MANAGEMENT & ACCOUNTING REVIEW

Volume 18 No. 2
August 2019

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Assessing the Relationship between Information Transparency through Social Media Disclosure and Firm Value

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ABSTRACT

The aim of this paper is to show the relationship between social media financial disclosure and firm value of the GCC listed firms. To answer the research questions, the researchers collected cross-sectional data from a sample of 241 firms listed in the financial stock markets of the GCC for the year 2017. An Index was used to calculate the total level of social media financial disclosure where the SMFD for each firm was calculated by dividing the total earned scores of the firm by the total maximum possible scores appropriate for the firm. The findings show that the 84% of firms in the GCC countries use social media, while 70% of these firms use the SM for financial disclosure. The results also confirm the hypothesis that enhanced disclosure levels through various social media channels of GCC listed firms significantly influence the firm value of these firms. These results have implications for both the social media disclosure literature and value relevance literature in the GCC countries.

Keywords: *Social Media Disclosure; Social Media Usage; Tobin's Q; GCC Countries*

ARTICLE INFO

Article History:
Received: 2 November 2017
Accepted: 8 November 2018
Available online: 31 August 2019

INTRODUCTION

Investors are constantly listening for financial information and tidbits, and these investors are usually made up of people who consume information differently. Offering a variation in the way financial information reaches investors will ensure that firms are being heard. Technology is changing how stakeholders, and investors access a firm's data. Social Media (SM), in particular, has had a dramatic impact on how firms engage in dialogue with investors as it allows in producing immediate and large quantities of data in many forms including videos, images, and audios. SM is based on the technological and ideological foundations of Web 2.0 which allows for the creation and exchange of user generated content (Kaplan and Haenlein, 2010), unlike the Web 1.0 which is a set of static websites that do not provide interactive content.

While many firms are still using paper-based means and static websites (Web 1.0) to disclose their financial information, others are jumping on the trending social media bandwagon (Web 2.0). In April 2013, the Securities and Exchange Commission issued a report stating that firms can use SM tools such as Facebook and Twitter to announce key financial information in compliance with the Regulation Fair Disclosure (US. SEC, 2013). Based on the Canadian Investor Relations Institute (CIRI, 2012), the role of the SM in financial reporting is increasing as firms that may have primarily used the SM for marketing purposes are now expanding their scope to include investors. Similarly, Bochenek and Blili (2013) and Lodhia and Stone (2017) claim that the use of internet-based communications by firms, mainly social media, is growing rapidly. Whereas, firms ignoring SM will be disadvantaged within the investment community (Alexander and Gentry, 2014).

These developments have considerable implications for accounting practices due to the demand of stakeholders for instant access to wide-ranging information related to a firm's governance, performance, finances, operations, and practices (Lodhia and Stone, 2017). Therefore, amidst these significant developments the incentive for this paper is imminent, as it is important to examine how the SM can be utilized to enhance the financial reporting process. Adams (2015) believes that the disclosure process should encompass the formal as well as the informal communications and interactions with the various stakeholders, and not simply by sharing a single and static annual report on the firm's website. Alexander and Gentry (2014) found that institutional investors analyze firms and make recommendations based on information they find on SM searches.

Consequently, by improving the quality of communication and reducing information costs, firms may reduce the cost of their capital (Li Li, 2015). According to William (2008), firms which aim to increase their value might choose a disclosure position which will allow their higher position to be disclosed, as opposed to firms with a lower performance, which will choose a disclosure position to legitimize their performance. It enhances transparency by disclosing symmetrical information and reducing the costs associated with the agency problem, thus adhering to the principles of corporate governance (Al-Sartawi and Sanad, 2019). This paper, henceforth, defines SM disclosure as the public reporting of financial and operating information by firms through the SM.

Despite the importance of such a study, there are negligible studies that provide evidence on the relationship between SM disclosure and firm value, certainly none related to the Gulf Cooperation Council (GCC) countries. Therefore, this explanatory paper attempts to develop a better understanding of the effects of SM financial disclosure on the firms listed in the GCC stock markets, whereby the main purpose is to determine whether information transparency has an impact on firm value, with a particular emphasis on Tobin's Q. This paper extends previous research which have focused on website-based disclosure through Web 1.0 and delves into SM disclosure through Web 2.0. The contribution of this paper is to proposea Social Media Disclosure Index (SMDI), which is based on the framework of prior studies relevant to web-based disclosure such as Meek et al. (1995) and Al-Sartawi (2018). The research questions addressed are: 1. What is the level of SM disclosure in the GCC countries?2. What is the relationship between SM disclosure and firm value?

The GCC was selected as the context for the study due to its unique environment in relation to the advancements in technology. They have recently introduced their own corporate governance codes to enhance the social and regulatory environments, hence attracting more investors by encouraging voluntary disclosure. According to its geographical location, the GCC is at the heart of the Middle East, providing quick and efficient access to every market in the region. It has, therefore, become an intended destination for many foreign investors. These investors ask for financial information and carry on with certain decisions whether to continue with a certain company or not, and this is provided through the SM.

The GCC countries such as Saudi Arabia and UAE are among the world's leading nations in terms of SM growth and use, driven by smartphone ownership, high levels of internet penetration and a large, digitally savvy youth population (Internet World Stats, 2018). Another study, the Arab Social Media Report (2015), states that in the GCC, consumers and investors believe that the SM encourages consumer-centric and transparent approaches and is an instant platform to get news and information. Moreover, they believe that it offers a cheap means of communication despite that SM poses a threat to traditional media by taking a piece of their market shares. This willingness to accept SM in business provides an interesting perspective for investigating the level of SM usage by firms and its relation to firm value.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Disclosure is a fluctuating term that frequently changes among researchers. Joinson and Payne (2007) define that disclosure is the revelation of the previously unknown so that it becomes shared information. As a form of online disclosure, SM has boomed as a platform that people use to create content, share, network, and interact at a phenomenal rate. But the question is: what are the implications of SM for firms with regard to information disclosure? Corporate social media facilitates firm-directed, one-to-many communications that bypass traditional media and allow a firm to broadcast its intended message to a large network of stakeholders which is instantly made visible to all (Lee et al., 2015). Miller and Skinner (2015) found out that Chief Financial Officers believe that their decisions which are related to disclosures have high implications. Therefore, Lardo et al. (2017), claim that the recent changes in technology, capital markets and the media affect and are affected by firms' disclosure policies, whereby regulators as well as companies are starting to embrace SM as a viable disclosure channel for important information.

Elliot et al. (2018) argue that SM provide investors, who have no direct channel of communication with the management, a voice to question decisions that give management incentives to take action. The use of SM for disclosure enables interaction between the stakeholders, and not merely between the stakeholders and the firms. This adds a new dimension to corporate disclosure, as what had been previously found regarding investors' reactions to corporate disclosures cannot be applied to their reactions in today's dynamic environment (Lardo et al., 2017). Cade (2018) argues that as investors and other stakeholders depend on SM for firm news and investment advice, firms that fail to take part in the conversation will be singled out for remaining silent. Hence, the previous researches which focused more on Web 1.0 need to be extended methodically to include more relevant issues such as SM disclosure.

SM channels are more widely available to investors and allow for interaction between users via postings and comments (Brad and Crossler, 2015). Firms usually choose SM as a part of their overall strategy to for online disclosure which aims to create a positive reputation and increase their value (Basouny et al., 2018). Firms also use SM as part of their strategy to reduce information asymmetry, increase transparency, and reduce agency-related costs (Blankespoor et al., 2014). Agency losses normally arise when there is a conflict between the desires or goals of the principal (shareholder) and the agent (manager), and it is difficult or expensive for the shareholder to determine what the manager is actually doing (Eisenhardt, 1989). The agency theory hence attempts to reduce agency losses by specifying mechanisms such as tying their compensation with shareholder returns.

Increased transparency is often achieved through voluntary disclosure. Therefore, to let the shareholders know what they are doing, managers need to reach stakeholders through different medium. Dolinsek et al. (2014) claim that managers know that shareholders aim to control their behavior through monitoring activities. Consequently, managers have incentives to disclose more information to show shareholders that they are acting optimally. Managers might opt to disclose information through SM due to the wide-range of benefits it offers such as low cost, timely information, and a wide-reach two-way communication platform. More transparency and better disclosure are associated with equality among investors, less insider trading and lowers uncertainty in investment decisions (Mohamed and Basuony, 2016). For example, when the CEO of Netflix posted on Facebook that Netflix's monthly online viewing is more than one billion hours, the stock price increased in one day by 6.2 % (Zhou et al., 2015). This indicates that SM disclosure has a direct influence on stock price, and by extension firm value.

Blankespoor et al. (2014) argued that social media channels, mainly Twitter, reduces information asymmetry, as other researchers (Bushee et al, 2010) found that by increasing the dissemination of the same information leads to a reduction in information asymmetry. According to Chung et al. (2015) enhancing voluntary disclosure can motivate top managers to improve firm value because of increased pressure from the intensive monitoring of outside shareholders. As market values depend on investor confidence presumably through increased and transparent disclosure, market evaluation could be measured using Tobin's Q. Tobin's Q is computed as the ratio of the market value of the firm's outstanding debt and equity divided by the book value of assets (Himmelberg et al., 1999). A prior study by Lishenga and Mbaka (2015) used Tobin's Q to examine the relationship between corporate disclosure and performance, and they reported a positive and significant association between the two variables.

Several researches have attempted to explore SM disclosure; however, as this is a new trend, these studies mainly focus on the literature, SM adoption, and the determinants of social media disclosure (Zhang, 2015; Zhou et al., 2015; Trinkle et al., 2015; Mohamed and Basuony, 2016; Lardo et al., 2017; Basuony et al., 2018; Cade, 2018). From these studies, we can assume that of the SM as a disclosure platform is gaining momentum, and this paper offers a contribution by taking part in the conversation. However, what differentiates this paper from previous ones is that this study empirically investigates the relationship between SM disclosure and firm value. This paper, therefore, hypothesizes that: There is a relationship between social media disclosure and firm value measured through Tobin's Q.

RESEARCH METHODOLOGY

Sample Selection

The empirical study of the current research depended on a sample which consisted of all the listed firms in the GCC stock exchange markets for the year 2017. The required data were gathered from 241 companies out of 289 companies listed under the financial sector. The financial sector was chosen for the study due to the large size of the banking industry in the GCC countries. The GCC countries are gradually undergoing a shift in their economies, from oil-dependent economies to more diversified economies, focusing mainly on the financial sector as the largest non-oil contributor to their GDPs. Table 1 shows the sample distribution according to country and industry type (Banks, Insurance and Investment).

Table 1: Sample Distribution According to Country and Industry

Industry	KSA	UAE	QAT	BAH	KUW	Per Industry	
Banks	11	33	8	7	8	67	28%
Insurance	32	31	4	5	7	79	32%
Investment	7	19	4	10	55	95	40%
Per Country	50	83	16	22	70	241	100%

Measuring the Level of SMD

Consequently, the study applied a two-stage process to measure (1) the level of usage of SM in UAE firms as well as (2) the level of the SM Financial Disclosure of those firms. Therefore, some firms might use the SM but not for reporting financial information. These were excluded from the study.

The first stage involved measuring the social media usage by GCC listed firms. In order to measure the percentage of usage of SM, the study used the binary data method, i.e., if a firm uses any type of the SM platform (Facebook, Twitter, Instagram, Snapchat, YouTube, LinkedIn, others) it received a score of 1. However, if the firm did not use any form of SM platform it received a score of 0. Similarly, the second stage involved measuring the level of SMFD for firms using the SM in stage 1. So, if a firm used the SM to report financial information it received a score of 1, and if a firm did not use its SM to report financial information it received a score of 0. Accordingly, the Index for each firm was calculated by dividing the total earned scores of the firm by the total maximum possible scours appropriate for the firm. To secure the data on the SM applications and channels from any updates or changes during the time of the study, all information, hyperlinks and images were downloaded and saved as HTML files beforehand. The SMFD index was calculated using the formula below

$$SMFD = \sum_{i=1} \frac{di}{n}$$

Where:

di: ***disclosed item*** equals One if the bank meets the checklist item and zero otherwise.
n: equals maximum score each bank can obtain.

To test the hypothesis, the following regression model was developed using the SMFD as an independent variable, and Tobin's Q as the criterion variable. Additionally, the study used firm age, firm size and financial leverage as control variables.

Model

$$TQ = \beta_0 + \beta_1 SMD_i + \beta_2 LFSZ_i + \beta_3 LVG_i + \beta_4 AGE_i + \varepsilon_i$$

Table 2: Study Variables

Code	Variable Name	Operationalization
Dependent variable		
TQ	Market value add	Total Market Value / Total Assets Value
Independent Variables		
SMFD	Social Media Financial Disclosure %	Total scored items by the company/Total maximum scores
Control Variables		
LFSZ	Firm size	Natural logarithm of Total Assets
LVG	Leverage	Total liabilities/ Total Assets
AGE	Firm Age	The difference between the establishing date of the firm and the report date

DATA ANALYSIS

Descriptive statistics

Table 3 reports the descriptive analysis of the independent, dependent and control variables. The overall mean of Tobin's Q was 1.07 by GCC firms with a minimum of 0.68 and maximum of 2.55 indicating that the majority of the firms are overvalued as their stocks are higher than the replacement costs of their assets. This proxy exposes the potential of added value of the firm as viewed by the market as a reflection of its performance. Therefore, if Tobin's Q is greater than 1, it indicates that the firm has a market value exceeding the price of the replacement of its assets. With regard to SM usage, the results show that the overall level of firms in the GCC countries that use the SM was 84%, which is considered as a moderate level of usage of the SM. Additionally, the results show that of the 84% of firms that use the SM, 70% use the SM for financial disclosure, which again indicates a moderate level of disclosure through the SM.

In addition to the dependent and independent variables, the descriptive statistics for control variables show that the mean of firm size was 84, 43,579, with a minimum of 4, 06,832 and a maximum 3,412,461.54, implying large firms. As according to Table 5 firm size was not normally distributed due to the significance of the Kolmogorov-Smirnov test being less than 5%, so the natural logarithm was used in the regression analysis to reduce skewness and bring the distribution of the variables nearer to normality. Moreover, the mean leverage of the firms was approximately 42%, with a minimum of 4% and a maximum of 87%, indicating that most GCC firms have a medium level of debts. Finally, firm age ranged from 2 to 64 with a mean of 33.45.

Table 3: Descriptive Statistics for continues variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
TQ	241	0.68	2.55	1.07	0.09025
Firm Size	241	406832.3	3412461.54	8443579	220268.40264
LVG	241	0.04	0.87	0.4254	0.26508
AGE	241	2	64	33.45	13.004
Descriptive Statistics for non-continuous variables					
Variables	**Achieved**		**Not achieved**		
	Number	**Percentage**	**Number**		**Percentage**
SMFD	89	70%	38		30%
SML	96	84%	18		16%

Testing Regression Assumptions

A Variance Inflation Factor (VIF) test was used to check the data for multicollinearity. This test was used as according to James et al. (2017) VIF calculates the severity of multicollinearity and measures how much the variance of an estimated regression coefficient is affected by collinearity. The VIF should be lower than 10 and tolerance should not be below 0.2 (Field, 2005). The VIF scores for each variable, both independent and dependent, are reported in Table 4. The results indicated that no VIF score exceeded 10 for any variable in the model, while the no Tolerance score was below 0.2. So, it was concluded that there is no threat of multicollinearity.

Table 4: Collinearity Statistics Test

Model	Tolerance	VIF
SMD	.717	1.107
Firm Size	.805	1.206
LVG	.733	1.080
AGE	.826	1.098

In addition to test for homoscedasticity and linearity, an analysis of residuals, plots of the residuals against predicted values as well as the Q-Q and scatter plots were conducted. Therefore, wherever there was a problem of heteroscedasticity the data were transformed. Autocorrelation test was not conducted in this research as the data used are cross-sectional.

Table 5: Kolmogorov-Smirnov Test

	Statistics	Sig.
Tobin's Q	2.137	0.165
SMD	2.009	0.381
Firm Size	2.044	0.003
LVG	2.095	0.540
AGE	2.113	0.347

Finally, the Kolmogorov-Smirnov test was used to assess the normality of the collected data for the variables. As Table 5 illustrates, a significance level of more than 5% for all the variables except for firm size indicated that the data was normally distributed. Regarding firm size however, the variable was adjusted using the natural logarithm.

Testing the Hypotheses

Table 6 reports the findings of the regression analysis. The findings indicated that the model was reflecting the relationship between the variables in a statistically appropriate way. As shown in the Table, the model has an adjusted R^2 of 0.303 which shows that the model explains approximately 30% of the variation in the Tobin's Q amongst the GCC listed firms. Additionally, the probability of the F-statistic with a significance 0.026 means that the independent variables are significant in interpreting the dependent variable, Tobin's Q.

Table 6: Regression Analysis

Variables	Beta	T. test	Sig.
SMD	.432	8.678	.008***
Firm Size	.277	2.683	.187
LVG	-.056	-.938	.207
AGE	-.184	-1.546	.000***
R^2		.303	
F		16.283	
Prob. (F)		.026	

*Prob. <10%, **Prob. <5%, ***Prob. < 1%

The main hypothesis of the study states that there is a relationship between the level of SM financial disclosure and firm value (Tobin's Q) in firms listed in the GCC stock exchange markets. The result indicates that there is a significant and positive relationship between the level of SMD and firm value, that is, the higher the level of disclosure, the higher the Tobin's Q. This is in line with the studies conducted by Foerster et al. (2014) and Plumlee et al. (2015) who suggest that the level and quality of disclosure affect firm value. Another study conducted in the MENA region (Al-Akra and Ali, 2012) found a positive relationship between disclosure and firm value. However, an earlier study conducted by Hassan et al. (2009) in the Middle East found no relationship between disclosure and firm value, which could be due to the lack of control for the endogeneity of the disclosure variable in relation to Tobin's Q. One reason for this could be the potential of SM as a two-way communication platform that allows timely dissemination of information to investors, shareholders and other stakeholders. This way all parties involved transmit information instantaneously, which helps them in making well-informed decisions. Furthermore, firms can receive instant feedback from their stakeholders which helps managers in making improvements, accordingly, thus satisfying all parties involved and reducing costs related to agency.

About the control variables, the study found a significant and positive relationship between firm value and age. Based on Susanti and Restiana (2018) who also found a positive association between age and firm value, investors have a higher level of confidence and trust in older firms due to their experience and maturity. On the other hand, this contradicts the study by Pástor and Veronesi (2003) who claim that firm value declines as investors learn about the firm's profitability or as their uncertainty resolves over time. Finally, the results show no relationship between firm value and the other control variables, firm size and leverage.

CONCLUSION AND RECOMMENDATIONS

The paper aimed to address several research questions: (1) the level of SM usage by GCC listed firms, (2) the level of SM financial disclosure (SMFD) by GCC listed firms and (3) the relationship between SM financial disclosure and firm value of the GCC listed firms. To answer to the research questions, the researchers collected data from a sample of 241 firms listed in the financial stock markets of the GCC for the year 2017. Due to the nature of the data collected which is cross-sectional only one year was chosen to gauge the data at a specific point in time.

The findings show that the 84% of firms in the GCC countries used the SM, while 70% of these firms used SM for financial disclosure. The results also confirm the hypothesis that enhanced disclosure levels through various SM channels of GCC listed firms significantly influence the firm value of these firms. The study was also checked for the possibility of non-linearity in the relation between SM disclosure and firm value by conducting various regression assumption tests such as Q-Q, scatter plots, collinearity statistics and the Kolmogorov-Smirnov tests.

From a theoretical standpoint, these results have implications for both the SM disclosure literature and value relevance literature in the GCC countries. From a practical perspective, this study provides contributions to GCC's government, policymakers and regulators with regard to a trending issue such as the modern disclosure tools that could be used by firms to increase transparency and reduce the agency problem. Policy makers and regulators in the GCC can make use of information from this research in setting new policies on SM financial disclosure in line with the Securities and Exchange Commission which recognizes the potential of SM as a platform for disclosure.

This paper suggests having a study that further investigates the relationship between SM disclosure and other types of performance such as financial and operational performance. Future studies could also investigate the level of corporate social responsibility disclosure or intellectual capital of firms on the SM.

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