Quantification versus Quality: The Value Relevance of CSR Disclosure of Saudi Companies

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Abstract

We offer a novel contribution by examining the impact of Corporate Social Responsibility (CSR) disclosure quantity and quality on firm value. We use a sample of 171 non-financial firms listed in the Saudi stock market for the period 2013-2014. We complement and extend the work of Hasseldine, Salama and Toms (2005) by measuring the quantity and quality of CSR disclosure and examining their impact on firm value. To measure CSR disclosure quality, we following Beest el al (2009) and capture all qualitative attributes of information quality as defined in the conceptual framework of the IASB (2010 a). We use a CSR disclosure index to measure the quantity of disclosure.

Our analysis shows a positive association between CSR disclosure quality and quantity and market capitalisation. However, we did not find the same results when we use either Tobin's Q or Return on Assets (ROA) as proxies for firm value. This suggests that both CSR disclosure quantity and quality have the same impact on firm value. However, the significance of this impact depends on whether the authors use market capitalisation, Tobin's Q or ROA.

Keywords: Corporate Social Responsibility, Disclosure Quantity versus Quality, Firm Value, Saudi Arabia

1. INTRODUCTION

Corporate Social Responsibility (CSR) disclosure quantity and quality have attracted major interest in accounting literature since the publication of a remarkable paper by Hasseldine, Salama and Toms (2005). Using a subjective measure of environmental disclosure quality, Hasseldine et al (2005:231) offer the first empirical evidence that the "quality of environmental disclosure rather than mere quantity has a stronger effect on the creation of environmental reputation amongst executive and investor stakeholder groups. They suggest that further investigation on the impact of CSR disclosure strategy and stock market value could be extremely useful in understanding the relevance of CSR disclosure quantity and quality. Our study aims to examine this important research issue.

In a recent study, Zahller, Arnold and Roberts (2015:155) provide evidence that “when CSR disclosures are higher quality, investors perceive organizational legitimacy to be higher, inferring that organizations should emphasize quantifiable, consistent, and comparable reporting”. This implies that “high-quality voluntary CSR disclosure can help protect organizational financial market performance following an exogenous shock through the disclosure’s effect on perceived legitimacy” (Zahller et al, 2015:174). Therefore, we expect that CSR quality should have a positive impact on firm value.

Zahller, et al (2015:174) consider two characteristics of information quality (the accuracy and completeness of CSR information) when measuring the quality of CSR disclosure. They suggest further research to consider “the factors producing high-quality voluntary CSR disclosures to understand how information characteristics interact with cognitive, affective, and behavioral user characteristics in affecting organizational performance. Our study is a response to Hasseldine et al (2005:231) and Zahller, et al (2015). We following Beest et al (2009) and capture all qualitative characteristics of information quality as defined in the conceptual framework of the IASB (2010 a). We use a CSR disclosure index to measure the quantity of disclosure. We then examine the impact of CSR quality and quantity on firm value in Saudi Arabia. Saudi Arabia provides a unique country context in which to analyse the impact of CSR disclosure quantity and quality on firm value because of its emerging economy with different religious, social and political systems and traditions.

Daily life, business, law, economics and political aspects of the Saudi society are affected by Islamic principles. In addition, the country improved its corporate governance (CG) code in 2010. This strengthened CG code requires companies to disclose their CSR activities in their annual reports. Moreover, the code is affected by Islamic principles that have paved the way for the introduction of Islamic governance characteristics (Albassam, 2014), and this is bound to affect the CSR disclosure of Saudi Arabian companies.

The impact of CSR disclosure on firm values of Saudi Arabian companies has not been thoroughly documented, although there are some studies that have investigated CSR in Saudi Arabia (e.g. Habbash and Ibrahim, 2015; Mandurah et al., 2012). Furthermore, Nalband et al. (2013) observed CSR perceptions, practices and performance of listed companies in Saudi Arabia. Our study offers two major contributions. First, we offer a new measure...
for CSR disclosure quality for one of the developing countries, Saudi Arabia. Second, we are the first to examine the impact of the quantity and quality of CSR disclosure on firm values in Saudi Arabia.

We find a positive relationship between CSR disclosure quantity and market capitalisation. However, we did not find the same observation when we use either Tobin’s Q or Return on Assets (ROA) as proxies for firm value. This suggests that both CSR disclosure quantity and quality have the same impact on firm value. However, the significance of this impact depends on whether the authors use market capitalisation, Tobin’s Q or ROA.

The remainder of the paper is organised as follows: Section 2 discusses theories, Section 3 reviews the literature, Section 4 explains the research design, Section 5 reports the results and Section 6 concludes the research.

2. THEORIES

There are many theories that explain the relationship between CSR disclosure and the value of a company. We use the signalling and agency theories and the efficient market hypotheses to explain the relationship between these variables.

2.1 Signalling and Agency theory

Prior research shows that a company’s voluntary disclosure impacts its value based on signalling theory (Sheu et al., 2010). The use of signalling theory explains why companies disclose CSR information to their stakeholders (Uyar et al., 2012). It is argued that voluntary disclosures in the annual report send signals to the marketplace that are expected to increase a company’s net present value and consequently its stock market value (Gordon et al., 2010). In addition, prior research (i.e. Sheu et al. 2010) shows that disclosure reduces the information asymmetry between insiders (managers) and outsiders (stakeholders) and hence reduced agency conflicts between both parties. This leads to an increase in firm value (Sheu et al. 2010).

2.2 Efficient market hypotheses (EMH)

According to the Efficient Market Hypothesis, CSR information is expected to be of increased benefit to investors as this information may lead to positive or negative adjustments in company security prices, thus affecting the value of a company (Jensen, 1978).

3. LITERATURE REVIEW

A limited number of studies examine the impact of disclosure on firm value (Uyar et al., 2012). However, the results are mixed. For example, Hassan et al. (2009) find that mandatory disclosure has a negative relationship with firm value while voluntary disclosure has no impact on firm value. Da-Silva and Alves (2004); Sheu et al. (2010), Gordon et al. (2010); Curado et al. (2011) and Uyar and Kılıç (2012) find that voluntary disclosure impacts firm value. In a recent paper, Elzahr et al. (2015) find a weak positive relationship between KPIs disclosure and firm value. Uyar and Kılıç (2012) noted that the relationship between voluntary disclosure and a company’s value depends on the measure of a company’s value (e.g., market to book value and market capitalisation).

Limited literature examines the value relevance of CSR disclosure. Cho, Lee, and Pfeffer (2013) investigated the relationship between CSR performance and information asymmetry. They found that CSR performance is inversely related to information asymmetry. The association, however, can be found only in companies that have less institutional investors, implying that fully informed investors are bound to act upon information relating to CSR performance. Richardson et al. (2001) investigated the relationship between social disclosure and cost of equity capital. They found a positive association between social disclosure and cost of equity capital. Hussein and Salama (2010) also provide evidence that higher levels of corporate environmental reporting scores improve investors’ ability to anticipate future earnings. Ulmān (1985) argued that firms use social disclosures in order to manage relationships with their stakeholders. He suggested that social disclosure is a function of three dimensions: stakeholders’ power, strategic posture and economic performance. Dhaliwal et al. (2011) found that firms that report well social responsibility information are more likely to raise larger amounts of equity capital in the two years following the reporting, compared with non-reporting firms. From a signalling perspective, managers seeking finance assistance may wish to send good signals to the investors and debt holders. For investors, such communication is credible because managers making fraudulent signals will be penalized (Hughes, 1986). This suggests that firm value might be lowered due to investors’ negative expectations with regard to the financial consequences of social and environmental aspects. Hasseldine et al. (2005) investigate the association between corporate environmental disclosure and corporate environmental performance measured by the environmental reputation. They find the quality of environmental disclosure more impact than the quantity of disclosure on the environmental reputation. Elliot et al. (2014) they find that association between CSR performance and investors’ estimates of fundamental value that can be diminished by investors’ explicit valuation of CSR performance.

To the best of our knowledge, there is no prior research on the impact of CSR disclosure quantity and quality on firm value (Habbash, and Ibrahim, 2015; Mondarah, et al. 2012), particularly in Saudi Arabia. Therefore, this study attempts to investigate this issue. Based on the above discussion and because of the mixed findings, we hypothesise that:

H1: There is an association between the quantity of CSR disclosure and firm value in Saudi Arabia.

Agency and signalling theories suggested that disclosure quality should help in correcting any firm mis-valuation. Both theories argued that disclosure quality should help in reducing asymmetric information among the stock market participants, as well as between managers and investors. Therefore, firm value should be increasing as a result of disclosure quality through either reducing its cost of capital or increasing the cash flow to its shareholders or both (Elzahr et al, 2015). Prior research argues that there is little evidence on this research stream to deduct a cohesive conclusion on the relationship between disclosure quality and firm value (Hassan et al., 2009). In addition, Beattie et al. (2004: 233) argue that. “Researchers investigating
the determinants and consequences of disclosure quality could be wasting their effort if the primary variable of interest Disclosure is not being measured with a sufficient degree of accuracy. Also, Beyer et al. (2010:311) review prior research different proxies for disclosure quality and conclude that: “a sensible economic definition of voluntary disclosure/financial reporting quality and direct derivation of measures from that definition is missing from the literature. This lack of an underlying economic definition hinders our ability to draw inferences from this work, and we recommend that future research address this issue”. In the CSR literature, Hasseldine et al (2005:231) showed that the quality (not the quantity) is more information for UK companies’ reputation. Zahller, Arnold and Roberts (2015) showed that investors perceived organizational legitimacy to be higher for companies with higher levels of CSR disclosure quality. Hence, we expect that CSR disclosure quality should positively affect firm value. Therefore, we hypothesise that:

H2: There is a positive association between the quality of CSR disclosure and firm value in Saudi Arabia.

4. RESEARCH DESIGN

4.1. Sample

The current study uses a sample of Annual Reports of Saudi Arabian non-financial companies listed on the Saudi Stock Exchange over the period of 2013-2014. The period chosen because it is close to the declaration of the Saudi governance code that included social contributions. In addition, the study is based on the most recent company Annual Reports that contain CSR disclosure. Moreover, non-financial companies are more likely to be utilised for their social and environmental impact, which can have a major influence on a company’s reputation (Brammer and Pavelin, 2008). The total number of non-financial companies listed in Saudi Stock Exchange for years 2013-2014 is 198. Following prior research (i.e. Hussainey and Salama, 2010), financial firms were excluded. In addition, companies with missing financial data and firms have been suspensions were excluded, this leaving a sample of 171 companies for both years. Table 1 shows the final sample sorted by industries.

Table 1. Sample classification among industries

| Industry          | N  | %   |
|-------------------|----|-----|
| Basic Material    | 28 | 16.4%|
| Consumer goods    | 27 | 15.8%|
| Consumer services | 35 | 20.3%|
| Industrials       | 66 | 38.6%|
| Real states       | 4  | 2.3% |
| Telecommunication | 7  | 4.1% |
| Utilities         | 4  | 2.3% |
| Total             | 171| 100%|

This Table provides the distribution of the sample amongst industries. The definitions of the industries are based on the Industry Classification Benchmark (ICB).

Annual Reports were collected from the official websites of companies. Governance data was manually collected from the companies’ Annual Reports. All financial data is collected from Datastream. The table 2 shows Datastream codes for the financial data.

Table 2. Datastream Variables Definitions

| Variable                          | Measurement                                                                 |
|-----------------------------------|------------------------------------------------------------------------------|
| Leverage                          | The ratio of total debt to total capital (WC 08221)                         |
| Liquidity                         | Current ratio (WC 08106)                                                    |
| Cash dividends paid               | Total dividends paid to common shareholders (WC 04551)                     |
| Asset growth                      | Total assets growth (WC 08621)                                              |
| Capital expenditure assets        | Capital expenditures as percentage of total assets (WC 08416)              |

4.2. Measuring CSR disclosure quantity and quality

This study develops two disclosure indices: one to measure the level of CSR disclosure quantity, and the other to measure CSR disclosure quality. The index for CSR disclosure quantity is based on prior research (e.g., Ng, 1995; Hackston & Milne, 1996; Hall, 2002; Newsom & Deegan, 2002). This index consists of seven disclosure categories: (1) employees, (2) communities, (3) environmental issues, (4) products and services, (5) energy, (6) customers and (7) other disclosure items which are consistent and compatible with the Saudi Arabia culture and its economic environment. Appendix 1 details the disclosure index for CSR disclosure quantity. In determining the CSR disclosure quantity, an unweighted disclosure is commonly utilised. This approach has been adopted by several researchers in which an item scores one if it is disclosed and zero if it is not disclosed (Abdurouf, 2014; Haji, 2013; Aburib and Gao, 2010; Anwar et al., 2010).

Following prior research (e.g., Botosan, 2004; Jonas and Blanchet, 2000; Beest et al., 2009; Chakroun et al. 2014), this study develops a disclosure index to measure the level of CSR quality based on the qualitative characteristics of accounting information suggested in the conceptual frameworks of the International Financial Reporting Standards (IFRS) (2010A). This allows for the evaluation of the qualitative characteristics of financial information by weighted measure as provided in earlier studies (Beest et al., 2009; Chakroun & Hussainey, 2014). The study adopted the four qualitative characteristics of CSR
information: “relevance,” “faithful representation,” “understandability” and “comparability” to assess the CSR disclosure quality in Annual Reports. The reliability and validity of our disclosure scores are checked by comparing the correlation between the scores produced by the first author with those produced by the second author for a sample of annual reports.

4.3. Measuring firm value

This study used three measurements of firm value. These are Tobin’s Q ratio, market capitalization and return on assets (ROA). Although there is no agreement in the literature about an ideal measure for firm value (Mangena et al., 2012; Albassam, 2014), these measures are used extensively in prior studies. The standardization of this type of measure would be helpful to develop comparability with other studies (Munisi and Randoy, 2013).

Our first measure of firm value is the natural logarithm of a company’s Tobin’s Q ratio at the end of the fiscal year. Tobin’s Q = [total debt + market value of equity] / book value of total assets. The second measure is the market capitalization (Uyar and Kilic, 2012). Market capitalization is measured as the market value of common equity at the end of a company’s year of operations. The third measure is the return on assets (ROA) that determines a company’s net income in relation to its total assets.

5. REGRESSION MODEL

To test the hypotheses (H1, H2), we control for corporate governance variables and firm characteristics. In particular, we consider the following variables: Board size, independent directors, governmental ownership, managerial ownership, and CEO duality, frequency of Board meetings, audit committee size, remuneration committee size, liquidity, leverage, dividends, asset growth and capital expenditure. In addition, the year and industry fixed effects were also included to control for the year and industry effect. Equation 1 examines the value relevance of CSR disclosure quantity while equation 2 examines the value relevance of CSR disclosure quality.

\[
\text{Firm value} = \beta_0 + \beta_1 \text{CSR Quan} + \beta_2 \text{BSIZE} + \beta_3 \text{INDTO} + \beta_4 \text{GOVWN} + \beta_5 \text{MANOW} + \beta_6 \text{CEOD} + \beta_7 \text{BMET} + \beta_8 \text{ACZISE} + \beta_9 \text{REMCOSZE} + \beta_{10} \text{LIQ} + \beta_{11} \text{DIVI} + \beta_{12} \text{ASTGTH} + \beta_{13} \text{CAPEXAST} + \text{Year Fixed Effect} + \text{Industry Fixed Effect} \quad (1)
\]

\[
\text{Firm value} = \beta_0 + \beta_1 \text{CSR Qual} + \beta_2 \text{BSIZE} + \beta_3 \text{INDTO} + \beta_4 \text{GOVWN} + \beta_5 \text{MANOW} + \beta_6 \text{CEOD} + \beta_7 \text{BMET} + \beta_8 \text{ACZISE} + \beta_9 \text{REMCOSZE} + \beta_{10} \text{LIQ} + \beta_{11} \text{DIVI} + \beta_{12} \text{ASTGTH} + \beta_{13} \text{CAPEXAST} + \text{Year Fixed Effect} + \text{Industry Fixed Effect} \quad (2)
\]

Where

- Firm value measured by TQ, ROA and MC; CSRQuan refers to the quantity of CSR disclosure; CSRQual is the quality of CSR disclosure; BSZE is the total number of directors on board; INDTO number of independent directors in the firm board of directors, GOVWN Percentage of shares owned by government, MANOW is the aggregate percentage of shares hold by major shareholders (with at least 3% ownership), CEOD A dummy variable equals 1 if the chairman is the same person as the CEO of the firm,0 otherwise BMET is the total number of board meetings during the year; ACZISE is the the total number of directors in audit committee; REMCOSZE Number of members of the firm remuneration committee, LIQ is firm liquidity, measured using the current ratio (current assets / current liabilities); LEV is firm leverage, measured using the ratio of total liabilities to total assets, DIVI Total dividends paid to common shareholders; ASTGTH is Firm asset growth ratio. CAPEXAST is capital expenditures assets, measured by Capital expenditures as percentage of total assets.

5.1. Results

5.1.1 Descriptive statistics

Table 2 shows the descriptive statistics of CSR disclosure quantity and quality on firm value. The mean value of CSR disclosure quantity and quality in Annual Reports. The mean and minimum and maximum values of 0.000 and 6.0. Furthermore, the minimum value is 0.000, and the maximum value is 16.0. The audit committee size (ACSZE) of Saudi Arabian firms has a mean value of 3.316 and its minimum value is 0.000 and its maximum value is 6.0. Furthermore, the mean value of remuneration committee size (REMCOSZE) is 3.368 and the minimum value is 0.000 and the maximum value is 7.0.

With regard to firm characteristics, the mean value of firm liquidity (LIQ) is 1.39 and the minimum and maximum values are 0.070 and 5.770, respectively. The mean value of firm leverage (LEV) is 57.96 with a minimum value of 0.000 and a maximum value of 354.910. Furthermore, the dividends paid (DIV) have a mean value of 493,507 and the minimum and maximum of 0.000 and 18,502,401, respectively. In addition, asset growth (ASTGTH) has a mean value of 8.736 and the...
minimum and maximum values of -28.730 and 75.120, respectively. Finally, the mean value of capital expenditure assets (CAPEXAST) is 7.558 and the minimum value is 0.000 and the maximum value is 56.950.

### Table 3. Sample descriptive statistics

|                | N   | Mean   | Std Dev. | Minimum | 25%   | Medium (50%) | 75%   | Maximum |
|----------------|-----|--------|----------|---------|-------|--------------|-------|---------|
| Log TO         | 171 | 0.6647 | 0.8931   | -0.038  | -0.260 | 0.582        | 0.926 | 2.494   |
| Log Capitalization | 171 | 15.040 | 1.3786   | 12.88   | 14.036 | 14.694       | 15.977| 19.628  |
| Return assets  | 171 | 8.9276 | 9.064    | -15.41  | 3.480  | 7.810        | 12.580| 36.530  |
| CSR quant      | 171 | 9.4133 | 9.512    | -0.000  | 2.000  | 6.000        | 15.000| 51.0    |
| CSR qual       | 171 | 3.334  | 1.417    | 1.00    | 2.000  | 3.25         | 4.25  | 1.000   |
| BSZE           | 171 | 8.485  | 1.606    | 4.00    | 7.000  | 9.000        | 9.000 | 12.0    |
| INDTO          | 171 | 4.064  | 1.587    | -0.000  | 3.000  | 4.000        | 5.000 | 11.0    |
| GOVWN          | 171 | 0.5255 | 0.347    | -0.000  | 0.000  | 0.000        | 0.000 | 0.7431  |
| MANOWR         | 171 | 0.577  | 1.264    | -0.000  | 0.000  | 0.000        | 0.0450| 0.7000  |
| CEOD           | 171 | 3.375  | 4.804    | -0.000  | 0.000  | 0.000        | 1.000 | 10.0    |
| BMET           | 171 | 5.292  | 2.3230   | -0.000  | 4.000  | 5.000        | 6.000 | 16.0    |
| ACSZE          | 171 | 3.316  | 0.9297   | -0.000  | 3.000  | 4.000        | 4.000 | 6.0     |
| REDMUCOSZE     | 171 | 3.308  | 1.0677   | 0.000   | 3.000  | 4.000        | 4.000 | 7.0     |
| LIQ            | 171 | 1.393  | 1.275    | 0.070   | -0.480 | 0.960        | 1.770 | 5.770   |
| LEV            | 171 | 57.961 | 67.515   | -0.000  | 8.200  | 32.760       | 87.490| 354.940 |
| DIVI           | 171 | 495307 | 1858755  | 0.000   | 23.000 | 65000        | 306000| 18502401|
| ASTGTH         | 171 | 8.736  | 13.750   | -28.730 | 6.200  | 14.550       | 51.120| 75.120  |
| CAPEXAST       | 171 | 3.900  | 8.760    | 4.630   | 11.090 | 56.950       | 16.0  | 50.0    |

Firm value measured by TO, ROA and MC; CSR qual refers to the quantity of CSR disclosure; CSR Quan is the quality of CSR disclosure; BSZE is the total number of directors on board; INDTO number of independent directors in the firm board of directors, GOVWN Percentage of shares owned by government, MANOW is the aggregate percentage of shares hold by major shareholders with at least 5% ownership, CEOD A dummy variable equals 1 if the chairman is the same person as the CEO, or 0 otherwise; BMET is the total number of board meetings during the year; ACSZE is the the total number of directors in audit committee, REMUCOSZE Number of members of the firm remuneration committee; LIQ is firm liquidity, measured using the current ratio (current assets / current liabilities); LEV is firm leverage, measured using the ratio of total liabilities to total assets; DIVI Total dividends paid to common shareholders, ASTGTH is firm Assets growth ratio, CAPEXAST is capital expenditures assets, measured by Capital expenditures as percentage of total assets.

***, **, * indicate significance at .001, .05 & .1 level.

This table provides the descriptive statistics of CSR disclosure quantity and quality, in addition to explanatory variables.

#### 5.1.2 Correlation analysis

Gujarati and Porter (2009) show that variables have high correlation if the correlation is higher than 0.80, and thus conclude that multi-collinearity among variables is acceptable if the correlation coefficients are less than 0.80. Table 3 shows the Pearson correlation. It shows that correlations are relatively low (less than 0.80) among all variables which indicate that there is no multi-collinearity problem.

An additional check for multi-collinearity was performed by calculating the Variance Inflation Factor (VIF) after each regression model. Earlier research has stipulated that if the VIF value is more than 10, then there is certain to be a multi-collinearity problem. The mean and maximum values of the VIF investigations were formulated with the regression results to show that there is no need to be concerned with this problem (Field, 2009).

Table 3 shows that CSR disclosure quantity is positively correlated with market capitalization at 0.371 (5% significance level). However, there is no correlation between CSR disclosure quantity and the other measurements. It provides evidence that CSR disclosure quantity is statistically correlated positively with some corporate governance variables such as BSZE at 0.182 (10% significance level), CEO duality at 0.191 (10% significance level), ACSZE at 0.173 (10% significance level), and correlated positively and negatively with firm characteristics, such as dividends paid at 0.287 (5% significance level) and CAPEXAST at -0.187 (10% significance level).

In addition, the CSR disclosure quality is associated positively with market capitalization at 0.305 (5% significance level). However, there is no correlation with the two other measurements. Table 3 shows that it is correlated with one variable of corporate governance, such as managerial ownership at 0.199 (5% significance level), and with firm characteristics, such as dividends paid at 0.338 (5% significance level).

Moreover, the Pearson correlation matrix indicates a significant association between CSR disclosure quantity and quality with some firm characteristic variables. This study finds that there is a positive relationship between CSR disclosure quantity and quality and both are significantly correlated with dividends paid at 0.287 and 0.338, respectively (5% significance level).

This result is consistent with prior research, such as Elliott, Jackson, Peccher and White (2014), who show that CSR disclosure is negatively associated with firm value. According to Klein et al. (2005), firm value rises with greater corporate governance disclosure, thus we suppose that voluntary disclosure has a positive impact on the firm value. Previous studies (Sheu et al., 2010; Gordon et al., 2010) pointed out that voluntary disclosure has an impact on firm value based on the signalling theory. Consequently, more disclosure signals give a better governance mechanism and reduce agency conflicts.
Table 4. Pearson correlation matrix

|                | CSR quant | LogTQ | Return assets | BSE | INDTO | GOVWN | MANOW | CEO | BMET | ISKOV | REMCOSZE | LIQ | ATII | DIM | ASYGTH | CAPEXAST |
|----------------|-----------|-------|---------------|-----|-------|-------|-------|-----|------|-------|-----------|-----|------|-----|--------|----------|
| CSR quant      | 1.668**   | -0.371*** | 0.182* | -0.041 | -0.079 | -0.021 | -0.191* | 0.064 | -0.173* | 0.000 | -0.008 | -0.095 | 0.287** | -0.848 | -0.187** |
| LogTQ          | 0.630     | 0.000 | 0.121         | 0.307 | -0.091 | -0.301 | -0.798 | -0.012 | -0.141 | -0.024 | -0.096 | -0.142 | 0.071 | 0.036 | -0.080 | -0.618** | 0.324 | -0.729** |
| Return assets  | 1.000     | 0.000 | 0.524         | 0.082 | -0.098 | -0.006 | -0.199** | -0.018 | -0.049 | -0.096 | -0.027 | 0.142 | 0.071 | 0.074 | -0.064 | 0.357 | -0.039 | -0.594 |
| BSE            | 0.148     | -0.065 | -0.105        | -0.210** | 0.095 | -0.040 | -0.047 | 0.031 | -0.193** | -0.522** | -0.015 | 0.145 | 0.243 | -0.004 | 0.000 | 0.090 | 0.101 |
| INDTO          | 0.000     | 0.000 | 0.000         | 0.734 | 0.221 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.017 | 0.000 | 0.014 | 0.016 |
| GOVWN          | 0.157*    | 0.060 | -0.105*       | -0.110 | -0.173* | -0.010 | -0.016 | -0.089 | -0.271** | -0.362** | 0.114 | 0.109 | 0.197** | -0.004 | -0.001 | 0.129 |
| MANOW          | 0.525**   | 0.089 | 0.020         | 0.049 | 0.047 | 0.105* | 0.280** | -0.004 | 0.088 | 0.000 | 0.088 | 0.004 | 0.129 | 0.004 | 0.000 | 0.093 |
| CEO            | -0.009    | 0.049 | 0.018         | 0.011 | 0.062 | 0.018 | -0.046 | -0.014 | -0.080 | -0.034 | -0.164** | 0.050 | 0.000 | 0.000 | 0.348 | 0.851 |
| BMET           | -0.594    | 0.017 | 0.022         | 0.119 | -0.278** | -0.254** | -0.080 | -0.220** | -0.495** | 0.035 | 0.012 |
| ISKOV          | 0.001     | 0.000 | 0.000         | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| REMCOSZE       | 0.314     | 0.041 | 0.002         | 0.246 | 0.408 | 0.360 | -0.005 | 0.101 | 0.157 | 0.044 | 0.012 | 0.004 | 0.000 | 0.143 | 0.000 | 0.114 | 0.123 |
| LIQ            | -0.001    | 0.122 | 0.009         | -0.407 | -0.111 | -0.073 | -0.147 | 0.145 | -0.621 | -0.216** | -0.236** | -0.113 | | |
| ATII           | 0.000     | -0.096 | -0.116 | -0.004 | -0.002 | -0.002 | -0.082 |
| DIM            | 0.000     | 0.000 | 0.000         | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ASYGTH         | 0.000     | 0.000 | 0.000         | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| CAPEXAST       | 0.000     | 0.000 | 0.000         | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Firm value measured by TQ, ROA and MC. CSR quant refers to the quantity of CSR disclosure; CSR qual is the quality of CSR disclosure; BSE is the total number of directors on board; INDTO number of independent directors in the firm board of directors; GOVWN Percentage of shares owned by government; MANOW is the aggregate percentage of shares held by major shareholders (with at least 3% ownership); CEO A dummy variable equals 1 if the chairman is the same person as the CEO of the firm; otherwise CEO is the total number of board meetings during the year; ACSZE is the total number of directors in audit committee; REMCOSZE Number of members of the remuneration committee; LEV is firm leverage, measured using the current ratio (current assets / current liabilities); LIQ is firm liquidity, measured using the ratio of total liabilities to total assets; DIV Total dividends paid to common shareholders. ASYGTH is firm Assets growth ratio. CAPEXAST is capital expenditures/assets, measured by Capital expenditures as percentage of total assets. This table provides the Pearson correlation of CSR disclosure quantity and quality, in addition to explanatory variables.
5.3 Regression result

Tables 4 and 5 show the results of OLS regression analyses. Table 4 shows the results of the value relevance of CSR disclosure quantity (Model 1), while, Table 5 reports the results of the value relevance of CSR disclosure quality (Model 2).

The regression tables show that F-values of Model 1 are 5.997; 4.667 and 13.242 for Tobin's Q model (TQ), return on assets (ROA) model and the market capitalisation (MC) model, respectively. F-values of Model 2 are 5.982; 4.672, and 10.883 for TQ; ROA and MC models, respectively. These values indicate that both Models 1 and 2 are statistically significant. Moreover, the adjusted R-Squared of Model 1 for the three measurements (TQ, ROA, MC) are 0.382, 312 and 0.602, respectively. Adjusted R-Squared of Model 2 are 0.381, 0.312 and 550, respectively for TQ, ROA and MC models.

In terms of CSR disclosure, there is a significant positive association between CSR quantity and firm value proxied by market capitalization (MC) at a 1% level of significance. However, the CSR disclosure quantity is not statistically significant with Tobin's Q ratio or ROA at any level of significance. Regarding CSR disclosure quality, there is a significant positive relationship between CSR disclosure and firm value measured by market capitalization (MC) at a 5% level of significance. On the other hand, there is no statistical significance with Tobin's Q or ROA at any level of significance. Our analysis shows a positive association between CSR disclosure quantity and market capitalization. However, we did not find the same results when we use either Tobin's Q or Return on Assets (ROA) as proxies for firm value. This suggests that both CSR disclosure quantity and quality have the same impact on firm value. However, the significance of this impact depends on whether the authors use market capitalisation, Tobin's Q or ROA. Therefore, it is not safe to accept H1 and H2.

Prior research (e.g. Hassan et al. 2009) finds that voluntary disclosure has a positive but insignificant association with firm value. On the other hands, the result shows that the mandatory disclosure has a negative association with firm value and highly significant. Dybvig & Warachka (2015) argued that Tobin's Q does not measure firm performance and it provides the two new measures for the firm value which are efficiency measure and assesses cost discipline. Consequently, this shortage of statistical significance supports the view that there is a conflicts relationship of determining the relationship between CSR disclosure and firm value. In addition, there is no agreement in the literature about an ideal measure for firm value (Mangena et al., 2012; Albassam, 2014). The finance theory suggestion that more public information increases firm value by reducing the firm's cost of capital or increasing the cash follows that accrue to shareholders (Botosan & Plumlee, 2002). Furthermore, firm value should be increasing as a result of disclosure quality through either reducing its cost of capital or increasing the cash flow to its shareholders or both (Elzahar et al, 2015). Dhaliwal et al. (2011) found that firms that report non-financial social responsibility information are more likely to raise larger amounts of equity capital in the two years following the reporting, compared with non-reporting firms. From a signaling perspective, managers seeking finance assistance may wish to send good signals to the investors and debt holders. Looking at the control variables, we noted that the impact of firm characteristics and corporate governance on firm value is not the same in our models. This is because of the definition of our dependent value (firm value) and our independent variable (CSR quantity versus quality).
### Table 5. Regression result of CSR quantity

|                          | Tobin Q   | Return on assets (ROA) | Market capitalization (MC) |
|--------------------------|-----------|------------------------|----------------------------|
|                          | Coefficient | t-Statistics | Sign | Coefficient | t-Statistics | Sign | Coefficient | t-Statistics | Sign |
| Constant                 | .743***    | -4.889      | .001  | -1.096      | .275         | 11.540***| 22.361  | .000         |
| CSR quan                 | .002       | .416        | .678  | .022        | .286         | .775  | .045**   | 4.942        | .000  |
| BSZE                     | .028       | -1.237      | .218  | 1.083**     | 2.449        | .015  | .202**   | 3.948        | .000  |
| INDTO                    | -.018      | -.848       | .398  | -.075       | -.179        | .858  | -.008**  | -.2042       | .043  |
| GOVWN                    | .019       | .621        | .335  | -1.544**    | -.2510       | .013  | 1.999*** | 2.756        | .007  |
| MANOWR                   | .467*      | 1.852       | .066  | 6.038       | 1.224        | -.223 | 1.447**  | 2.536        | .012  |
| CEOD                     | .110       | 1.604       | .111  | 2.934**     | 2.196        | .030  | .081     | .526         | .060  |
| BMET                     | -.008      | -.528       | .399  | .377        | 1.303        | .194  | .045     | 1.333        | .184  |
| ACSZE                    | -.028      | -.611       | .542  | -.729       | -.820        | .414  | .145     | 1.407        | .161  |
| REMCOSZE                 | .025*      | 1.844       | .067  | 1.071       | 1.351        | .179  | .048     | .525         | .001  |
| LIQ                      | -.062**    | 2.231       | .027  | 1.484**     | 2.751        | .007  | .041     | .655         | .313  |
| LEV                      | -.003***   | -4.437      | .000  | -.028**     | -.370        | .019  | .001     | .928         | .355  |
| DIVI                     | -.008      | -.764       | .446  | -.407*      | 1.732        | .085  | -.007**  | 2.585        | .011  |
| ASTGTH                   | -.001      | -.246       | .213  | -.027       | -.315        | .002  | .007     | 1.154        | .250  |
| CAPEXAST                 | .006       | 1.437       | .153  | .262***     | 3.308        | .001  | .019**   | 2.020        | .045  |
| Adjusted R-Squared       | .382       | 3.097       | .000  | 13.242***   | 13.242**     | .000  | .000     | .000         | .000  |
| F-test                   | 5.997***   | 4.667***    | 4.667***| 13.242***   | 13.242**     | .000  | .000     | .000         | .000  |
| F Sig                    | 1.335      | 1.255       | .000  | .000        | .000         | .000  | .000     | .000         | .000  |
| Observation              | 171        | 171         | 171   | 171         | 171          | 171   | 171      | 171          | 171   |

Firm value measured by TQ, ROA and MC; CSRQuan refers to the quantity of CSR disclosure; CSRQual is the quality of CSR disclosure; BSZE is the total number of directors on board; INDTO number of independent directors in the firm board of directors, GOVWN Percentage of shares owned by government, MANOW is the aggregate percentage of shares hold by major shareholders (with at least 3% ownership), CEOD A dummy variable equals 1 if the chairman is the same person as the CEO of the firm,0 otherwise BMET is the total number of board meetings during the year; ACSZE is the the total number of directors in audit committee, REMCOSZE is the number of members of the firm remuneration committee, LIQ is firm liquidity measured using the current ratio (current assets / current liabilities); LEV is firm leverage measured using the ratio of total liabilities to total assets; DIVI Total dividends paid to common shareholders. ASTGTH is firm Assets growth ratio, CAPEXAST is capital expenditures assets measured by Capital expenditures as percentage of total assets.

***, **, * indicate significance at .001, .05 & .1 level.

This table reports the Regression Results of the impact of CSR disclosure quantity of the firm value.
### Table 6. Regression result of CSR quality

| Coefficient | t-Statistics | Sign | Coefficient | t-Statistics | Sign | Coefficient | t-Statistics | Sign |
|-------------|--------------|------|-------------|--------------|------|-------------|--------------|------|
| Constant    | .759***      | 3.187 | .002        | -4.255       | .915 | .362        | 11.404***    | 19.931 | .000 |
| CSR qual    | -.019        | -0.799 | .937        | -1.838       | -3.866 | .700        | 1.214**      | 2.075 | .040 |
| BSZE        | -.023        | -1.112 | .268        | 1.161***     | 2.666 | .009        | 2.499***     | 4.657 | .000 |
| INDTOR      | -.020        | -0.920 | .359        | -1.32        | -3.12 | .755        | -1.122**     | -2.135 | .033 |
| GOVWN       | .181         | .568  | .571        | -16.127**    | -2.586 | .011        | 1.659**      | 2.162 | .032 |
| MANOWR      | .473*        | 1.824 | .070        | 6.505        | 1.263 | .201        | 1.182*       | 1.894 | .060 |
| CEO         | .111         | 1.626 | .100        | 2.529**      | 2.194 | .030        | .151         | 9.18  | .360 |
| BMET        | -.007        | -0.482 | .631        | .384         | 1.317 | .183        | .067*        | 1.898 | .060 |
| ACSZE       | -.023        | -0.520 | .694        | -0.634       | -0.724 | .470        | .228**       | 2.119 | .036 |
| REMUCOSZE   | .069*        | 1.768 | .079        | .959         | 1.252 | .213        | -.057        | -.006 | .545 |
| LIQ         | .050***      | 1.985 | .062        | 1.292**      | 2.308 | .008        | .415         | 2.23  | .016 |
| LEV         | -.003***     | -0.456 | .900        | -1.227**     | -2.417 | .017        | .001         | .780  | .436 |
| DIVI        | -.008        | -.609 | .541        | .607**       | 1.985 | .049        | .007*        | 1.141 | .256 |
| ASTGTH      | -.001        | -0.351 | .725        | -0.206       | -0.495 | .621        | .007         | 1.141 | .256 |
| CAPEXAST    | .003         | 1.312 | .183        | .251***      | 3.165 | .002        | .013         | 1.363 | .175 |
| Adjusted R Square | .381 | .312 | .550 |
| F-test      | 5.982***     | .000 | 4.672***    | .000         | 10.883*** | .000 |
| Durbin-Watson | 1.322 | 1.246 | 1.184 |
| Observation | 171          | 171  | 171         |

Firm value measured by TQ, ROA and MC; CSRQuan refers to the quantity of CSR disclosure; CSRQual is the quality of CSR disclosure; BSZE is the total number of directors on board; INDTO number of independent directors in the firm board of directors, GOVWN Percentage of shares owned by government, MANOW is the aggregate percentage of shares hold by major shareholders (with at least 3% ownership), CEOA A dummy variable equals 1 if the chairman is the same person as the CEO of the firm,0 otherwise BMET is the total number of board meetings during the year; ACSZE is the is the total number of directors in audit committee, REMCOSZE Number of members of the firm remuneration committee, LIQ is firm liquidity, measured using the current ratio (current assets / current liabilities); LEV is firm leverage, measured using the ratio of total liabilities to total assets, DIVI Total dividends paid to common shareholders, ASTGTH is firm Assets growth ratio, CAPEXAST is capital expenditures assets, measured by Capital expenditures as percentage of total assets.

***, **, * indicate significance at .001, .05 & .1 level.

This table reports the Regression Results of the impact of CSR disclosure quantity of the firm value.
6. CONCLUSION

This study aims to examine the impact of quantity and quality of CSR disclosure on the value of a firm. It uses a sample of Saudi Arabian, non-financial listed firms over the period of 2013-2014. It uses three measurements of firm value (Tobin’s Q, ROA and MC). The study finds that both CSR disclosure quantity and quality are significantly associated with the firm value measured by MC. However, both CSR disclosure quantity and quality are not significantly associated with TQ and ROA as proxies of firm value.

This study offers important implications for the users of Annual Reports in Saudi Arabia and for companies as well. This study finds evidence that the disclosure of CSR could affect the value of firms. It is provides important implications for managers of Saudi firms by encourage and pay more attention to the CSR activities in the firm’s operations and highlights the importance of this type of disclosure to their firms.

The study has some limitations that could be considered as avenues for future research. First, it focuses only on three measurements of firm value which are Tobin’s Q, return on assets and market capitalisation. It would be interesting to use other measures for firm value, such as scale efficiency measures, as suggested by Dybvig & Warachka (2015). Second, this study focuses on the CSR disclosure of non-financial firms only. It would be interesting to examine the association between CSR disclosure and firm value for financial companies. We finally suggest that further research could examine the economic consequences of CSR disclosure quantity versus quality by looking at the impact of disclosure on analysts’ forecasts; share price anticipation of earnings and the cost of capital.

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APPENDICES

Appendix1: CSR disclosure quantity index

| 1. Employee                      | 5. Environmental Issues                          |
|----------------------------------|--------------------------------------------------|
| Employee Data                    | Environmental policy statement                   |
| Training & Development           | Designing facilities harmonious with environment  |
| Employees Benefit                | Using recycling material                         |
| Pension                          | Sponsoring environmental activities              |
| Work place                       | pollution                                         |
| 2. Community                     | Waste management                                  |
| Community investment             | Conservation of natural resources                |
| Contribution to national economy | 6. Energy                                         |
| Education                        | Disclosing the company energy policies           |
| Health and safety                | Conservation of energy                           |
| Social Loan                      | Disclosing increased energy efficiency of products|
| Social activities support        | 7. Other Disclosures regarding to Saudi environment|
| Funding scholarship programs     | Charitable society for the holy Quran memorization holly |
| Human rights                     | Ongoing charity (. WAGFF)                         |
| Charity & Donation               | Hajj donations                                    |
| volunteering                     | Others disclosure related to Sharia activities    |
| Establish non-profit project     |                                                  |
| 3. Products and Services         |                                                  |
| Developing & innovating new products |                                                  |
| Products & services quality      |                                                  |
| ISO & other awards               |                                                  |
| Guidance campaigns               |                                                  |
| 4. Customer                      |                                                  |
| Information of commercial and marketing |                                      |
| Meeting customer needs           |                                                  |
| customer feedback                |                                                  |
| Customer service                 |                                                  |
| Customer satisfaction            |                                                  |
| Existing of certificated systems of quality |                                      |


Appendix 2: The index to measure of CSR disclosure quality adopted from Beest et al. (2009) and Chakroun et al. (2014)

| Relevance | Question | Likert’s | Literature |
|-----------|----------|----------|------------|
| **R1**    | To what extent does the company disclosed the CSR in the annual report? | 1 = No disclose about CSR 2 = Disclosed of CSR information limited (boilerplate paragraph) 3 = Disclosed for Forward-looking information. 4 = Apart subsection of CSR. 5 = Extensive information useful for making expectation. | e.g. McDaniel et al., 2002; Jonas and Blanchet, 2000 Chakroun et al. 2013 |
| **R2**    | To what extent does the presence of non-financial company in terms of business opportunities and to what extent contribute to the society and environment? | 1 = No non-financial information 2 = Little non-financial information, no useful for forming expectations 3 = Useful non-financial information 4 = Useful financial information, helpful for developing expectations 5 = Non-financial information presents additional information which helps developing expectations | e.g. Jonas and Blanchet, 2000 Chakroun et al. 2013 |
| **F1**    | To what extent does the company, in the discussion of CSR in the annual report, highlight the positive events as well as the negative events? | 1 = No positive & negative events, are mentioned 2 = Negative events only mentioned in footnotes 3 = Emphasize on positive events 4 = Balance positive/negative events of CSR 5 = Impact of positive/negative events of CSR is also explained | e.g. Razaei, 2003; Cohen et al., 2004 Chakroun et al. 2013 |
| **F2**    | To what extent does the company provide more explain of CSR information? | 1 = No description of CSR 2 = Information on CSR limited, 3 = Apart subsection of CSR 4 = Extra attention paid to information concerning CSR 5 = Comprehensive description of CSR | e.g. Jonas and Blanchet, 2000 |
| **U1**    | To what extent is the annual report presented of CSR in a well-organized manner? | 1 = Very bad presentation ( no text of CSR) 2 = Bad presentation ( text only) 3 = Poor presentation (text and graphs ) 4 = Good presentation ( text, graphs and ratio ) 5 = Very good presentation ( full paragraph with more descriptive ) | e.g. Jonas and Blanchet, 2000 Chakroun et al. 2013 |
| **U2**    | To what extent does the presence of graphs and tables clarifies the presented information of CSR? | 1 = No graphs 2 = 1-5 graphs 3 = 6-10 graphs 4 = 11-15 graphs 5 = > 15 | e.g. Jonas and Blanchet, 2000 |
| **C1**    | To what extent is the information of CSR in the annual report comparable to information provided by other organizations? | 1 = No comparability ( no paragraph) 2 = Limited comparability ( one paragraph) 3 = Moderate comparability (two paragraph) 4 = Very much comparability (two paragraph with numbering) 5 = Very extensive comparability ( more than above ) | e.g. IASB, 2008; Jonas and Blanchet, 2000. Chakroun et al. 2013 |
| **C2**    | To what extent does the company presents financial index numbers of CSR and ratios in the annual report? | 1 = No ratios 2 = 1-2 ratios 3 = 3-5 ratios 4 = 6-10 ratios 5 = > 10 ratios | e.g. Cleary, 1999 |