications on shareholders' well-being. We complement the existing literature by documenting the impact of corporate governance on the efficiency of social disclosure. The current paper breaks from the existing literature by showing that an appreciation in board independence enhances the effectualness of socially-related investments. In other words, higher levels of board monitoring help channel part of the firm's scarce resources towards rewarding social activities. In addition, boosting the legitimacy of societal reporting, through board independence, amplifies the signaling power of CSR reporting regarding the firm's future cash flows.

The remainder of the article is organized as follows: Section 2 reviews the literature. Section 3 presents the data and descriptive statistics. Section 4 reports our empirical results. Section 5 concludes.

2. LITERATURE REVIEW

The traditional disclosure studies pointed that the objective behind disclosing voluntary information is to improve transparency, facilitate investors' decision process (Meek, Robert and Gray 1995), reduce agency costs as well as information cost in financial markets (Jensen and Meckling 1976; Poshakwale and Courtis 2005; Cormier and Gordon, 2001; Verrechia 2001). The improved disclosure practice provides stock participants with detailed information, which helps in reducing the uncertainty gap, decreasing stock return volatility and enhancing stock price (Kothari, Xu and Short 2009; Bushee and Noe 2000). Moreover, Richardson, Welker, and Hutchinson (1999) argue that equity value is a reflection to all available information in efficient markets, whether financial or non-financial. Indeed, providing wider disclosure base to capital markets assists in reducing the uncertainty gap and encourages trading, which improve stock price (Kim and Verrechia 1994). The expanded disclosure practice encourages investors to adjust stock valuation according to the available information and hence stock price improves (Healy, Hutton and Palepu 1999). In this regard, Cormier, Ledoux and Magnan (2011) argue that social disclosure, in particular, is likely to decrease information asymmetry between the management and external stakeholders as it reduces stock market asymmetry. In other words, investors building their decisions on a wider content of information are more confident in placing larger orders, which in turn enhance stock price (Diamond and Verrechia, 1991). In contrary, higher return will be demanded by the uninformed investors to compensate the uncertainty risk due to the lack of information (Easley and O'Hara, 2004). Therefore, the desired rate of return will vary in relation to the information collection cost (Hubbard, 2002).

The World Bank defines corporate social responsibility as "the commitment of businesses to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are

good for business and for development" (Starks 2009, p. 465). Social responsibility is the way firms integrate into their values and practices their social, environmental and economic concerns (Cormier et al. 2011) to share in the development of their societies and create wealth (Industry Canada, 2010). It is the voluntary interaction with communities by addressing their social and environmental issues (Reverte, 2009). The social-related dimension aims at the development of trust and achieving the acceptance of stakeholders such as employees, business partners and community, which reduces transaction cost (Hill 1990). Whilst, the environmental-related dimension reflects firms care for a green environment and ensures low impact on pollution, energy consumption, climate changes etc. (Cormier at al. 2011). Firms' social responsibility has evolved to extend their good citizenship and address their care to societal issues, ranging from safety to ethical practices and environmental protection, through their practices and policies (Foote, Gaffney and Evans 2010).

Reporting on firm sustainability provides voluntary information on firms' non-financial aspects that might have economic impact on their stakeholders and economies at large (Berthelot, Coulmont and Serret 2012). Typically, social reporting contains information on firms' impact on the society, the environment and human resources (Jizi et al. 2014; Campbell and Slack 2008). The effective communication of this information determines the impact and the strength of the signal (Godfrey, Merrill and Hansen 2009), which last longer when the information disclosed is of better content (Jennings and Starks 1985). Therefore, the effect of social and environmental practices on firms are likely determined by successfully communicating them to the largest group of stakeholders (McWilliams and Siegel 2001; Godfrey et al. 2009). This ensures firms social acceptance and develops long-term relations with stakeholders (Gray, Khuhy and Lavers 1995; Cormier et al. 2011). In light of the increasing pollution, executive bonuses, natural resources consumption etc., companies are

under increasing pressure to discharge their social, environmental and ethical practices to avoid stakeholders' sanctions (Arvidsson 2010; Sutantoputra 2009). Nevertheless, whether the communication of firms social, environmental and governance activities is considered valuable by the market participants or disregarded is still debatable in the literature (Murray et al. 2006; Jizi, Nehme and Salama 2016).

While firms' management strive to achieve adequate return for shareholders (Cormier et al. 2011), considering the impact of their decisions on the environment and society is of equal importance (Hart 1997). A stream of literature supports a positive link between being socially-responsible and achieving better financial performance, arguing that social, environmental and governance information have favorable consequences on firms' financial performance. For instance, El Ghoul et al. (2011) examine a large sample of US firms covering the period from 1992 to 2007 and show that CSR score reduces the cost of capital as higher CSR score lowers the perceived risk and attracts more investors. Similarly, Dhaliwal, Tsang and Yang (2011) examine US first time CSR reporter firms and find that the detailed disclosure managed to decrease the cost of equity and attract more institutional investors. In addition, they evidence that firms that outperform in-terms of CSR conducted public offering in the following two years and succeeded to raise relatively larger amount of equity. As by providing more firm related information, whether it is financial or non-financial, it is likely to enlarge investors' base and reduce the risk of expected cash flow.

Cormier et al. (2011) argue that social and environmental disclosures are substitutes in reducing information asymmetry, proxied by the bid-ask spread and stock return volatility. They noticed that firms that cause more environmental damage to society disclose more environmental information; however they acknowledge the limitation in interpreting their findings due to the inherent subjectivity risk in the disclosure coding instrument. Within the same context, Salama, Anderson and Toms (2011) evidence that firms having more social

and environmental investments have relatively less systematic risk. For example, firms investing in clean technology are less vulnerable to changes in energy prices, which systematically affect corporations. This competitive advantage encourages long-term investors to consider firms' social and environmental behavior in their decisions (Aguilera, Williams, Conley and Rupp 2006) as the buffer of goodwill CSR provides protects shareholder's value, particularly, when firms are facing negative events (Godfrey et al. 2009).

Richardson, Welker and Hutchinson (1999) argue that disseminating social information assists in the management of agency issues and enhances market performance. Previous literature pointed the influence of social reporting on firm reputation, trust level and performance (Aguilera et al. 2006; Simpson and Kohers 2002; Scholtens 2008; Salama et al. 2011; El Ghoul et al. 2011), which are mirrored on equity value. Moreover, the empirical findings (e.g. Cormier et al. 2009; Aerts and Cormier 2009 and Li and McConomy 1999) show the value-relevance of social and environmental disclosure to stock markets. The fact of voluntarily disclosing sustainability information is likely to be perceived by investors as a positive signal, as on one hand firms will not favor disclosing bad news, and on the other hand such information might give competitive advantage to the firm and manage its relations with the public (Berthelo et al. 2012)

In contrast, a branch of literature evidences absence or a negative relationship between social disclosure and shareholders wellbeing. Examining a sample of Canadian firms, Makni, Francoeur and Bellavance (2009) evidence absence of a causal relationship between the aggregate score of CSR performance and firm's financial performance, except for market return. However, when examining the causal relation of each social dimension individually, the environmental performance show negative association with ROA, ROE and market return. The aggregate score consisted of six dimensions which are community and society, corporate governance, customers, employees, environment and human rights. Murray

et al. (2006) examine UK firms for the years 1988 to 1997 concluding that no relationship exists between CSR disclosure and stock return. They argue that when valuing assets investors are still thinking traditionally and not considering the social dimension in financial decisions. Similarly, Alexander and Buchholz (1978) find no evidence to support a relationship between CSR ranking and stock price, rationalizing this by the absence of differences between stock returns and market adjusted stock return in their sample. While Murray et al. (2006) and Alexander and Buchholz (1978) were not able to relate CSR to stock return, Pava and Krausz (1996) find that socially-responsible firms are more risky, as they tend to rely on their social profile.

It has been argued that as major part of the disclosed social and environmental information is not audited, the reliability of this disclosure is still questionable (Cormier et al. 2011). As well, among the firms that engaged in social and environmental activities and reported on them, few provided quality information that is useful for analysis (Gray and Beddington, 2007). The absence of reliable measures for CSR related information beside the validity of this information might excuse market participants to perceive CSR information as window dressing their reporting (Arvidsson 2010). This keeps stakeholders skeptical concerning the truthfulness of the disclosed information and their reliability in conveying firm's social involvement (Harding 2005; Frankental 2001). Moreover, it has been noted that the level of social, environmental and ethical information disclosed by firms is not meeting investors need (Solomom and Solomon 2006). Therefore, firms might fail to benefit from their CSR practices as they turn into public relations rather than improving financial performance (Porter and Kramer 2006). In responding to the public pressure, firms tend to engage in generic CSR activities instead of identifying and investing in productive social involvements that interconnect the business and social interest (Porter and Kramer 2006).

The presumptive assumption is that the presence of independent members on corporate boards boosts the firm's monitoring environment. Fama (1980) stresses on the converse relationship between board independence and the expropriation of shareholders' wealth. Fama and Jensen (1983) highlight the efficiency of independent directors in monitoring the firm's management due to their reputation concerns. Weisbach (1988) suggests that independent directors are better monitors than outsiders as they are more likely to question the manager's actions and decisions. Borokovich et al. (1996) demonstrate a direct relationship between outside board members and designating the firm's CEO position to an outsider. Guo and Masulis (2014) suggest, after the passage of the Sarbanes-Oxley Act (SOX), an improvement in CEO turnover performance sensitivity for the sub-group of firms who were not complying with the independence requirement prior to SOX.

On the other hand, several articles propose that independent directors lack firm-specific information relative to corporate insiders. This increases the costs associated with information asymmetry and coordination. Maug (1997) demonstrates that the advantages of monitoring might be outweighed by monitoring costs for high information asymmetry firms. Accordingly, increasing board independence may not be favorable for the firm. Bhagat and Bolton (2008) show an inverse relation between board independence and firm value. In addition, Dah et al. (2014) highlight the unanticipated effects of imposed independence regulations on corporate governance. Brick, Ivan, Palmon and Wald (2006) and Dah and Frye (2014) suggest the presence of back-scratching between outside board members and the firm's management.

The significant importance of financial information as a driver to reduce information asymmetry and lean the stress on financial assets (Acharya, Shin and Yorulmazer 2011, Lajili and Zeghal 2005) is clearly articulated in the literature. However, it might be debatable and it continues to be an open question (Renneboog, Horst and Zhang 2008; Murray et al., 2006)

whether financial markets price social disclosure or disregard it either because they are doubting its reliability or it is considered not related in financial decisions. This increases the significance of examining the influence of social disclosure on shareholders' wealth on one hand and to undercover the impact of board independence on the effectiveness of the social disclosure on the other hand. From an agency theoretical perspective, higher board independence is "expected to be more successful in directing management towards long-term firm value enhancing activities and a high degree of transparency" (Jizi et al., 2014, p. 4). Independent directors has important role in the choice of CSR activities preventing shareholders from firm over-investment or investing in non-productive social involvement (Jo and Harjoto, 2011). Moreover, the remuneration of the independent directors is not linked to the firm's financial performance and growth, contrary to executives' remuneration. Therefore, they promote long-term sustainability activities, such as engaging in and reporting on CSR rather than focusing on short-term performance measures (Ibrahim, Howard and Angelidis 2003).

3. DATA AND DESCRIPTIVE STATISTICS

We utilize the Bloomberg database to collect information (data) on firms included in the FTSE 350 index. Our sample period is from 2007-2012. The reported Bloomberg CSR disclosure score is based on the extent of environmental, social, and governance information a firm discloses. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. Bloomberg CSR disclosure score gives different weights to each collected data point according to its societal impact. For example, information on green gas emission has a greater weight among other disclosures. The score is also tailored for each industry to evaluate a given firm in terms of the data relevant to its industry sector.

As a measure of board independence, independence dummy (**IndepDummy**) is a dummy variable that takes a value of 1 if the percentage of independent directors is greater than the overall mean independence level and 0 otherwise. We also employ the percentage of independent directors as a continuous variable in our regressions to boost the findings' robustness.

We account for firm risk through the calculation of both the volatility of the firm's returns and systematic risk. **Volatility** is the standard deviation of the daily logarithmic price movements. Systematic risk is measured by **Beta**. In a given year, firm **Beta** is the slope coefficient of regressing the firm's daily excess return on the market risk premium.

Firm performance is measured by calculating both the risk-adjusted returns (**AR Carhart**) and the daily buy and hold return (**BH Return**). **AR Carhart** is computed based on the Carhart (1997) 4-factor model. For a given firm i in a certain year t, we utilize the following regression model:

$$\mathbf{r_{id} - r_{fd} = \alpha_i + \beta(r_{Md} - r_{fd}) + sSMB_d + hHML_d + hUMD_d + \varepsilon_{id}} \quad \mathbf{(1)}$$

where the intercept (α_i) represents the firm's abnormal return (**AR Carhart**), r_{id} is the return of firm i in day d in a certain year. r_{fd} is the simple daily T-bill rate. r_{Md}- r_{fd}, SMB_d, HML_d, and UMD_d denote the market risk premium, size factor, book-to-market factor, and momentum factor respectively. Daily data on these factors is obtained from the University of Exeter Business School's website.[6] Factors are constructed following Gregory, Tharayan, and Christidis (2013). Furthermore, in a given year t, the daily buy-and-hold return (**BH Return**) for firm i is given by:

$$\mathbf{BH\ Return_{it}} = \prod_{n=1}^{N}(1 + r_{in}) - 1 \quad \mathbf{(2)}$$

where N is the number of trading days for firm i in year t.

We include a set of control variables to account for financial, governance, and firm characteristics variables. The list of control variables is in conformance with the existing literature on CSR disclosure, board independence, and firm performance (Murray et al. 2006; El Ghoul et al. 2011; Goodfrey et al. 2009; Makni et al. 2009). Variable definitions are presented in Table 1. Table 2 provides descriptive statistics on the examined variables. It shows that the percentage of board independence has a mean of 54.57% and a standard deviation of 12.5. The mean of the CSR disclosure score is 30.88 and the standard deviation is 12.53. Knowing that the disclosure score is a weighted average score and varies between 0 and 100, the findings suggest that a significant portion of FTSE 350 firms are not efficiently allocating their social spending towards impactful societal activities. Industry and year dummies are used to control for unobserved industry and year specific characteristics. Bloomberg divides the FTSE 350 firms among 10 different industries. White (1980) robust standard errors are applied to account for any potential heteroskedasticity.

[Table 1 about here]

[Table 2 about here]

4. BOARD INDEPENDENCE AND THE EFFICIENCY OF SOCIAL DISCLOSURE

4.1 Board Independence and Social disclosure

Agency theory argues that boards with higher independence are assumed to be more effective in executing their vigilance duties and protecting shareholders wealth (John and Senbet 1998; Ahmed, Hossain and Adams 2006). Therefore, they are more inclined toward encouraging management to invest in long-term value maximizing activities and to be more transparent (Jizi et al. 2014). The presence of independent directors on corporate boards is said to escalate the efficiency and effectiveness of the firm's monitoring environment (Fama 1980; Fama and Jensen 1983; Weisbach 1988; Borokovich et al. 1996; Guo and Masulis 2014).

That is, board independence may play a significant role in aligning managerial and shareholders' interests. As market participants are increasingly holding firms more accountable towards social welfare, independent directors may instigate impactful societal reporting and spending to promote the firm's good citizenship. Jamali, Safieddine and Rabbath (2008) suggest that boards of directors are responsible for setting the firm's CSR agenda to address stakeholders' needs.

Previous research suggests that independent board members promote firm social investments (Johnson and Greening 1999) and provide more consideration to the impact of CSR than inside directors. Furthermore, boards with higher percentage of independent directors are likely to facilitate the dissemination of wider content of voluntary information in general and CSR disclosure in particular (Cheng and Courtenay 2006; Chau and Gray 2010; Jizi et al. 2014; Jizi 2013). Therefore, firms with higher board independence are expected to support firms' investment in CSR activities and to display a greater involvement in societal activities and reporting to reduce information asymmetry (Jamali et al. 2008; Arora and Dharwadkar 2011). This suggests that higher board independence increases CSR disclosure

We start by examining the effect of board independence on CSR reporting. Table 3 presents a regression of social disclosure on our two measures of board independence and several control variables. Using both **IndepDummy** and the percentage of independent directors **(PerIndep)**, our findings demonstrate that higher board independence levels amplify social disclosure. Ibrahim et al. (2003) imply that independent directors encourage the engagement in long-term societal activities. Jo and Harjoto (2011) suggest that independent directors inspire efficacious social expenditure. Independent board participants inhibit social over-investment and/or investing in non-rewarding social projects. Jizi et al. (2014) propose that the participation of independent board members assists in promoting social agenda aiming valuable social activities.

As reported earlier, Bloomberg's CSR measure is a weighted average of the voluntarily reported environmental, social, and governance activities. Certain social projects are deemed more impactful than others and, thus, assigned a higher weight in the calculation of the disclosure index.[7] Accordingly, our results suggest that board independence amplifies societal disclosure by encouraging further sustainability investments and/or channeling societal spending towards more valuable projects.

Our results suggest smaller boards are more efficient in promoting firms' CSR agendas. The limited number of directors on the board facilitates coordination and communication among members as well as holding each of them more accountable and committed (Ahmed et al. 2006; Dey 2008). Consistent with Jizi et al. 2014; Arora and Dharwadkar 2011; Haniffa and Cooke 2005, we show that profitable firms engage in more CSR activities and reporting as they are likely to have more free resources. In sharing part of the profits with their society, firms tend to appease powerful stakeholders and signal their commitment to societal obligations. On the other hand, we document an inverse relation between the firm's market to book ratio and CSR reporting. Firms that are more confident about their future growth are less concerned to address stakeholders' concerns through CSR activities. In line with previous literature, firms with larger size, which are more exposed to stakeholders' pressures and are likely to have larger impact on communities (Barnia and Rubin 2010; Reverte 2009), invest in a wider variety of CSR activities to acknowledge the need of several stakeholder groups.

[Table 3 about here]

4.2 Efficiency of Social Disclosure

The participation of independent members on corporate boards may boost the efficiency of social disclosure for several reasons. First, the participation of independent directors is expected to promote the effectualness and effectiveness of the firm's monitoring

environment. This enhances corporate decision making and, as a consequence, the efficacy of fund allocation towards winner projects, among which are winner social projects. Market participants' do not exhibit homogenous perceptions of diverse social projects and, thus, react differently to disclosures on dissimilar projects. Therefore, given that social spending is increasingly perceived as an investment in the firm's image and reputation rather than an unwarranted expense, higher levels of board monitoring may help direct the firm's societal spending towards impactful projects. Second, better monitoring promotes the investors' conception of the reliability of CSR disclosure. Third, CSR reporting may convey information about the financial strength of the firm and its future performance. Lys, Thomas, Naughton and Wang (2014) suggest that increased CSR spending signals to investors' information regarding the soundness of the firm's financial situation and its future cash flows. Only financial sound corporations who anticipate excess future cash flow may engage in additional social activities. Subsequently, CSR signaling power may be enhanced by the higher participation of independent directors since disclosures could be deemed more reliable and trustworthy.

On the contrary, the presence of independent board members may elevate information asymmetry as they lack firm-specific information. This might lead to an inefficient allocation of funds across the firm's various investment activities. Thus, the deficiency in independent directors' firm-specific knowledge could induce them to support ineffectual social projects. This may take the form of over-investment or financing negative NPV societal projects.

Accordingly, in this section, we investigate whether the positive association between board independence and social disclosure is beneficial to shareholders. Therefore, we hypothesize that board independence positively influences the efficiency of social disclosure. We define the efficiency of CSR reporting based on its impact on the firm's risk and return.

That is, an increase in societal disclosure is said to be efficient if it has a favorable influence on the firm's risk and/or performance.

4.2.1 Board Independence, Social Disclosure, and Firm Risk

Table 4 examines the influence of board independence on the relationship between CSR reporting and firm risk. We measure firm risk using both the standard deviation of daily stock returns (**Volatility**) and the firm's systematic risk (**Beta**). **IndepDummy** is used to measure the level of board independence. Table 4 column (1) highlights a converse association between social disclosure and the firm's volatility. No significant relationship is documented between the independence dummy variable and firm risk. In column (2), an interaction variable between board independence and social disclosure is introduced. Social disclosure's coefficient estimate is no longer significant implying that CSR reporting has no substantial effect on firm risk at low levels of board independence. The disclosure – independence interaction variable is negative and significant. Hence, relative to low independence levels, an increase in societal reporting diminishes the firm's return volatility at high levels of board independence. We generally obtain analogous results when using beta to measure risk in columns (3) and (4). However, in column (3), no significant relationship is documented between social disclosure and the firm's systematic risk.

[Table 4 about here]

To improve the robustness of our results, in Table 5, we repeat the same analyses using the percentage of independent directors as our measure of board independence. The results are almost identical to those reported in Table 4. However, using **Volatility** as the measure of risk, the coefficient estimate of the interaction variable in column (2) is not significant. Nonetheless, we confirm the significant impact of board independence on the relation between social disclosure and the firm's systematic risk.

Our findings demonstrate the favorable influence of board monitoring on the value of CSR reporting. Cormier et al. (2011) show a converse impact of social disclosure on firm risk. The authors propose that the management-investor information asymmetry declines as a reaction to enhanced social and environmental disclosure. CSR reporting promotes the firm's good citizenship image and reputation. This may boost investors' faith and confidence in a given firm's operation. Societal spending could also provide market participants with propitious information regarding the firm's future performance. Either of these factors may prompt a converse impact of CSR reporting on firm risk. However, our results suggest that the CSR-risk inverse association only holds at high levels of board independence. In other words, firm risk declines when investors perceive the disclosed societal information as reliable and trustworthy. This occurs when firms display a sound monitoring environment.

[Table 5 about here]

4.2.2 Board Independence, Social Disclosure, and Firm Performance

We now examine whether the participation of independent directors on corporate boards affects the association between social disclosure and firm value. We employ both the firm's daily buy and hold return (**BH Return**) and abnormal return (**AR Carhart**) to measure firm performance. Table 6 column (1) shows that both CSR reporting and board independence have no significant impact on the firm's risk-adjusted return.[8] We introduce an interaction variable between board independence and societal disclosure in column (2). Our findings highlight a negative association between social disclosure and firm performance at low levels of board independence. That is, when the presence of independent directors is below average, an increase in societal reporting has a converse effect on shareholders' wealth. This reflects the non-reliability and low signaling power of social disclosure at inferior levels of monitoring. Furthermore, we observe that the coefficient estimate of the interaction variable is significantly positive. This implies that high board independence has a positive effect on

the CSR-performance sensitivity. Relative to low levels of board independence, an increase in societal reporting amplifies firm value at high levels of independence. We generally obtain similar results when using the daily buy-and-hold return (**BH Return**) as a measure of firm value. In addition, in Table 7, we repeat our analysis using the fraction of independent directors to measure board independence. However, the results are almost identical to those reported in Table 6.

[Table 6 about here]

These results reflect the non-reliability and low signaling power of social disclosure at inferior levels of monitoring. However, we emphasize the positive impact of increased independence on the efficacy of CSR reporting. Market participants deem social disclosure more trustworthy and effective at higher monitoring levels. That is, the presence of independent board members enhances the credibility and signaling capability of CSR reporting. Accordingly, we propose that societal disclosure have a direct effect on shareholders' wealth when independent members dominate corporate boards.

[Table 7 about here]

5. CONCLUSION

This article studies the effect of board monitoring on the efficacy of CSR disclosure. We suggest that board independence has a favorable influence on social disclosure as it escalates its positive implications on shareholders' well-being. Our paper complements the existing literature by proposing that the advantageous effect of social reporting prevails when firms enjoy a sound governance structure.

We show that an increase in the participation of independent directors have a direct impact on CSR reporting. Independent directors seem to encourage societal consciousness to emphasize the firm's good citizenship. Our findings also demonstrate that the presence of independent board members instigate a reduction in firm risk through societal disclosure. In

addition, relative to low independence boards, we show that CSR reporting increases firm performance at high levels of board independence.

Accordingly, this research suggests that board independence amplifies the efficiency of societal conscience. Independent directors may help direct the firm's scarce resources towards valuable and effective social projects. Moreover, social disclosure sends a positive signal to market participants regarding the firm's future prospects and financial strength. The substantiality of societal conscience to shareholders' welfare prevails and materializes through the participation of independent directors on corporate boards. Better monitoring enhances the investors' perception towards the legitimacy and competency of the reported societal activities. That is, it elevates the signaling legitimacy and significance of CSR reporting.

Given a sound monitoring environment, our paper highlights the advantageousness of social disclosure. We propose that an effectual government structure deems societal spending and reporting beneficial to the firm's well-being. Subsequently, the firm's engagement in efficient sustainability projects is reckoned as a compensating investment activity rather than a non-rewarding expenditure.

Notes

[1] Maug (1997) illustrates that, for firms with high information asymmetry, the advantages of monitoring may be overshadowed by its amplified costs.

[2] Our measure of social conscience is a weighted average of voluntary environmental, social, and governance disclosure. Accounting for industry specific characteristics, different social projects are assigned different weights given their societal impact. Hence, two firms might be investing the same amount of money on social activities but their social disclosure score may be different due to the effectualness of their social spending.

[3] Lys, Naughton, and Wang (2014) propose that social reporting sends market participants a favorable signal regarding the firm's financial strength.

[4] We measure risk using both the firm's volatility of returns and systematic risk.

[5] We measure performance through the calculation of both the firm's daily buy-and-hold return and Carhart's risk-adjusted return.

[6] http://business-school.exeter.ac.uk/research/areas/centres/xfi/research/famafrench/files/

[7] For example, firms with equal dollar investments on sustainability projects may have different CSR scores depending on their spendings' societal impact.

[8] In unreported results, using a t-test, we confirm that abnormal returns are significantly different than zero.

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Table 1. Variable Definitions

Variable name	Variable descriptions
Social disclosure	The firm's weighted average disclosure score measuring the extent of environmental, social and governance information
PerIndep	The number of independent directors on the board to the total number of directors
IndepDummy	A dummy variable that takes a value of 1 if the percentage of independent directors is greater than the overall mean independence level and 0 otherwise
Duality	A dummy variable: 1 if the chairman of the board of directors is also the CEO and 0 otherwise
Beta	The slope coefficient of regressing the firm's daily excess return on the market risk premium
Volatility	The standard deviation of the daily logarithmic price movements
AR Carhart	The firm's abnormal return measured following Carhart's (1997) 4-factor model
BH Return	The firm's daily buy-and-hold return
Log (Assets)	The logarithm of total assets in the corresponding year
Market to Book	The market value of equity (market capitalization) divided by the book value of equity
ROA	Net income over total assets
Leverage	Debt divided by the total assets
Board Size	Number of directors on the board
Percentage Women on Board	The number of women directors to the total number of directors on the board
Board Average Age	The average age of the directors on the board
Number of Board Meetings	The number of board of directors meetings held in a corresponding year

Table 2. Descriptive Statistics

Variable	Mean	Std. Dev.
Social Disclosure	30.883	12.532
PerIndep	54.57	12.500
CEO Duality	0.024	0.152
Log (Assets)	9.379	0.826
Market-to-Book	4.020	32.080
ROA	0.071	0.150
Leverage	0.521	1.221
Board Size	11.390	7.422
Volatility	37.466	17.600
Percentage Women on board	8.894	8.948
Board Average Age	56.181	3.395
Number of Board Meetings	18.228	10.2214
AR Carhart	9.097	35.439
Beta	0.914	0.442
BH Return	14.555	51.693

Table 3. Board Independence and Social disclosure

Table 3 presents a regression of social disclosure on our two measures of board independence and several control variables. Our sample period is from 2007-2012. The dependent variable is Bloomberg's social disclosure score which is based on the extent of disclosed environmental, social, and governance information. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. **IndepDummy** is a dummy variable that takes a value of 1 if the percentage of independent directors is greater than the overall mean independence level and 0 otherwise. **PerIndep** is the percentage of independent directors serving on the firm's board of directors. Industry and year dummies are included to control for industry and year specific characteristics. Table 1 provides detailed information on all variables. Robust standard errors are computed following White (1980) to account for any possible heteroskedasticity. The asterisks ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

	Social Disclosure	**Social Disclosure**
	(1)	**(2)**
IndepDummy	1.4252**	
	(0.6320)	
PerIndep		0.0621**
		(0.0253)
Duality	-0.6891	-0.4850
	(1.5469)	(1.5407)
Log (Assets)	7.8965***	7.8179***
	(0.4664)	(0.4691)
Market-to-Book	-0.0088***	-0.0093***
	(0.0028)	(0.0030)
ROA	7.8190***	7.7022***
	(2.8828)	(2.8797)
Leverage	0.2484	0.2209
	(0.5172)	(0.5131)
Board Size	-0.1065**	-0.0985**
	(0.0470)	(0.0464)
Percentage Women on Board	0.1952***	0.1937***
	(0.0340)	(0.0341)
Board Average Age	0.0629	0.0508
	(0.0936)	(0.0932)
Number of Board Meetings	-0.0269	-0.0267
	(0.0291)	(0.0290)
Intercept	-52.3487***	-53.7426***
	(5.7323)	(5.5725)
Industry Dummies	YES	YES
Year Dummies	YES	YES
Adj. R-Sq.	0.4275	0.4278
Number of Observations	1098	1098

Table 4. High Board Independence, CSR Reporting, and Firm Risk

Table 4 investigates the effect of high board independence on the association between CSR reporting and firm risk. The dependent variable is the firm's risk, as measured by both the volatility of returns (**Volatility**) and systematic risk (**Beta**). The social disclosure score is based on the extent of disclosed environmental, social, and governance information. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. **IndepDummy** is a dummy variable that takes a value of 1 if the percentage of independent directors is greater than the overall mean independence level and 0 otherwise. Industry and year dummies are included to control for industry and year specific characteristics. Table 1 provides detailed information on all variables. Robust standard errors are computed following White (1980) to account for any possible heteroskedasticity. The asterisks ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

	Volatility	**Volatility**	**Beta**	**Beta**
	(1)	**(2)**	**(3)**	**(4)**
Social Disclosure	-0.1061**	0.0171	0.0006	0.0050***
	(0.0440)	(0.0641)	(0.0013)	(0.0018)
IndepDummy	-1.2101	5.2467**	-0.0080	0.2191***
	(1.0508)	(2.5805)	(0.0243)	(0.0630)
Social Disclosure * IndepDummy		-0.2059**		-0.0073***
		(0.0803)		(0.0019)
Duality	-4.4723**	-4.2573**	-0.0151	-0.0085
	(1.8928)	(1.8406)	(0.0574)	(0.0570)
Log (Assets)	1.9797**	2.0752**	0.2239***	0.2274***
	(0.9947)	(0.9998)	(0.0235)	(0.0234)
Market-to-Book	-0.0066*	-0.0072*	0.0001	0.0001
	(0.0040)	(0.0040)	(0.0001)	(0.0001)
ROA	4.8243	5.0788	-0.0948	-0.0856
	(3.8685)	(3.8539)	(0.1025)	(0.0968)
Leverage	0.9489	0.9750	-0.0688**	-0.0680**
	(0.6756)	(0.6751)	(0.0289)	(0.0291)
Board Size	0.0000	-0.0052	0.0044***	0.0041***
	(0.0705)	(0.0699)	(0.0016)	(0.0016)
Percentage Women on Board	-0.2057***	-0.2035***	-0.0029**	-0.0028**
	(0.0562)	(0.0562)	(0.0014)	(0.0014)
Board Average Age	0.0122	0.0143	0.0007	0.0006
	(0.1446)	(0.1438)	(0.0033)	(0.0033)
Number of Board Meetings	-0.1336***	-0.1473***	-0.0014	-0.0018*
	(0.0445)	(0.0446)	(0.0010)	(0.0010)
Intercept	14.5782	10.9489	-1.0678***	-1.1930***
	(12.3222)	(12.7412)	(0.2504)	(0.2536)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Adj. R-Sq.	0.4036	0.4077	0.3631	0.3724
Number of Observations	1045	1045	1087	1087

Table 5. Percentage of Independent Directors, CSR Reporting, and Firm Risk

Table 5 investigates the effect of the percentage of independent directors on the association between CSR reporting and firm risk. The dependent variable is the firm's risk, as measured by both the volatility of returns (**Volatility**) and systematic risk (**Beta**). The social disclosure score is based on the extent of disclosed environmental, social, and governance information. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. **PerIndep** is the percentage of independent directors serving on the firm's board of directors. Industry and year dummies are included to control for industry and year specific characteristics. Table 1 provides detailed information on all variables. Robust standard errors are computed following White (1980) to account for any possible heteroskedasticity. The asterisks ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

	Volatility	**Volatility**	**Beta**	**Beta**
	(1)	**(2)**	**(3)**	**(4)**
Social Disclosure	-0.1064**	0.1006	0.0005	0.0125***
	(0.0436)	(0.1761)	(0.0013)	(0.0037)
PerIndep	-0.0452	0.0698	0.0004	0.0070***
	(0.0553)	(0.0852)	(0.0010)	(0.0019)
Social Disclosure * PerIndep		-0.0036		-0.0002***
		(0.0030)		(0.0001)
Duality	-4.6188**	-4.3144**	-0.0126	0.0032
	(1.9408)	(1.8820)	(0.0579)	(0.0569)
Log (Assets)	2.0075*	2.0725*	0.2206***	0.2247***
	(1.0833)	(1.0978)	(0.0237)	(0.0235)
Market-to-Book	-0.0063	-0.0067	0.0001	0.0001
	(0.0040)	(0.0041)	(0.0001)	(0.0001)
ROA	4.8914	4.8344	-0.0981	-0.1001
	(3.8945)	(3.8653)	(0.1030)	(0.1006)
Leverage	0.9753	0.9443	-0.0683**	-0.0699**
	(0.6791)	(0.6812)	(0.0289)	(0.0294)
Board Size	-0.0073	-0.0129	0.0042***	0.0039**
	(0.0701)	(0.0686)	(0.0016)	(0.0016)
Percentage of Women on Board	-0.2058***	-0.2057***	-0.0030**	-0.0029**
	(0.0569)	(0.0569)	(0.0014)	(0.0014)
Board Average Age	0.0201	0.0257	0.0003	0.0007
	(0.1501)	(0.1509)	(0.0033)	(0.0033)
Number of Board Meetings	-0.1332***	-0.1386***	-0.0014	-0.0017
	(0.0446)	(0.0455)	(0.0010)	(0.0010)
Intercept	15.9861	9.0746	-1.0423***	-1.4425***
	(12.1643)	(15.7424)	(0.2418)	(0.2774)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Adj. R-Sq.	0.4034	0.4039	0.3631	0.3686
Number of Observations	1045	1045	1087	1087

Table 6. High Board Independence, CSR Reporting, and Firm Performance

Table 6 investigates the effect of high board independence on the association between CSR reporting and firm performance. The dependent variable is the firm's performance, as measured by both Carhart's (1997) risk-adjusted returns (**AR Carhart**) and the daily buy-and-hold return (**BH Return**). The social disclosure score is based on the extent of disclosed environmental, social, and governance information. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. **IndepDummy** is a dummy variable that takes a value of 1 if the percentage of independent directors is greater than the overall mean independence level and 0 otherwise. Industry and year dummies are included to control for industry and year specific characteristics. Table 1 provides detailed information on all variables. Robust standard errors are computed following White (1980) to account for any possible heteroskedasticity. The asterisks ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

	AR Carhart	**AR Carhart**	**BH Return**	**BH Return**
	(1)	**(2)**	**(3)**	**(4)**
Social Disclosure	-0.0976	-0.4094**	-0.1880	-0.4876**
	(0.1151)	(0.1739)	(0.1334)	(0.2080)
IndepDummy	-3.0804	-19.2834***	-6.2813**	-21.8530***
	(2.3567)	(6.3500)	(2.8006)	(7.6861)
Social Disclosure * IndepDummy		0.5205***		0.5002**
		(0.1911)		(0.2252)
Duality	-7.3237	-7.7957	-6.4712	-6.9247
	(6.9954)	(7.0111)	(8.2216)	(8.2422)
Log (Assets)	-3.0221	-3.2747	-2.5851	-2.8279
	(2.0510)	(2.0521)	(2.3830)	(2.3903)
Market-to-Book	0.0209**	0.0224**	0.0128	0.0142
	(0.0100)	(0.0099)	(0.0144)	(0.0142)
ROA	13.6283	12.9752	20.2535	19.6259
	(15.3259)	(15.1921)	(12.6567)	(12.8670)
Leverage	3.1479	3.0919	5.2477**	5.1939**
	(2.7447)	(2.7420)	(2.3171)	(2.3476)
Board Size	0.1434	0.1587	0.0732	0.0879
	(0.1668)	(0.1658)	(0.2113)	(0.2106)
Percentage Women on Board	-0.1399	-0.1466	-0.1937	-0.2002
	(0.1256)	(0.1255)	(0.1500)	(0.1498)
Board Average Age	0.1322	0.1345	0.2729	0.2751
	(0.3584)	(0.3576)	(0.4742)	(0.4725)
Number of Board Meetings	0.0613	0.0956	0.1358	0.1687
	(0.1031)	(0.1031)	(0.1241)	(0.1258)
Intercept	30.6315	39.5615	56.7403*	65.3223**
	(24.7301)	(25.1482)	(29.1390)	(30.3378)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Adj. R-Sq.	0.0283	0.0353	0.3752	0.3774
Number of Observations	1087	1087	1087	1087

Table 7. Percentage of Independent Directors, CSR Reporting, and Firm Performance

Table 7 investigates the effect of the percentage of independent directors on the association between CSR reporting and firm performance. The dependent variable is the firm's performance, as measured by both Carhart's (1997) risk-adjusted returns (**AR Carhart**) and the daily buy-and-hold return (**BH Return**). The social disclosure score is based on the extent of disclosed environmental, social, and governance information. The score varies from 0.1 for firms that disclose a minimum level of social information to 100 for firms that disclose on all the data points collected by Bloomberg. **PerIndep** is the percentage of independent directors serving on the firm's board of directors. Industry and year dummies are included to control for industry and year specific characteristics. Table 1 provides detailed information on all variables. Robust standard errors are computed following White (1980) to account for any possible heteroskedasticity. The asterisks ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

	AR Carhart	**AR Carhart**	**BH Return**	**BH Return**
	(1)	**(2)**	**(3)**	**(4)**
Social Disclosure	-0.0978	-1.0955**	-0.1926	-0.9162*
	(0.1156)	(0.4344)	(0.1342)	(0.4750)
PerIndep	-0.1080	-0.6551***	-0.1803	-0.5771**
	(0.1032)	(0.2267)	(0.1171)	(0.2653)
Social Disclosure * PerIndep		0.0174**		0.0126*
		(0.0070)		(0.0076)
Duality	-7.6312	-8.9460	-6.9132	-7.8668
	(7.0154)	(7.1426)	(8.2830)	(8.4225)
Log (Assets)	-3.0165	-3.3577	-2.7609	-3.0084
	(2.0930)	(2.0869)	(2.4064)	(2.4145)
Market-to-Book	0.0218**	0.0238**	0.0141	0.0156
	(0.0102)	(0.0099)	(0.0147)	(0.0146)
ROA	13.7350	13.9006	20.2702	20.3903
	(15.4341)	(15.3523)	(12.8338)	(12.8691)
Leverage	3.2167	3.3495	5.4028**	5.4991**
	(2.7436)	(2.7518)	(2.3046)	(2.3237)
Board Size	0.1234	0.1496	0.0288	0.0479
	(0.1668)	(0.1657)	(0.2103)	(0.2098)
Percentage of Women on Board	-0.1415	-0.1466	-0.2039	-0.2075
	(0.1259)	(0.1257)	(0.1509)	(0.1506)
Board Average Age	0.1465	0.1204	0.2825	0.2636
	(0.3633)	(0.3649)	(0.4814)	(0.4831)
Number of Board Meetings	0.0626	0.0877	0.1390	0.1572
	(0.1032)	(0.1029)	(0.1245)	(0.1246)
Intercept	34.7865	68.1000**	66.0386**	90.2004***
	(24.2661)	(28.6896)	(28.8821)	(34.7809)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Adj. R-Sq.	0.0278	0.0335	0.3737	0.3745
Number of Observations	1087	1087	1087	1087