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DO SOCIAL RESPONSIBILITY DISCLOSURES SHOW IMPROVEMENTS ON STOCK PRICE?

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ABSTRACT

The 2007 financial crisis was the largest shock to the financial markets not only to the United States but the world as a whole since 1930. Lack of information and confusion in financial markets causes sharp declines in banks capitalization. The link between stock price behavior and the content of social disclosure is lacking in the literature and there is no clear understanding whether they are valued or disregarded by financial markets. CSR is the voluntary interaction between the firm and its stakeholders through addressing their social and environmental concerns with business activities. This paper contributes to the literature by drawing conclusions on whether CSR disclosure, which communicates firm involvement and level of commitment to society, shows improvement on banks' stock prices. Banks' social behavior is equally important to investors and customers risk assessment on one hand, and to regulators' reputation and the public confidence in the banking system on the other hand. Poorly controlled and operated banks can impose extensive negative effects not only on investors but also on their societies; therefore, effective management manages risk not only through financial performance but also through reflecting their good citizenship. The research examines a sample of national commercial banks, as the banking sector was experiencing increasing pressure that scratched stakeholders and investors trust during the latest financial crisis. In addition to examining a unique sample of banks during 2009-2010, the study contributes by employing content analysis technique to measure the content; i.e. the existence and comprehensiveness; of CSR disclosure in banks' annual reports. We find that the informative content of CSR disclosure is appreciated by stock participants and is of value. The reported results signal investors' interest in and consideration to CSR disclosure when valuing assets. Moreover, our results suggest that management involvement and communication of their CSR activities through better disclosure content is a potential tool to enhance shareholders value. The documented results are likely to encourage banking institutions in the developing countries to invest and report on their social activities. Banking institutions may enhance their shareholders welfare by investing in effectual social engagements and considering the content of CSR disclosure rather than classifying social involvement as non-rewarding activity.

JEL Classifications: M140, G120, G010

Keywords: Corporate Social Responsibility (CSR) Disclosure, Stock Return, Content Analysis.

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INTRODUCTION

The 2007 financial crisis was the largest shock to the financial system not only in the U.S. but in the world since 1930 (Cornett et al. 2011). The confusion in the financial market during the years 2007 and 2008 led to the financial crisis where banks market capitalization declined sharply. Eight trillion US dollars in wealth were lost on stock market between October 2007 and October 2008 (Brunnermeier 2009). Most of the security prices dropped sharply and the volatility in financial markets was at a peak (Ivashina and Scharfstein 2010). The panic in the financial market and the shrink of trading activities were driven partly by the lack of information that limited the assessment of assets risks (Gorton 2009).

Stakeholders' perception of bank performance is important for sustainability (Grove et al. 2011), encouraging banks to consider a long-term view of their investors' business interests and to acknowledge and respond to their societal responsibilities (Gill 2008; Grove et al. 2011). Banks' social behavior is equally important to investors and customers risk assessment on one hand, and to regulators' reputation and the public confidence in the banking system on the other hand (Jizi et al. 2014). Poorly controlled and operated banks can impose extensive negative effects not only on investors but also on their societies, since depositors and government agencies are the key bank funders and the sources of liquidity (Jizi et al. 2014; Grove et al. 2011). Therefore, effective management manages risk not only through financial performance but also through reflecting their good citizenship, which is important to achieve stakeholder acceptance and facilitate the implementation of their risk management strategies (Kytte and Ruggie 2005). In this regards Haji and Ghazali (2012) argued, "the financial crisis might have forced companies to be involved in more social activities to legitimize their existence." (p.101).

The link between corporate social responsibility (CSR) disclosure and firm performance was investigated by different scholars evidencing CSR disclosure impact on firms' performance, reputation and risk levels (Simpson and Kohers 2002; Scholtens 2009; Gray et al. 1995; Jizi 2013; Salama et al. 2011; Pava and Krausz 1996). Furthermore, long term potential investors consider corporate social and environmental behavior as material to investment decisions due to the competitive advantage CSR might give to the firm (Aguilera et al. 2006), as well as protecting firm's and shareholders' value especially when the firm faces negative events (Godfrey et al. 2009).

In efficient markets all available information, financial and non-financial, is reflected in equity value (Richardson et al. 1999). Reducing the degree of information asymmetry and improving the disclosure practice is reflected on firms' cost of capital and return volatility (Kothari et al. 2009), enhancing share prices (Welker 1995). Disclosing voluntary information and enhancing its content to raise certainty, encourage investors to place larger orders, which in turn improve stock price (Kim and Verrecchia 1994; Diamond and Verrecchia 1991). Accordingly, it is assumed that firms' engagement and communication of their CSR activities through better disclosure content are more likely to show improvement on stock prices. The financial consequences of disclosing CSR information have been addressed by different scholars; however, there are few studies and contradicting evidence on the reaction of stock price to the content social disclosure (Murray et al. 2006). This study fills a literature gap by addressing and providing evidence on whether CSR disclosure is valued or disregarded in financial markets. In addition to

examining a unique sample of banks, the study contributes by employing content analysis technique to measure the content of CSR disclosure in banks' annual reports contrary to most of the previous studies that relied on rating agencies or used the word or sentence count to measure disclosure (Bushee and Noe 2010; Gelb and Zarowin 2002). Understanding CSR-stock price association might be valuable to banks' corporate managers considering their reporting strategy and benefiting from CSR reporting as a tool to enhance stock prices after the sharp decline caused by the crisis.

Our results support the link between CSR disclosure and stock price behavior. Informative content of CSR disclosure is valued by stock participants and shows improvements on stock prices. The reported results provide evidence suggesting that financial market participants consider CSR information economically. Furthermore, our results suggest that management involvement and disclosure to better CSR content seems to be potential tool to enhance shareholders value. Therefore, banks that disclose better content of CSR disclosure are able to reduce the degree of information asymmetry and to enhance their stock price. As CSR is not yet a mature concept in the developing countries and related data is limited, we believe that the documented results are likely to encourage banking institutions in the developing countries to invest and report on their social activities. Accordingly, banking institutions may enhance their shareholders welfare by considering the content of CSR disclosure rather than classifying it as non-rewarding activity.

The paper consists of four main sections. The first section covers the literature review and theoretical framework. The second section illustrates the research design and the examined models. The third section addresses the results of data analysis and hypotheses testing. The conclusion of the study is drawn in the final section.

CSR and STOCK PERFORMANCE

CSR is the voluntary interaction between the firm and its stakeholders through addressing their social and environmental issues within business activities (Reverte 2009). The strength and impact of CSR is most likely determined by the effective communication of the firm's CSR activities to the largest group of stakeholders and the level of involvement, which reflects commitment to society and unselfishness (Godfrey et al. 2009). Therefore, the typical content of the voluntarily disclosed CSR information contains information addressing the firm's impact on social, environmental and human resources issues (Campbell and Slack 2008).

Prior research on CSR disclosure suggests its positive consequence on firm profitability, risk, cost of capital and reputation, and thereby on firm value (Pava and Krausz 1996; Simpson and Kohers 2002; Scholtens 2009; Salama et al. 2011; Jizi 2013). The increasing need for firm social information and the attention toward the significance of firms' social attitude in managing stakeholders concerns and protecting firm value lead the financial markets to develop sustainability indexes such as Dow Jones Sustainability and FTSE4GOOD index (Arvidsson 2010). In line, CSR was defined by the World Bank 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). Therefore, CSR is how firms incorporate their social and environmental concerns into their business activities to support the development of their communities and create wealth (Cormier et al. 2011).

With the evolving role of CSR, managers are more willing to consider CSR investments in their strategic decisions and remove constraints as shareholders are more willing to accept lower return compensated by improved CSR practice (Pava and Krausz 1996). Richardson et al. (1999) expand Pava and Krausz (1996) survey arguing that disclosing CSR information regardless of news type reduces uncertainty concerning future cash flows and lowers firm risk, which lowers cost of capital and enhances market performance. Similarly, Alexander and Buchholz (1978) mention that within efficient markets the variation in CSR might be associated with stock price. CSR creates a buffer of goodwill and develops moral capital that leads to lower impact on stock prices particularly if the firm is facing negative events (Godfrey et al. 2009). Furthermore, Murray et al. (2006) noticed that the demand for CSR disclosure is growing, however investors are still having a traditional view and not considering the social perspective when taking financial decisions. In contrast, Belkaoui (1976) finds that more environmental disclosure enhances stock price temporarily. When the stock is fully valued, stock selling events start causing prices to decline.

The accounting interest in information content is due to the role of expanded disclosure in correcting asset undervaluation and enhancing stock liquidity (Healy et al. 1999). Expanded disclosure encourages investors to adjust stock valuation according to the level of disclosed information, which improves stock price (Healy et al. 1999). Reporting and disclosing information is an opportunity for management to signal its performance and provide information allowing the principal to monitor management practices, reducing the information gap (Healy and Palepu 2001). Decreasing information asymmetry and enhancing confidence among investors by disclosing CSR information facilitate stock trading activities and might also decrease a firm's cost of capital relatively to other firms with poor disclosure practice (Healy and Palepu 2001). The signaling power of CSR is determined by its effective communication to the largest group of stakeholders (McWilliams and Siegel, 2001; Godfrey et al. 2009). Indeed, discussing a firm's social activities, charitable contributions, environmental projects and their development to human capital acts as a dialogue signaling bank's good standing and interest in responding to society's obligations (Simpson and Koher, 2002; Gray, Kouhy and Lavers, 1995; Nehme et al. 2015). Consequently, firms with better disclosure levels have better stock prices (Gelb and Zarowin 2002). Agency theory perspectives argue that managers have incentives to eliminate uncertainties in order to lower agency conflicts and enhance stock price (Kochhar 1996). By managing information asymmetry, investors' trust is enhanced encouraging them to trade in firm's stocks as they relatively reflect the fair market value, which results in better stock prices (Diamond and Verrecchia 1991; Kim and Verrecchia 1994). Therefore, quality firm management sends signals to shareholders and investors to differentiate their firms and benefit from higher share price. Therefore, we hypothesize the following:

H1 The better the content of CSR disclosure the better is the stock return.

RESEARCH DESIGN

Sample Selection and Data Collection

Annual reports are an important information channel (Campbell and Slack 2008) providing investors with details to evaluate assets (Kothari et al. 2009). They are the most widely distributed disclosure media (Gray et al. 1995) illustrating CSR conducted and communicated activities throughout the year. Therefore, a sample of U.S. national commercial banks annual reports covering years 2009 and 2010; i.e. in the wake of the financial crisis (Grove et al. 2011); were reviewed to measure CSR disclosures content. *Thomson One Banker* was used to identify active listed U.S. national commercial banks and collect financial data. Banks with asset size greater than 1 billion according to 2009 figures were selected forming the initial sample size of 107 banks per year. Due to missing data, some banks were omitted from the initial sample. Consequently, the total examined sample size is 194 U.S. national commercial bank annual reports.

Stock Price Changes (Stock Return)

Stock prices within an efficient market move according to newly available information and changes in stock prices signal efficiency and reflect stock participants reaction to information (Ross et al. 2005). Improvement in stock price is highly important to companies in general and companies with undervalued stocks in particular. Undervalued stocks are costly to both shareholders and management if firm wants to raise equity or stock options will expire shortly (Healy et al. 1999). Changes in stock prices imply that market assessment to the current and future performance of the corresponding financial asset have been changed due to changes in its expected cash flows (Klassen and McLaughlin 1996). CSR information and reputation are likely to reduce uncertainty concerning future cash flows, which in turn lowers firm risk and cost of capital enhancing stock performance (Pava and Krausz 1996).

Breen et al. (2002) refer to the simple return formula to compute the equity return when predicting the impact of equity liquidity on stock price behavior. Similarly, Pereira and Zhang (2010) consider stock price changes resulting from trading activities as the difference between two prices over the base price. While, Gelb and Zarowin (2002) measure the change in stock using the simple return formula with dividends. As we have low frequency of compounding, the simple return formula i.e. the difference between two consecutive year-end closing stock prices with and without dividends over the base year price, in addition to the average monthly return, are used alternatively to measure price change (PCh) i.e. investment return. The history of the stocks that witnessed large change in their market price was reviewed to ensure that this difference is not the result of stock splits.

Corporate Social Responsibility Disclosure

CSR is the voluntary interaction between the firm and its stakeholders through addressing their social and environmental issues within business activities (Reverte 2009). Therefore,

social reporting in particular informs shareholders and other third parties by firm's involvement and the level of commitment to society (Campbell and Slack 2008). CSR disclosure is defined as "Voluntary disclosure containing information on the company's impacts upon a range of social and environmental constituencies or stakeholders. Typical contents include information on human resources, communities, environmental resource consumption and environmental impact" (Campbell and Slack 2008, p.8). The impact of CSR is achieved by effectively communicating CSR activities to the largest group of stakeholders, conveying the level of community involvement and unselfishness (Godfrey et al. 2009).

The content analysis approach is employed to measure the richness of CSR disclosure presented in annual reports. Holder-Webb et al. (2009) defined the content analysis as "a way of codifying text and content of written narratives into groups or categories based on selected criteria", which could be performed in different ways that vary in its complexity (Gray et al. 1995). The content score mirrors both the quality and quantity of the disclosure contrary to the sentence or word count, which only reflects the quantity while the quality of communicated information is more important (Hasseldine et al. 2005). The advantage of using the content analysis approach over relying on rating agency disclosure score (such as 'Kinder Lydenburg Domini' KLD or 'Association for Investment Management Research' AIMR), is avoiding agency score limitation such as available rated companies or just classifying firms as socially responsible or irresponsible (Healy et al. 1999). Moreover, in AMIR rating, poor and average disclosure firms are omitted and the ranking criteria and motive is unclear (Healy et al. 1999).

To measure the content of CSR disclosure, we first define four CSR categories according to the most commonly used categories in previous literature, which are community involvement, environment, human resources, and social products and service quality (Jizi et al. 2014; Scholtens 2009; Gray et al. 1995). Using similar CSR categories as in previous studies is important for comparability purposes (Gray et al. 1995). Following Jizi et al. (2014), each CSR category is rated from zero to five according to the richness of information disclosed (see appendix A). A maximum of three points were given if the CSR category is comprehensively discussed but not supported by quantitative figures. Additional point is given per category if quantitative figures are disclosed, and another point if these figures were compared with previous or projected performance. Consequently, the disclosure score is the ratio of points awarded over the maximum points a bank could achieve.

$$CSRDS = \frac{\sum \text{points of CSR categories (Community, environment, human resources, social products \& service quality)}}{20}$$

To ensure that the scores are reproducible and reliable, the Krippendorff alpha to test inter-code reliability of disclosure score is conducted (Krippendorff 2007; Holder-Webb et al. 2009, and Jizi 2015). Twenty annual reports covering 10% of the examined annual reports were randomly selected and recoded by two independent coders. The test of reliability showed alpha value of 80% from the first round, which is considered acceptable agreement rate for the CSR score (Hasseldine et al 2005; Holder-Webb et al. 2009).

Control variables

During crisis banks faced liquidity difficulties that stressed on their asset pricing and turned to be of a higher concern after the 2008 credit crunch (Allen and Moessner 2011). Banks facing high leverage ratio are more risky and subject to bankruptcy (Helbok and Wagner 2006), which might impact on the market value (Kothari et al. 2009). Firms with potential investments and opportunities to grow will be able to utilize their free cash flow, which assists in controlling agency problems (Fama and French 2002) and consequently impacts on firm value (Sibilkov 2009). Moreover, Kothari et al. (2009) argue that firms with low book-to-market ratio are considered as firms with lower risk, as firms with continuous future cash flows experience higher appreciation and confidence in the market. According to agency theory, higher profitability assists in reducing agency conflict and lowering agency cost, as profitability convinces shareholders by corporate managers' performance and signals the ability to undertake new investments, which enhance firm's value (Kochhar 1996). Profitable firms can manage agency conflicts and lower their cost by distributing portion of their profits as dividends (Fama and French 2002). In contrast, poor performing companies are more sensitive to financial difficulties and lack resistance to external shocks (Baek et al. 2004).

REGRESSION MODEL

The pooled linear regression model is implemented to analyse our data and estimate the relationship between the dependent and the independent variables.

The regression model will form the following equation:

$$PCh(\text{return}) = \alpha + B_1CSRD + B_2Lev + B_3BtoM + B_4AG + B_5ROA + \epsilon \quad (1)$$

TABLE 1. INDEPENDENT VARIABLES MEASUREMENT

Variable name	Variable code	Variable descriptions	Predicted sign
Corporate social responsibility disclosure score	CSRD	Corporate social responsibility disclosure score measured as the ratio of disclosure content points over the maximum score a bank can achieve.	+
Profitability	ROA	Net income over total assets	+
Leverage	Lev	Debt divided by the book value of equity	+
Book-to-market value of equity	BtoM	Book value of equity divided by the market value of equity (market capitalization)	-
Asset Growth	AG	The difference in asset size between the beginning and end of year divided by the beginning of year asset size	+

RESULTS AND DISCUSSIONS

Table 2 illustrates that stock price change in the examined sample varies between 1.07 and -1.00. Only 24% of the banks covered in the examined sample witnessed enhancements in their stock prices during 2009 compared to 65% in year 2010 and 6% showed no changes in their stock prices. The mean, median and standard deviation are respectively (-0.06), (-0.02) and (0.41). CSR was disclosed in banks annual reports with variation in their content and informative levels. The highest CSR disclosure score is (0.8) across the four categories. Ten banks did not disclose any CSR information. The mean of the sample is (0.23) and the standard deviation is (0.17) reflecting reasonable variation in CSR scores.

TABLE 2. DESCRIPTIVE STATISTICS

Description	Price Change	Price Change with dividends	CSR	ROA	Lev	Book-to Market	Asset Growth
Mean	-0.06	-0.04	0.23	-0.29	10.23	2.29	0.02
Mode	0	0	0.15	0.43	13.57	14.88	0
Median	-0.02	-0.01	0.15	0.4	9.15	1.09	0.01
Standard	0.41	0.41	0.17	1.84	4.23	5.75	0.11
Skewness	0.12	0.14	1.2	-1.93	2.75	10.17	2.35
Minimum	-1.00	-0.81	0.00	-9.53	0.09	0.313	-0.22
Maximum	1.07	1.08	0.80	3.69	37.77	72.74	0.81

The relationships between stock price changes and the content of CSR disclosure is estimated by employing the linear regression analysis with robust standard error. The spearman correlations matrix and VIF test are used to test for the existence of multi-collinearity between the examined variables. Table 3 shows that with the exception of the correlation between ROA and book-to-market value of equity (0.72), the correlation between other variables is well below one. The variance inflation factor (VIF) test reports results' showing low risk of collinear variables as they are close to one (Gujarati, 2003) and far from 10 (Reverte 2009). The spearman's rank correlation and the VIF test shown in table 3 suggest that statistically there is no serious problem of multi-collinear variables with the exception of return on assets, which we need to deal with it cautiously. We test for autocorrelation and heteroscedasticity using Durbin Watson test and Breusch-Pagan/Cook-Weisberg test for heteroscedasticity. Both report no threat of autocorrelation or heteroscedasticity. Durbin Watson test reports 1.382.

The impact of the content of CSR disclosure on stock return with and without dividends as well as average return is examined in three stages. In doing so, the first set of regressions estimates the change in stock price as a function of CSR disclosure alone; in the second set of regressions the control variables with the exception of ROA are introduced and then ROA is added. The objective behind following such approach is that collinearity between independent variables could also be detected if the coefficient values of the independent variables are affected with the addition or removal of any examined variable (Brooks 2008, p.172).

TABLE 3. CORRELATIONS MATRIX

Variables	VIF	Price Change	CSR	ROA	Lev	Book-to-Market	Asset Growth
Price Change		1.000					
CSR	1.059	0.246**	1.000				
ROA	1.503	0.474**	0.220**	1.000			
Leverage	1.305	-0.217**	-0.106	-0.156*	1.000		
Book-to-market value of equity	1.062	-0.424**	-0.207**	-0.727**	0.164*	1.000	
Asset Growth	1.142	0.078	-0.001	0.325**	0.041	-0.353**	1.000

* Significant at $p < 0.05$, ** significant at $p < 0.01$

Stock return and CSR disclosure content

The content of CSR disclosure is statistically significant and positively associated with stock return. The inclusion of ROA in regressions VII, VIII and IX increased the goodness of fit but at the same time it caused changes to the significance levels as well as coefficients signs and magnitudes of CSR and other control variables. The change in CSR significance when introducing the ROA variable might be due to the significant association between ROA and CSR disclosure (see Simpson and Kohers 2002; Jizi et al. 2014) and/or the high correlation detected in the correlation matrix. Therefore, to avoid model misspecification the analysis is based on equation IV, V and VI.

The reported results suggest direct association between the content of CSR disclosure and stock return. These results are aligned with the set hypotheses and discussed theoretical framework. Better content of CSR disclosure provides stock participants with additional information to consider when valuing stocks, lowering the degree of asymmetry and enabling more precise stock valuation. The CSR economic impact could be explained by the information CSR disclosure are likely to provide to investor concerning social and environmental issues the bank might be proceeding to. For example, information concerning the probability of employees' claims and legal issues that might arose as consequences to the financial crisis assists investors in estimating the prospected cash flows and their current value when valuing stocks. By disclosing better content of CSR disclosure, management is conveying its ability to contribute to community and signaling their financially controlled position. Companies with good standing, clear strategy and future growth will favor signaling their good news in the form of voluntary disclosures (Watson et al. 2002).

The CSR significance indicates that financial market participants discount CSR information economically and management involvement and communication to CSR information is likely to enhance shareholders value. Therefore, if CSR information did not protect banks from financial crisis consequences, it might share in limiting the impact of financial stress on firm value by either enhancing stock price or eliminating negative stock

price changes. On the basis of analyzing the reported results, we can conclude that stock participants during the period of study care for bank social profile and that CSR is likely to lower the degree of information asymmetry. This enhances stock prices after crisis as in efficient markets all available information, financial and non-financial, is reflected in equity value (Richardson et al. 1999).

The suggested association between CSR disclosure content and stock return reconciles with the results obtained by Godfrey et al. (2009) arguing that the moral capital generated from CSR leads to low impact on stock prices in case of negative events. Moreover, our results match with Salama et al. (2011) and Belkaoui (1976) results. Salama et al. (2011) provide evidence showing that firm community and environmental performance decrease firm's systematic risk, which leads to lower cost of capital. Belkaoui, as well, finds that environmental disclosure enhanced stock price temporarily, since stock prices declined after four month from the disclosure date.

On the other hand, the association between CSR disclosure and stock price change found in our study contradicts with the results obtained by Alexander and Buchholz (1978) when examining a sample containing both financial and non-financial sectors. Similarly, Murray et al. (2006) found no relationship between CSR disclosures and stock price return. This might be explained by the use of different measure to compute stock price returns. Murray et al. (2006) used the continuous compounded return formula for yearly stock prices, which is commonly used when there is high frequency of compounding e.g. daily or weekly. While the present study uses the simple return formula, which is recommended when there is low frequency of compounding i.e. yearly data (Brooks 2008).

In accordance with the agency theory, banks those were able to enhance shareholders value and succeed in having market value of equity higher than book value were able to improve their stock prices or eliminate negative price downturn. Having better growth ratio convinces shareholders and investors by management strategies and bank ability to have future investments and continuously generate cash flows. Therefore, this sign of success assists in lowering agency conflicts and results in better firm value. The results also suggest that lower leverage ratio was perceived by investors as lower risk, which enhances confidence in stock and consequently leads to more stock price appreciation. Leverage was of concern during crisis time as banks were obliged to undertake significant write-downs due to the estimated loss in the mortgage market, which significantly increase bank liquidity risk (Brunnermeier 2009).

TABLE 4. LINEAR REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN STOCK RETURN AND CSR DISCLOSURES CONTENT WITH SELECTED CONTROL VARIABLES

Dependent variable	Equation I. Total investment return ^a	Equation II. Return ^a	Equation III. Average return ^a	Equation IV. Total investment return	Equation V. Return	Equation VI. Average return	Equation VII. Total investment return	Equation VIII. Return	Equation IX. Average return
Independent variables	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value
Constant	-0.141 -3.09***	-0.14 -3.03***	0.0002 0.04	0.230 2.42**	0.148 1.58	0.029 2.71***	0.110 1.23	0.023 0.26	0.022 2.05**
CSRD	0.464 3.44***	0.380 2.53**	0.051 3.63***	0.334 2.56**	0.273 1.87*	0.042 3.1***	0.166 1.37	0.096 0.71	0.032 2.38**
Leverage				-0.030 -4.07***	-0.023 -3.15***	-0.003 -2.64***	-0.012 -1.65	-0.004 -0.54	-0.002 -1.55
Book-to-market value of equity				-0.016 -3.82***	-0.015 -3.61***	-0.001 -1.83*	-0.013 -3.47***	-0.011 -3.13***	-0.0003 -1.16
Asset Growth				0.110 0.58	0.046 0.23	0.033 1.25	-0.294 -1.45	-0.377 -2.17**	0.010 0.37
ROA							0.098 5.64***	0.104 8.11***	0.006 2.66***
Adj. R-squared	0.037	0.025	0.05	0.185	0.1255	0.165	0.314	0.2716	0.215
Prob > F	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
F-test	11.83	6.39	13.2	10.57	7.05	5.3	21.36	24.10	6.5

*P < 0.1, **P < 0.05, ***P < 0.01

^a Return reflects price change; Total investment return reflects price change with dividends; Average return reflects the average monthly return.

**TABLE 5. LINEAR AND POISSON REGRESSION ANALYSIS OF THE
RELATIONSHIP BETWEEN PRICE CHANGE AND CSR DISCLOSURES
CONTENT**

Dependent variable	Model I. <i>Linear regression</i>		Model II. <i>Poisson regression</i>	
	Without dividends	With dividends	Without dividends	With dividends
Independent variables	Coeff. t-value	Coeff. t-value	Coeff. t-value	Coeff. t-value
Constant	2.10 13.41***	2.159 15.68***	0.770 8.55***	0.832 10.34***
CSRD	0.377 1.71*	0.396 1.89*	0.194 1.72*	0.214 1.9*
Leverage	-0.029 -2.36**	-0.042 -4.99***	-0.017 -2.22**	-0.028 -5.02***
Book-to-market value of equity	-0.019 -3.68***	-0.019 -3.94***	-0.0144 -2.81***	-0.014 -2.98***
Asset Growth	0.189 0.59	0.091 0.27	0.100 0.61	0.063 0.35
Adj. R-squared	0.09	0.12		
Prob > F / Prob > Chi	0.000	0.000	0.001	0.000
F-test / Chi	6.00	11.57	18.02	40.66

*P < 0.1, **P < 0.05, ***P < 0.01

To examine the influence of profitability on the relationship between CSR and stock return, we introduced an interaction variable between CSR and ROA. First ROA was transferred into a dummy variable, giving a value of 1 if bank's ROA is greater than the sample mean and 0 otherwise. Then an interaction variable was developed between CSR score and ROA dummy variable. The findings (Table 6) highlight a positive and significant relationship between CSR disclosure and stock return at high levels of profitability. That is, when the bank's ROA is above average, an increase in CSR disclosure has a direct effect on stock return and more signaling power. This reflects that stakeholders in general and stock participants in particular consider more banks social profile when they have high profitability levels, as they have no excuse not to invest in social activities and share part of their profits with their societies. Therefore, our results emphasize on the importance of investing in CRS and reporting on them to boost shareholders well-being.

**TABLE 6. LINEAR REGRESSION ANALYSIS OF THE RELATIONSHIP
BETWEEN STOCK RETURN AND CSR DISCLOSURES CONTENT WITH THE
INTERACTION BETWEEN CSR AND ROA**

Dependent variable	Equation I. Total investment return a	Equation II. Return ^a	Equation III. Average return ^a
Independent variables	Coeff. t-value	Coeff. t-value	Coeff. t-value
Constant	22.139 2.31**	0.134 1.44	0.028 2.64***
CSR-D	-46.286 -1.93*	-0.402 -1.68*	0.003 0.13
Leverage	-2.688 -3.60***	-0.200 -2.78***	-0.002 -2.48**
Book-to-market value of equity	-1.364 -4.48***	-0.013 -4.05***	-0.001 -1.31
Asset Growth	-11.707 -0.62	-0.113 -0.57	0.024 0.371
CSR-ROA	95.841 4.13***	0.793 3.36***	0.045 1.95*
R-squared	0.25	0.17	0.18
Prob > F	0.000	0.000	0.000
F-test	16.35	10.60	5.53

*P < 0.1, **P < 0.05, ***P < 0.01

^a Return reflects price change; Total investment return reflects price change with dividends;
Average return reflects the average monthly return.

CONCLUSIONS

The latest financial crisis was one of the key features that characterized the decade due to the shock it caused to the financial system. U.S. banking industry was in the middle of the crisis storm and trillions of U.S. dollars were lost on stock markets (Brunnermeier 2009). Most security prices dropped sharply (Ivashina and Scharfstein 2010) and the lack of information available to stock participants to assess assets values led to massive drawback in trading activities and stock prices (Gorton 2009).

Volume of literature examined stock price reaction to revealed information or dealt with the topic using financial risk measures such as abnormal returns and spread (Kothari et al. 2009; Bushee and Noe 2000; Godfrey et al. 2009). However, literature lacks

studies explaining the association between social disclosures and stock price changes (return) and how CSR disclosure is signaling to cause changes to economic factors (Murray et al. 2006). The present study addressed interesting empirical question and reported results on the reaction of banks stocks prices to the disclosed content of CSR information. These results might be valuable for banks management to consider in aligning their disclosure practice in order to maximize its benefit.

The reported results provide evidence supporting the hypothesis assuming positive relationship between CSR disclosure content and stock improvements. Results suggest that banks disclosing better content of CSR disclosure were able to provide stock participants with needed information related to their social profile and consequently enhanced their stock prices. That is, providing comprehensive content of CSR disclosure eliminates information asymmetry and uncertainty gap, which in turn reduce agency conflicts and enhance stock price. Price response to management participation and communication to CSR information suggests additional view in enhancing shareholders value, as CSR was not perceived as excess usage of non-productive investments, but as a tool to enhance shareholder value. In accordance with agency theory, growth measured by book-to-market value of equity is significant and share in explaining changes in stock prices. Leverage is also found to be inversely related to stock price changes suggesting that banks having lower leverage were able to convince shareholders and investors by their ability to overcome the hard financial period.

Further research could be conducted expanding the present study by covering other information channels, larger sample and/or other financial institutions. This will provide additional evidence regarding the consistency of the obtained results and assist in drawing more generalized conclusions.

APPENDIX A

	CSR category	CSR sub-category
1	Community involvement	<ul style="list-style-type: none"> • Contributions and donations to charities, NGOs and community activities • Provision if support to students to continue their education and sponsoring sport activities • Sponsoring health programmes • Sponsoring arts and culture • Supporting sports and/or recreational projects • Participation in social government campaigns
2	Environment	<ul style="list-style-type: none"> • Bank's environmental policies and concerns • Implemented systems for environmental management • Environmental projects such as recycling and protection of natural resources • Energy saving in performing business operations
3	Human resources	<ul style="list-style-type: none"> • Number of employees; health and safety policies and measures. • Equal opportunities in employment (e.g. minorities, women) • Training and education provided to employees (training policies and nature of training) • Employee assistance/benefits • Employee compensation • Employee expertise and backgrounds • Employee share purchase schemes • The confidence and self-esteem of employees • Employees' appreciation • Issues related to the recruitment process • Photos to document employee welfare (e.g. at social activities, award ceremonies) • Discussion of employees' welfare • Policies adopted regarding staff profit sharing
4	Social products and services quality	<ul style="list-style-type: none"> • Diversity of social products (e.g. climate products, educational loans etc.) • Discussion of the types of social products • Geographical distribution and marketing network of the offered social products • Discussions in relation to customers feedback • Provision for disabled, frail and difficult-to-reach customers • Investments in social responsibility activities • Strategies and plans for future expansion in social products and services • Loyalty programmes and gifts to customers

Source: Based on categories identified by Jizi 2013; Jizi et al. 2014.

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