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Corporate Social Responsibility and Stock Price Crash Risk: Evidence from an Emerging Market

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ABSTRACT

The main purpose of this study is to investigate the relationship between corporate social responsibility (CSR) and stock price crash risk of companies listed on Tehran Stock Exchange (TSE). The empirical data include 75 companies listed on the TSE, over a ten-year period from 2007 to 2016. Content analysis is used for measuring the CSR. In addition, a negative skewness was used to measure stock price crash risk. The statistical analysis of multiple linear regression was used to test the research hypotheses. The results of the researchers' analysis indicated that there is a significant and negative relationship between CSR and stock price crash risk. The present study contributes to the literature by providing empirical evidence about the role of CSR in stock price crash risk from an Islamic and developing country.

Keywords: Corporate Social Responsibility (CSR), Stock Price Crash Risk, Tehran Stock Exchange (TSE), Islamic country.

Introduction

Other than economic performance, stakeholders are now also concerned about the social impacts of companies (Darus et al., 2014). In recent years with the growth of corporate activities, paying attention to the social role of

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companies has become a vital issue and standard instructions issued by international institutions (for example, UN and European Unions) are a clear evidence of such a subject. In Iran, a non-governmental, non-profit, and non-political institution called the promotion center of corporate social responsibility (CSR) was founded in 2006 based on the framework of goals and concepts of CSR. In this regard, many companies in Iran have realized their social role in society, and have considered CSR in their strategies.

Kim et al. (2014) believe that a multithreaded growing literature is published in this area and its impact on corporate actions and the consequences have been formed. In this regard, many types of research have focused on reviewing the relationship between financial performance and social performance of companies (for example, Roman et al., 1999; Jiao, 2010; Kim & Statman, 2012; Callan & Thomas, 2014). Some other researchers analyzed the relationship between CSR and earnings management (Khajavi et al., 2011). Moreover, some others assessed the association between CSR and capital cost (El Ghoul et al., 2011; Dhaliwal et al., 2011; Goss & Roberts, 2011). Some research studies focused on the relationship between CSR and stock price crash risk recently (Kim et al., 2014). In line with the previous studies, this study aims to review whether CSR affects stock price crash risk in Iran or not. In other words, considering political and economic situations of Iran and its differences with developed countries, such as the United States and also considering the inefficiency of Tehran Stock Exchange (TSE), it should be investigated whether CSR affects the stock price crash risk or not. The results are important from three perspectives. First, Iran is a developing country with characteristics different from that of the other countries, including emerging markets, like China and Malaysia. Second, Iran is an Islamic country; whereby its social and business activities are based on a strict interpretation of Sharia (religious laws). Third, it is a non-capitalist country where a large portion of ownership belongs to the government, and this indicates a small private ownership. Although these facts more or less influence CSR, available evidence about stock price crash risk and its relationship with CSR in Iran is rare. This research is a starting point for solving this phenomenon. Especially, the probable results will indicate that CSR has been able to decrease stock price crash risk through activities, such as transparency in financial reporting. Since financial policies of Iran are inducing privatization, the probable results of this research will take an important step in this direction through the recognition of factors affecting stock price crash risk. By managing these factors, we can attract the

trust of small investors and private section to invest in companies listed on TSE, which subsequently increases the investment of the private section in the capital market of Iran.

Literature Review

The corporate social responsibility goes back to the early of the twentieth century (Araque-Padilla & Montero-Simó, 2006; Martínez et al., 2016). The situation of that period caused the authors such as Weber (1922) and Clark (1939) to propose a need for a new framework of social responsibility. In 1953, Bowen defined the concept of social responsibility as "a set of moral and personal obligations that the employer must follow, considering the exercise of policies, decisions, or courses of action in terms of objectives and values desired by the society". Next year, with the experience of multinational factories such as Ford and General Motors which received much criticism from the mass media and various national regulatory institutions, Drucker proposed the need for considering public opinion in the decision-making process of any organizations regardless of size or industry. Davis (1960) expanded the definitions of social responsibility and coined the term of "corporate constitutionalism". This term refers to a firm as a social institution that should have exercised its power responsibly, with their groups' interest at heart, in order not to be punished and expelled from the market. In 1967, Walton expanded the definition of social responsibility as a set of actions that managers try to implement for companies to improve their relationship with the broad range of stakeholder groups that made up their environment. In addition, Walton introduced the essential part of social responsibility as the degree of voluntariness by business, because these actions required high cost and risk, which might lead to the success or failure of a company. In the eighties, as Carroll (1979), Garriga and Melé (2004) and Lee (2009) reflected there is a great theoretical dispersion that aimed at analyzing the benefits and advantages of implementing actions in terms of social responsibility by firms. Currently, CSR is a corporate behavior and management philosophy that an increasing number of corporations worldwide choose to adopt (Isaksson et al., 2014). Corporations' activities in the field of social responsibility are carried out with diverse motives and objectives. These activities are in response to the threat from the government and social activists that can be applied as a means to improve the fame or competitive advantages of the managers

in a moral perspective. As the importance of social responsibility behavior has increased for investors, the attitude toward CSR has been significantly changed in recent decades. Thornton (2008) believes that CSR is not only limited to big companies; but also is a necessity for all business organizations. The concept of CSR refers to how to create wealth through responsible business. Therefore, company's business behaviors include employees, contractors, environment, and the society. As Carroll (1979) believes, CSR is social responsibility of business that a society expects from organizations (including economic, legal, moral, and voluntary expectations). As mentioned before, CSR plays an undeniable role in businesses. So, many studies have been reviewed concerning the role of CSR in the determination of strategies and activities of companies (for example, Prior et al., 2008; lee & Faff, 2009; Dhaliwal et al., 2011; Goss & Roberts, 2011; Kim et al., 2012 and 2014; Khajavi et al., 2011). Sudden changes in stock prices in recent years, namely after the financial crisis of 2008, have absorbed the attention of many scholars and professionals. Such changes mainly take place in two forms of "crash" and "stock price jump". Researchers pay more attention to stock price crash than stock price jump. The definition of stock price crash has three specific characteristics (Chen et al, 2001): Stock price crash is a significant and abnormal change in stock price taking place without any important economic event. Such significant changes are negative.

Stock price crash is a contagious phenomenon in the market. It means that a decrease in stock price is not only limited to a specific stock, but also it includes all stocks available on the market.

Each of the above-mentioned characteristics roots in a series of empirical facts. About the first characteristic, Poterba and Summers (1986) state that the majority of big changes took place after the World Wars in S&P 500 index, namely market crash on October 1987, were not due to the disclosure of important events. Similarly, French and Roll (1986) argue that in many cases, it is very hard to explain changes in stock prices through the disclosure of information regarding a specific event. The second characteristic is due to significant and empirical asymmetry in changes of the market return. It means that big changes in price are falling rather than rising. This asymmetry can be explained by two methods. First, through the direct observation of historical data regarding the market return: a review of the mentioned data indicates that 9 out of 10 changes occurred in S&P 500 index since 1947 was falling.

In general, a big portion of literature related to stock market indicates that stock return has a negative skewness or asymmetry fluctuation (Chen et al, 2001). The other method of proving the presence of asymmetry in market changes is to review the price of securities for buying stocks. The process of this pricing is inconsistent with this assumption of Black-Scholes' model, which considers that prices are normal in long-term. Hence, price process of securities of stock purchase indicates the presence of a negative skewness in securities return (Hong and Stein, 2003). The third characteristic of defining stock price is that crash is a phenomenon that includes the overall market. It means that this phenomenon spreads to all different types of stocks in the market. Duffee (2001) stated that the point is that when a crash phenomenon is taken place the correlation between different types of stocks available on the market increases. Kelly (1994) proved that the reviewing process of historical data regarding the market price of stock purchase securities indicated that when the price index of stock purchase is decreased, the correlation between different types of purchase securities is increased.

The main background of the relationship between CSR and stock price crash risk refers to the existing transparency and following of individual benefits of directors in the framework of the representative theory. In this regard, the available theoretical literature presents two completely divergent anticipations about the role of CSR in the determination of stock price crash risk. Therefore, the research literature is explained from two different perspectives.

The first perspective anticipates a negative relationship between CSR and stock price crash risk. Based on the opinions of researchers, like Jin and Myers (2006), and Hutton et al. (2009), the directors do not inform the bad news to the investors because they are afraid of the stock price crash. This culminates with the prevention of distribution of bad news about companies' activities, and then bad news suddenly spreads in the market; and it comes with the stock price crash risk (Kim et al., 2014).

The previous studies on CSR (for example, Carroll, 1979; Jones, 1995; Garriga and Mele, 2004; and Mackey et al., 2007) provided a theoretical background for the entrance of moral-business expectations to the economic framework. For example, Jones (1995) developed a theoretical framework for merging economic theory and business ethics. According to his opinion, companies performed their activities based on trust and corporation and they had some intentions to show commitment to moral behaviors. Atkins (2006) claimed that investment in social responsibility aimed to clarify company's financial reporting. In other words, companies with a high social

responsibility tried to meet moral expectations of society through the selection and execution of correct social behavior methods, and subsequently, they provided clearer and more reliable financial information for investors. Results of a research by Kim et al. (2012), and Khajavi et al. (2011) supported this idea. Therefore, it is expected from companies with a higher social responsibility to consider moral standards of financial reporting, to meet the moral expectations of the society, and to provide a clearer and higher-quality information to the society (both good and bad news). Therefore, it is expected that such companies be less prone to the stock price crash. It should be mentioned that findings of Kim et al. (2014) supported such arguments.

The second perspective by using this argument that directors sought individual interests in the framework of representative theory claims there is a positive relationship between CSR and stock price crash risk. As Jensen and Meckling (1976), and McWilliams et al. (2006) maintained, social responsibility activities of companies can be potentially related to the director's individual interests. A director might have got involved in CSR in order to cover the effects of his wrong behaviors (Hemingway and Maclagan, 2004). Kim et al. (2014) believed that long-term directors might use CSR to follow their individual interests. If the directors got involved in corporate social responsibilities, they may manipulate the financial information and factors, such as profit management, in order to mislead beneficiaries about the company's performance (Kim et al., 2012). Therefore, directors prevent transmission of bad news and hide it through participation in CSR. Finally, as mentioned before, as this secrecy reaches to its tipping point, the bad news spread to the market suddenly and lead to an increase in stock price crash.

It should be mentioned that some previous research studies have indicated that active companies in CSR got more involved in the manipulation of information and earnings management (Petrovits, 2006; Prior et al, 2008), though the available evidence in Iran indicates something different (Khajavi et al, 2011). Theses research studies have mainly focused on the opportunistic use of CSR in the framework of the representative theory. Prior et al. (2008) reviewed whether companies use social responsibility strategically for hiding earnings management or not. They found a positive relationship between earnings management and CSR in regulated companies, but the results were not statistically significant for unregulated companies. Kim and Venkatachalam (2011) found that sin stock companies (for example, companies working in gambling, tobacco and alcohol industries)

had better financial reporting quality than the control group. Since reporting intentions might be different based on the fact that if CSR is voluntary or not, the result of a research by Kim and Venkatachalam (2011) is less related to the purpose of the present research.

In sum, considering the evidence accumulated from the previous research studies, we expect from directors in Iran to not use CSR to cover the bad news, and the relationship between CSR and stock price crash risk is negative. In other words, CSR in Iran leads to clear financial information and the transmission of both good and bad news to the market, and subsequently a decrease in stock price crash.

Research Methodology

The present research aims to test the theory from the perspective of nature and attempts to provide evidence for stability, confirmation, or improvement of shortcomings of a theoretical framework already tested in a new geographic region (Feldman, 2004). Library method was used to collect data.

Data and Sample

Research methods of this study consist of two parts. In the first part, this paper measures the CSR using the content analysis. Content analysis is a technique for gathering data. It involves codifying qualitative and quantitative information into predefined categories (Talebnia et al., 2013; Guthrie & Abeysekera, 2006). It is an instrument used to measure comparative positions and trends in reporting (Talebnia et al., 2013; Guthrie et al., 2004). Content analysis seeks to present published information in a systematic, objective, and reliable analysis (Talebnia et al., 2013; Krippendorff, 2004). In the second part, data related to stock price crash risk and control variables are gathered via the firms' financial statements. Thus, it is a quantitative research. This kind of research is used when the data is quantitative and for extracting the result, statistical methods are used (Namazi, 2003).

The required data of companies were collected through "Tadbir Pardaz" second version software and the official websites of TSE. Research time span is a 10-year period according to financial statements from 2007 to 2016. Due to some inconsistencies among social members, the fiscal year of the company being reviewed should be ended at the end on final month based on the Iranian calendar, and they should not be changed it during 2007 to 2016. Moreover, companies being reviewed should not be banks or financial institutes (investment companies, financial intermediaries, holding

companies, and leasing companies). Finally, they must not have negative shareholders' equity. By applying the above-mentioned conditions and limitations, a number of 75 companies were selected as the sample of the study during 2007-2016 time periods.

Dependent Variable Stock price crash risk

In this research, the stock price crash risk is considered as a dependent variable. Negative skewness is used to measure stock price crash risk. To measure stock price crash risk, first specific monthly return of company is calculated using equation 1 (Hutton et al., 2009; Bradshaw et al., 2010; Kim & Venkatachalam, 2011; Callen and Fang, 2011; Andreou et al., 2016; Andreou et al, 2013):

$W_{j,t} = \text{Ln}\,(1 + \varepsilon_{j,t})$ (1)

Where:

W_{jt}= specific monthly return of company j in month t during fiscal year;

ε_{jt} = residual stock return of company j in month t, it is the residual of model in equation 2:

$r_{j,t} = \alpha_j + \beta_{1,j}\, r_{m,t-2} + \beta_{2,j}\, r_{m,t-1} + \beta_{2,j}\, r_{m,t} + \beta_{4,j}\, r_{m,t+1} + \beta_{5,j}\, r_{m,t+2} + \varepsilon_{j,t}$ (2)

Where:

$r_{j,t}$ = stock return of company j in month t during fiscal year;

$r_{m,t}$ = market return in month t. to calculate monthly market return, index at the beginning of month is reduced from index at the end of month, and the obtained value is divided into index at the beginning of month.

Chen et al. (2001) maintained that signs of the stock price crash were formed one year before the occurrence of the stock price crash phenomenon, and it was a sign of the presence of a negative skewness in company stock price. Therefore, companies that have experienced a negative skewness in the previous year are more prone to face stock price crash phenomenon in the upcoming year. Hong and Stein (2003) stated that the negative skewness of stock return was an alternate way for measuring asymmetry in stock distribution. To calculate negative skewness of stock price, equation 3 is used (Chen et al, 2001; Kim & Venkatachalam 2011, Callen and Fang, 2011; Andreou et al., 2016; Andreou et al., 2013):

$$NCSKEW_{jt} = -\left(n(n-1)^{\frac{3}{2}} \sum W_{jt}^{3} \Big/ (n-1)(n-2)(W_{jt}^{2})^{\frac{3}{2}} \right) \quad (3)$$

Where:

$NCSKEW_{j,t}$ = negative skewness of monthly stock return of company j during fiscal year t.

$W_{j,t}$ = monthly return of company j in month t.

N = number of years that their stock return have been measured.

Independent Variable CSR

The independent variable of the current study is CSR and content analysis is used for measuring the CSR. In other words, the amount of CSR disclosure is used as a way to measure CSR. According to Gary's research (2002), there are four domains of CSR, such as interaction with society, help for developing human resource, help for developing the natural resources and environment and increasing the quality of products. This research, due to the economic position and availability of the information, puts emphasis on the interaction of corporation with society and helps the development of natural resources and environment. The full list of items in each category is presented in table 1. It must be mentioned that these items were used in the research of Sepasi and Esmaeili Kejani (2014), Talebnia et al. (2013), Gao et al. (2005), and Williams (1999).

Table 1. CSR content themes and sub-theme

Content themes	***Sub-themes***
Environment	*Pollution control (air, water, land, noise, visual)* *Prevention of environmental damage*
	Waste recycling *Conservation of natural resources* *Research and development* *Environmental policy* *Environmental management certification (ISO 14000)* *Increase in green space and landscaping* *Training environmental protection for staffs* *Conservation and energy saving activities* *Environmental pollutants Measuring*
Society	*Public health support* *Sport activities support* *Entertainment, cultural, and religious support* *Education support* *Charitable donations and services* *Legal proceedings, claims, and judgments* *Scholarship Program* *Cash Donation Program* *Welfare, health and education services for staffs*

The CSR score is computed from the sum of these items' score. It means, the researchers investigated whether any of these items reported in corporate reports or not. If it is reported, it takes 1 point, otherwise, it is 0. Then all of the points would be summed together and divided into 20 (the number of items).

Control variables

Size of companies: natural logarithm of the market value of the company regarded as the company size.

Debt structure or financial leverage: is measured through the ratio of total debts to book value of total assets.

The ratio of the market value to book value of stock holders' equity: it is expected that the stock return of companies with a higher market to book value will fluctuate more; in turn, these companies are more prone to experience great losses. This increases the possibility of lawsuits against the company (Khan & Wats, 2009). Moreover, it may increase the possibility of the stock price crash.

Return on equity: it includes net income divided into total equities.

Analytical Model

To analyze data, the descriptive statistics, including central and dispersion indexes were used in average, maximum, minimum, and standard deviation format and the inferential statistics were used in regression model format. To analyze how CSR affects the stock price crash risk, the ordinary least squares regression is used as follow:

$$SPCR_{i,t+1} = \beta 0 + \beta 1\ (CSRi) + \gamma X_{i,t} + \varepsilon i$$

In the above model, $CSR_{i,t}$ indicates CSR of company I, which is defined in research variables section, $SPCR_{i,t+1}$ indicates stock price crash risk of company I in year t+1, and $X_{i,t}$ indicates vector of control variables, including company size, return on equities, market to book value of equities, and debt ratio.

Results

Table 1 indicates the descriptive statistics for all research variables including mean, standard deviation, minimum, maximum of CSR, stock

price crash risk, size, market to book value, return of equity, and financial leverage for the period from 2006 to 2015.

As shown in Table 2, market to book value of equity and CSR have the highest and lowest dispersion among the investigated variables. The statistics of financial leverage show that on average, more than fifty percent of assets of listed companies on TSE originated from debt. The statistics of return on equity show that companies listed on the TSE; on average gain return about thirty-three percent of their equities. Evidence related to the market to book value of equity is about 2.6. In addition, statistics related to the CSR, show that companies could attain only twenty-eight percent of all CSR disclosures, which is not a good position.

An important point here is that none of the companies has the scholarship program. In addition, in some indexes (such as maintaining the natural resources, support of public health, support of education, law actions, and donation of cash) companies had a low contribution.

Table 2. Descriptive statistics of research variables

Variable	*Minimum*	*Maximum*	*Mean*	*Standard deviation*
CSR	*0*	*0.85*	*0.280*	*0.170*
Stock price crash risk	*-3.659*	*3.965*	*1.449*	*1.782*
Size	*23.293*	*31.298*	*27326*	*1.470*
Market to book value of equities	*0.417*	*9.821*	*2.680*	*1.887*
Return on equities	*-0.898*	*0.998*	*0.328*	*0.237*
Financial leverage	*0.110*	*0.991*	*0.614*	*0.177*

Table 3 shows the correlation matrix among the investigated variables. Correlation analysis was done in order to identify the multicollinearity among the independent and control variables. This analysis carried out with a Pearson correlation. Moreover, multicollinearity shows that the existence of a linear relationship between two and more than two variables. Multicollinearity causes the problem of the difference between the explained variables and estimated repressors' which in turn cause the bias into the great deviation (Murray, 2006; AbuRaya, 2012). Furthermore, in the case of a linear and complete relationship between the explained variables, the estimated regresses could not be calculated uniquely.

Table 3. Pearson Correlation Result						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
CSR (1)	**1**	**-0.204 (0.000)**	**-0.174 (0.000)**	**-0.040 (0.000)**	**0.004 (0.920)**	**-0.038 (0.298)**
Stock price crash risk (2)		*1*	*0.003 (0.938)*	*-0.051 (0.164)*	*-0.157 (0.000)*	*0.135 (0.000)*
Size (3)			*1*	*0.181 (0.000)*	*0.254 (0.000)*	*-0.137 (0.000)*
Market to book value of equity (4)				*1*	*0.377 (0.000)*	*0.117 (0.001)*
ROE (5)					*1*	*-0.213 (0.000)*
Financial leverage (6)						*1*

Statistical results related to the used regression model have been shown in Table 3. According to the data presented in this table and value of F test in total companies, which is equal to 2.241, this model is significant at the significance level of 95%. Moreover, considering the value of the Durbin-Watson test presented in Table 3 in total companies, which is equal to 1.612, it rejects the presence of continuous auto-correlation in regression components. The value of R^2adj is equal to 0.129. Therefore, the researchers can anticipate 12.9% of changes of the dependent variable using independent and control variables. Moreover, the significance level related to Z test indicates that the residuals of the used regression model have a normal distribution. The related statistics indicate a lack of multiple collinearity problems among independent and control variables of research through reviewing this problem.

The above table shows the correlation matrix of investigated variables in the model. Given the coefficient of Pearson correlation, it is obvious that the highest degree of correlation among the explained variable is equal to 0.377, which belongs to the correlation between market to book value of equity, and ROE. The lowest correlation is 0.004, which belongs to the correlation between CSR and ROE. The probability of collinearity according to the Pearson correlation matrix and with regard to the numbers in table 3 is very low because the coefficient of correlation is lower than 0.8 among explanatory variables. Therefore, the range of correlation between independent and control variables do not make problems of collinearity between independent and control variables.

Stability (reliability) of research variables

In order to ensure the falsifiability of the regression model, the stability of variables is examined. The results of the study on the reliability of the research variables are presented in Table 4. According to the data in this table, in all of the research variables, the significance level in the root tests of Levin, Lin and Chow, Im, Pesaran, and Shin, adjusted Dickey-Fuller and Phillips Peron is smaller than 0.05, which indicates that the variables are stable.

Table 4. Reliability test of research variables

variables	***Levin, Lin and Chow Test***	***Im, Pesaran, and Shin***	***Adjusted Dicky Fuller***	***Phillips Peron***
	Statistics (significance level)	***Statistics (significance level)***	***Statistics (significance level)***	***Statistics (significance level)***
CSR	*-11.0934 (0.0000)*	*-4.8240 (0.0000)*	*257.984 (0.0000)*	*315.782 (0.0000)*
Stock price crash risk	*-21.5231 (0.0000)*	*-12.0635 (0.0000)*	*438.500 (0.0000)*	*530.295 (0.0000)*
Size	*-15.6366 (0.0000)*	*-8.6432 (0.0000)*	*217.390 (0.0000)*	*298.418 (0.0000)*
Market to book value of equity	*-16.2452 (0.0000)*	*-7.9377 (0.0000)*	*329.595 (0.0000)*	*366.781 (0.0000)*
ROE	*-15.9957*	*-7.5409*	*313.800*	*327.808*
	(0.0000)	*(0.0000)*	*(0.0000)*	*(0.0000)*
Financial leverage	*-7.3132 (0.0000)*	*-2.6248 (0.0000)*	*242.824 (0.0000)*	*247.579 (0.0000)*

Table 5 shows the results of regression analysis of the research hypotheses. According to this table, the result of the Chaw test and the panel model must be used. Also, the Housman test result, the fixed effect model must be used. The F value in table 5 is 9.7825, which means that model is meaningful. Furthermore, with regard to the Durbin-Watson value that is 1.8772 the serial correlation in residual is rejected. The adjustment R^2 of the model is 0.141, which means the model can predict 14.1 percent of change in the dependent variable by using the independent and control variables.

Table 5 shows the coefficient of regression models and the significance level of the research hypotheses. According to the table, the significance level of CSR shows that there is a negative and significant relationship between CSR and stock price crash risk. In addition, the results of control

variables show a positive and significant relationship between financial leverage and stock price crash risk at 95% confidence interval. Furthermore, there is a negative and significant relationship between market to book value of equity and stock price crash risk but there is no significant relationship between size and ROE and the stock price crash risk.

Table 5. Results of regression model				
Dependent variable: stock price crash risk				
variables	**coefficient**	**Standard error**	**T-statistic**	**Significance level**
Fixed amount	*3.419*	*1.294*	*2.641*	*0.0084*
CSR	*-1.8493*	*0.3523*	*-5.2490*	*0.000*
Size	*-0.0593*	*0.0457*	*-1.297*	*0.1950*
Market to book value of equities	*-0.1039*	*0.0367*	*-2.8255*	*0.0048*
Return on equities	*-0.4785*	*0.2960*	*-1.6165*	*0.1064*
Financial leverage	*0.9861*	*0.3491*	*2.8243*	*0.0049*
R^2	R^2	*Durbin-Watson*	*F statistic*	*Significance level*
0.1570	*0.1410*	*1.8772*	*9.7825*	*0.0000*
Chaw test	*7.8562*		*Hausman test*	*34.7287*
Significance level	*0.0000*		*Significance level*	*0.0000*

Conclusion and Discussion

Internationally, considerable efforts are made in CSR domain. In spite of some unique social characteristics of Iran, namely a developing and governmental-based economy, the predominance of religious laws, a broader scope of stakeholder in stock exchange, we do not have a fruitful research in this topic in Iran, especially from stock price crashes aspect. This research provides evidence about the relationship between CSR and stock price crash risk in Iran. In this regard, this research by using data related to 75 companies listed on TSE in 2007-2016 time span is going to answer this question that whether CSR disclosures affect the stock price crash risk or not.

The results obtained from analysis of collected data, using multivariable linear regression indicate that in general, there is a negative and significant relationship between CSR with stock price crash risk. This finding is consistent with evidence of research conducted by Kim et al. (2014) and the available literature. As expected, this finding is the result of the moral attitude of active companies in the CSR domain. Companies meet ethical

standards in their financial reporting to meet the ethical expectations of the community. This will allow these kinds of companies to provide more transparent and high- quality information (whether good news or bad news) to the market. As a result, by reducing the accumulation of bad news at the company, the risk of falling stock prices of these companies also reduces significantly. Accordingly, it is suggested to the capital market authorities to contribute to the development of social and cultural trends and lead companies to CSR activities and in turn the reduction of the sudden stock price crash risk and make the market grow. It is also suggested to investors to consider information about corporate social activities as a factor affecting the risk of stock prices crash risk for companies.

References

Aburaya, R. (2012). *The relationship between corporate governance and environmental disclosure: UK evidence* (Doctoral dissertation, Durham University), http://etheses.dur.ac.uk/3456/

Andreou, P. C., Antoniou, C., Horton, J., and Louca, C. (2016). Corporate governance and stock price crashes. *Forthcoming to European Financial Management*, DOI: 10.2139/ssrn.2029719

Padilla, R. A. A., and Simó, M. J. M. (2006). *La Responsabilidad Social De la Empresa a Debate*. Business & Economics, VOL: 64, ISBN: 978-84-7426-861-3

Atkins, B. (2006). Is Corporate Social Responsibility Responsible? *Corp. Govern. Advert*, 14, pp. 28-29, https://www.forbes.com/2006/11/16/leadership-philanthropy-charity-lead-citizen-cx_ba_1128directorship.html#4d93bc3c4a07

Bradshaw, M.T., Hutton, A.P., Marcus, A.J., and Tehranian, H. (2010). Opacity, Crashes, and the Option Smirk Curve, *Boston College*, DoI: 10.2139/ssrn.1640733

Callan, S. J., and Thomas, J. M. (2014). Relating CEO Compensation to Social Performance and Financial Performance: Does The Measure of Compensation Matter?. *Corporate Social Responsibility and Environmental Management*, 21 (4), pp. 202-227, DOI: 10.1002/csr.1307

Carroll, A. B. (1979). A Three-dimensional Conceptual Model of Corporate Performance., *Academy of management review*, 4 (4), pp. 497-505, http://www.jstor.org/stable/257850

Chen, J., Hong, H., and Stein, J. C. (2001). Forecasting Crashes: Trading

Volume, Past Returns, and Conditional Skewness in Stock Prices. *Journal of financial Economics*, 61 (3), pp. 345-381, DOI: 10.1016/S0304-405X(01)00066-6

Clark, J. M. (1939). Social Control of Business, New York: McGraw-Hill. ISBN-10: 0678005265., ISBN-13: 978-0678005262, https://www.amazon.com/Social-Control-Business-John-Clark/dp/0678005265

Darus, F., Fauzi, H., Purwanto, Y., Yusoff, H., Amran, A., Zain, M. M., and Nejati, M. (2014). Social Responsibility Reporting of Islamic Banks: Evidence From Indonesia. *International Journal of Business Governance and Ethics*, 9 (4), pp. 356-380, DOI: 10.1504/IJBGE.2014.066275

Davis, K. (1960). Can Business Afford to Ignore Social Responsibilities?., *California management review*, *2* (3), pp. 70-76, https://cmr.berkeley.edu/search/articleDetail.aspx?article=4820

Dhaliwal, D. S., Li, O. Z., Tsang, A., Yang, Y. G. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The accounting review*, *86* (1), pp. 59-100, DOI: 10.2308/accr.00000005

Duffee, G.R. (2001). Asymmetric Cross-Sectional Dispersion in Stock Returns: Evidence and Implications, Federal Reserve Bank of San Francisco, http://www.frbsf.org/econrsrch/workingp/2000/wp00-18bk.pdf.

El Ghoul, S., Guedhami, O., Kwok, C.C.Y., and Mishra, D.R. (2011). Does corporate social responsibility affect the cost of capital*?, Journal of Banking and Finance*, 35 (9), pp. 2388–2406, DOI: 10.1016 /j.jbankfin.2011.02.007

Feldman, D.C. (2004). The Devil is in The Details: Donverting Good Research in to Publishable Articles. *Journal of Management*, 30 (1), pp. 1-6, DOI: 10.1016/j.jm.2003.09.001

French, K.R., and Roll, R. (1986). Stock Return Variances: The Arrival of Information and Reaction of Traders. *Journal of Financial Economics*, 17 (1), pp. 5-26, DOI: 10.1016/0304-405X (86)90004-8

Gao, S. S., Heravi, S., and Xiao, J. Z. (2005). Determinants of Corporate Social and Environmental Reporting in Hong Kong: A research note. *Accounting Forum*, 29 (2): pp. 233-242, DOI: 10.1016/j.accfor.2005.01.002

Garriga, E., Mele´, D. (2004). Corporate Social Responsibility Theories:

Mapping The Territory. *Journal of Business Ethics*, 53 (1/2), pp. 51–71, http://www.jstor.org/stable/25123282

Goss, A., and Roberts, G.S. (2011). The Impact of Corporate Social Responsibility on The Cost of Bank Loans. *Journal of Banking and Finance*, 35 (7), pp. 1794–1810, DOI: 10.1016/j.jbankfin.2010.12.002

Guthrie, J., and Abeysekera, I. (2006). Content Analysis of Social, Environmental Reporting: What is new? Faculty of Commerce - Papers (Archive), University of Wollongong Research Online., https://researchers.mq.edu.au/en/publications/content-analysis-of-social-environmental-reporting-what-is-new

Guthrie, J., Petty, R., Yongvanich, K., Ricceri, F. (2004). Using Content Analysis as a Research Method to Inquire into Intellectual Capital Reporting. *Journal of Intellectual Capital*, 5 (2), 282 - 293, DOI: 10.1108/14691930410533704

Hemingway, C., Maclagan, P. (2004). Managers' Personal vValues as Drivers of Corporate Social Responsibility. *Journal of Business Ethics*, 50 (1), pp. 33–44, DOI: 10.1023/B:BUSI.0000020964.80208.c9.

Hong, H., and Stein, J.C. (2003). Differences of Opinion, Short-sales Constraints, and Market Crashes. *The Review of Financial and Studies*., 16 (2), pp. 487- 525 . , DOI: 10.1093/rfs/hhg006

Hutton, A.P., Marcus, A.J., and Tehranian, H. (2009). Opaque Financial Reports, R2, and Crash Risk. *Journal of Financial Economics*, 94(1), pp. 67-86, DOI: 10.1016/j.jfineco.2008.10.003.

Isaksson, L., Kiessling, T., and Harvey, M. (2014). Corporate Social Responsibility: Why bother? Organizational Dynamics, 43 (1), pp. 64-72, DOI: 10.1016/j.orgdyn.2013.10.008

Jensen, M., and Meckling, W. (1976). Theory of the Firm: Managerial Behavior, Agency Cost and Capital Structure. *Journal of Financial Economics*, 3 (4), pp. 305–360, DOI: 10.1016/0304-405X (76)90026-X

Jiao, Y. (2010). Stakeholder Welfare and Firm Value. *Journal of Banking and Finance*, 34 (10), pp. 2549–2561, DOI: 10.1016/ j.jbankfin. 2010. 04.013

Jin, L., and Myers, S. C. (2006). R2 around The World: New Theory and New Tests, *Journal of financial Economics*, 79 (2), pp. 257-292, pp. DOI: 10.3386/w10453, DOI: 10.1016/j.jfineco.2004.11.003

Jones, T. M. (1995). Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics. *The Academy of management review*, 20 (2), pp.

404-437, DOI: 10.5465/AMR.1995.9507312924

Kelly, M. (1994). Correlation: stock answer. Risk, 7, pp. 40-43.

Khajavi, Sh., Bayazidi, A., and Jabarzadeh Kangarloyee, S. (2011). Investigating The Relationship Between Earnings Management and Corporate Social Responsibility of Accepted Companies in Tehran Stock Exchange, Journal of Accounting Advances, 3(1), 29-54., DOI: 10.22099/jaa.2011.3388 (In Persian)

Khan, M., and Watts, R.L. (2009). Estimation and Empirical Properties of a Firm- Year Measure of Accounting Conservatism. *Journal of Accounting and Economics*, 48 (2-3), pp. 132-150, DOI: 10.1016 /j.jacceco.2009.08.002

Kim, I., and Venkatachalam, M. (2011). Are Sin Stocks Paying the Price for Accounting Sins? *Journal of Accounting, Auditing, & Finance*, 26 (2), pp. 415-442, DOI: 10.1177/0148558X11401222

Kim, Y., and Li, H., Li, S. (2014). Corporate Social Responsibility and Stock Price Crash Risk, *Journal of Banking & Finance* 43, pp. 1-13, DOI: 10.1016/j.jbankfin.2014.02.013

Kim, Y., Park, M.S., and Wier, B. (2012). Is Earnings Quality Associated With Corporate Social Responsibility*? The Accounting Review*, 87 (3), pp. 761–796, DOI: 10.1080/0969160X.2013.845031., DOI: 10.2308/accr-10209

Kim, Y., Statman, M., (2012)., Do Corporations Invest Enough in Environmental Responsibility?. *Journal of Business Ethics*, 105 (1), pp. 115–129, https://link.springer.com/article/10.1007/s10551-011-0954-2

Krippendorff, K. (2004). Content Analysis. An Introduction to Its Methodology (2nd Ed.), Thousand Oaks: SAGE, http://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=1645983

Lee, D.D., and Faff, R.W. (2009). Corporate Sustainability Performance and Idiosyncratic Risk: A Global Perspective, *Financial Review*, 44 (2), pp. 213–237, DOI: 10.1111/j.1540-6288.2009.00216.x

Mackey, A., Mackey, T., Barney, J. (2007). Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies. *The Academy of Management Review*, 32 (3), pp. 817–835, http://www.jstor.org/ stable/20159337, DOI: 10.5465/AMR.2007.25275676

Martínez, J. B., Fernández, M. L., and Fernández, P. M. R. (2016).

Corporate Social Responsibility: Evolution through Institutional and Stakeholder Perspectives, *European Journal of Management and Business Economics*, 25 (1), pp. 8–14, DOI: 10.1016/j.redee.2015.11.002

McWilliams, A., Siegel, D. S., and Wright, P. M. (2006). Corporate Social Responsibility: Strategic Implications., *Journal of management studies*, *43* (1), pp. 1-18, DOI: 10.1111/j.1467-6486.2006.00580.x

Murray, M. P. (2006). Avoiding Invalid Instruments and Coping with Weak Instruments. *Journal of economic Perspectives*, *20* (4), pp. 111-132, DOI: 10.1257/jep.20.4.111

Petrovits, C. (2006). Corporate-sponsored Foundations and Earnings Management., *Journal of Accounting and Economics*, 41 (3), pp. 335–362, DOI: 10.1016/j.jacceco.2005.12.001

Poterba, J.M., and Summers, L.H., (1986)., The Persistence of Volatility and Stock Market Fluctuatioms, *The American Economic Review*, 76 (5), pp. 1142-1151, http://www.jstor.org/stable/1816476

Prior, D., Surroca, J., and Tribó, J. A. (2008). Are Socially Responsible Managers Really Ethical? Exploring the Relationship between Earnings Management and Corporate Social Responsibility. *Corporate Governance: An International Review*, *16* (3), pp. 160-177., DOI: 10.1111/j.1467-8683.2008.00678.x

Roman, R., Hayibor, S., and Agle, B. (1999). The Relationship between Social Performance and Financial Performance. *Business and Society*, 38 (1), pp. 109–125, DOI: 10.1177/000765039903800105l.

Sepasi, S., and Kejani, M. E. (2014). A Theoretical Model of Corporate Governance and Environmental Disclosures Based on Cost Management Approach, *Journal of Management Accounting and Auditing Knowledge*, 3, pp. 147-160 (In Persian)

Talebnia, Gh., Alikhani, R., and Maranjoori, M. (2013). Evaluating the Quantity and Nature of Disclosure of Environmental and Social Accounting Information in Iran. *Journal of the accounting and auditing review,* 19 (69), 43-60 (In Persian)

Thornton, G. (2008). Corporate Social Responsibility- a Necessity not a Choice for Privately Held Businesses, https://www.gt.co.bw/news/pressreleases/publications/ibr/IBR08_CSR.pdf.

Weber, M. (1922). The theory of Social and Economic Organization. New York, NY: University of California Press,

http://www.worldcat.org/title/theory-of-social-and-economic-organization/oclc/339004

Williams, S. M. (1999). Voluntary Environmental and Social Accounting Disclosure Practices in The Asia-Pacific Region: An International Empirical Test of Political Economy Theory. *The International Journal of Accounting*, *34* (2), pp. 209-238, DOI: 10.1016/S0020-7063(99)00006-0