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The Effect of Corporate Social Responsibility on Real Earnings Management in Companies with and without Financial Crisis

(A case study of the companies listed on the Tehran Stock Exchange)

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Abstract

Corporate social responsibility is one of the new concepts in the field of company management, which has a comprehensive look at the interests of all stakeholders in the organization and the lack of attention to it can create adverse consequences. The present study has investigated the effect of corporate social responsibility on real earnings management in companies (with and without financial) listed on the Tehran Stock Exchange. The research hypotheses were analyzed by using 74 companies from 2010 to 2014 through multiple linear regression system and Eviews 7 analytical software. The research findings indicated there is a reverse and positive relationship between corporate social responsibility and real earnings management in the companies without financial crisis than the companies with financial crisis.

Keywords:

The companies listed on the Tehran Stock Exchange, corporate social responsibility, and real earnings management

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Introduction

Almost all external organizational users attempt to predict earnings in the next several periods by using the reported financial data. Thus, investors estimate their expected returns by using the financial data of companies. Furthermore, investors rely more on the data related to earnings compared to other performance parameters (such as cash earnings, cash flows, earnings fluctuations) (Biddle et al, 1995). Thus, the reported earnings are one of the determinants of investors' expected returns. Some examples of real earnings management include the manipulation of discretionary expenses, additional production, price discounts at the end of year, timing the assets sale and investments. On the other hand, corporate social responsibility is one of the most important factors discussed in modern management area. Macro problems like weather, health, globalization, and energy shortage on the one hand and stakeholders like green customers, pragmatic shareholders, legislators, non-governmental institutions, etc. made social responsibilities important for attracting all stakeholders to participate. Furthermore, most companies move beyond the standards includes the rules to discuss as a significant company in societies where they work. The reduction of environmental risks and improvement of employees' health and safety led to the improved efficiency and reduced operating expenses. The companies with significant reputation can strengthen their credit to customers, investors, and stakeholders who are sensitive to social problems. Therefore, the researchers in the field of real estate management studies are seeking to identify the abnormal levels of the business unit's activities. Therefore, the main objective of this study is to investigate the relationship between corporate social responsibility and the manipulation of the true criteria of earnings quality in Tehran Stock Exchange. In contrast to domestic research that has more than voluntary accruals as a criterion for earning quality, this study tweaks profits through real activities and their relationship with corporate social responsibility according to Christine's research and Giwovana (2015) has been studied to address the problem of the lack of theoretical basis of the requirements for reporting on social responsibility in Iranian companies for companies in developed countries, and why financially inclined companies tend to have a genuine profit management.

Literature review and hypotheses development

Hilay and Valen (1999) stated that earnings management occurs when managers use their personal judgments in financial reporting and manipulate the structure of exchanges for changing the financial reporting. This goal is for misleading some earnings holders on the economic performance of companies or the effects on the results of contracts subject to achieving personal earnings. These researchers documented two forms of earnings management. The first form included the selection of other appropriate accounting methods for achieving the desirable levels of earnings (i.e. earnings management based on accounting items). The second form used timing or operating decisions for achieving the desirable earnings (i.e. manipulating the real activities). The first form of earnings management, i.e. earnings management based on accounting items was certain at the year of occurring changes and could be specified by auditors in a common method. Recognizing the second form through operating decisions could be difficult for the person out of the company (Shiper, 1989). If we compare the concept of corporate social responsibility to the other two concepts, we can understand it better. These concepts include social commitment and social responsibility. Social commitment occurs when an organization provides economic and legal responsibilities in social activities due to its commitment. Such organization is only committed to what it performs. This method is based on the perspective of classics on corporate social responsibility (Iran Nejad, Parizi, and Tvasoli, 2010. Companies can achieve different advantages with the efficient and effective management of their corporate social responsibilities. Such advantages include the improved competitive advantage, increased reputation of company, more effective risk management, improved performance, increased value of company, reduced capital expenses, reduced operating expenses, limited legal claims, etc. Christian and Givana (2015) studied corporate social responsibility and earnings quality and concluded that the companies with higher corporate social responsibility have a tendency towards accrual earnings management and the companies with less corporate social responsibility have a tendency towards real earnings management. Evans et al (2014) studied the amount and type of companies' earnings management by evaluating the opinions of 616 experienced financial managers throughout the world, the effect of their countries and the effect of using different accounting standards (American standards versus international standards). They found that since the American accounting standards facilitate the discovery of earnings management and implementing the rules are relatively stronger in America, those American companies using American standards have more reliance on real earnings management compared to non-American companies and the American companies using international standards. In addition, they shared that reporting environments with stronger legal monitoring do not necessarily reduce the probability and total amount of earnings management, but encourage the use of real earnings management instead of accrual items.

Scholtens and Ching Kang (2012) in a study entitled “corporate social responsibility and earnings management: some evidence from Asian companies” studied the relationship between earnings management with corporate social responsibility and support of investors in 139 companies in ten Asian countries. The research hypothesis claimed that there is a reverse relationship between corporate social responsibility with supports of investors and earnings management. The study results indicated that the companies with good corporate social responsibility are significantly interested in reduction of earnings management. The support of investors has a negative relationship with earnings management and corporate social responsibility makes Asian companies use earnings management less depending on legal system.

Bazr Afshan and Aref Manesh (2014) studied 41 bankrupted companies on the Tehran Stock Exchange during 2001 to 2012. They showed that such companies managed earnings in the year before bankruptcy, whether manipulating accrual items or real activities, and the size of auditor has no effect on the amount of earnings management in such companies.

The relationship between corporate social responsibility and real earnings management has a significant difference in companies with and without financial crisis.

The importance of the research

In recent years, organizations active in social and environmental issues such as the KLD in the United States, the CSID Institute in Canada and the Institute (Vigo) in Europe have increasingly been evaluated and ranked by organizations based on social and environmental standards. Even this issue has recently been taken into consideration in Iran and in the country's current assessments. The research, by answering the question of what the relationship between social responsibilities, the management of genuine profits, helps organizations to achieve better performance and profit, and also to have a better social status, and the result can be perceived work, How to influence the investment decisions from corporate social responsibility and, consequently, value and efficiency. If companies are encouraged or punished for compliance with or neglected social accountability considerations, managers and investors consider social responsibility indicators as one of the criteria for assessing investment decisions. As well as companies, corporate social responsibility is seen as a commercial strategy, which adds to their credibility in a highly competitive environment and increases their share in the market.

Methods

Data collection tools, population, and statistical samples

In this regard, the research hypotheses were tested through some appropriate statistical methods by Excel, SPSS, and Eviews 7 software. The statistical population of this study included the companies listed on the Tehran Stock Exchange with the following criteria:

1. The financial data of the companies should be available for the research time period, i.e. from 2001 to 2014.
2. Their fiscal year should lead to the end of April
3. Stock exchanges should not be stopped for six months

After applying the limitations, 154 companies had the above criteria from 2001 to 2014. Accordingly, sampling was conducted and finally 74 companies were selected. (Table 1)

Table 1: The number of companies in the study

Description	Number of companies subject to restrictions	Number of remaining samples
The number of companies listed on the Stock Exchange	-	۳۹۷
Restrictions		
Companies listed after 2010	۱۰	۳۸۷
Investment Companies, Banks, Financial Intermediation, Holding and Leasing	۵۲	۳۳۵
Different fiscal year	۸۳	۲۵۲
Companies lacking required information (incomplete information) for at least one year from the research period	۸۸	۱۶۴
Sampling	۹۰	۷۴

Based on the model, the companies were classified into two groups of with financial crisis and without financial crisis (Table 2)

Table 2: The classification of companies based on the model

Company status	Number
without financial crisis	۳۷
With financial crisis	۳۷
Total Sample Companies	۷۴

The statistical models for measuring the research variable

In order to measure the real earnings management, the abnormal operating cash flow (R-CFO) remained from model 1, abnormal production expenses (R-PRO) remained from model 2, and abnormal discretionary expenses (R-DEXP) remained from model 3 were estimated (Roychowdhury, 2006).

In the above model, CFO the cash flow obtained from operations expressed as a linear function of sale (S) and change in sale (ΔS) for each year of the company. PRO is another parameter for real earnings quality of using produced expenses (total final expenses of sold commodities and changes of material and commodity inventories over years), and Dexp is the discretionary expenses (advertising, general, administrative, and sale expenses) (Nargesi et al, 2001). In this study, all social activities of companies in form of 20 items and four dimensions include the employee disclosure (EMPD), community disclosure (COMD), production disclosure (PROD), and environment disclosure (ENVD) (Alipour et al, 2001). The companies with any of these items considered code 1 for the relevant item, otherwise they considered code 0.

In addition, the dummy and control variables given below were used for testing the research hypotheses:

- Size = The size of company equal to the logarithm of assets
- Leverage= The ratio of debts to assets
- ADJ-ROA= The sale of current year- base year sale/ base year sale x100

- MTB= The opportunities of company’s growth equal to the ratio of the market value of shareholders' equity

Result

Data analysis

First, the descriptive statistics of studied data were calculated for data analysis. (Table 3 and Table 4)

Table 3: The descriptive statistics of research variables in companies without financial crisis

Variable	Mean	Median	Standard Deviation	Max	Min
REM	-۰,۴۵۶۶۰۷	-۰,۴۲۰۹۴۶	۰,۲۶۷۵۰۷	۰,۱۱۰۹۸۸	-۱,۴۲۶۴۵۰
CSR	۷,۹۳۵۱۳۵	۸	۳,۰۴۷۸۲۷	۱۵	۰
SIZE	۵,۹۴۹۲۴۴	۵,۹۰۴۸۸۵	۰,۵۸۷۰۵۱	۸,۱۵۳۹۵۰	۴,۷۵۶۴۴۶
LEV	۰,۶۱۸۱۰۳	۰,۶۲۰۶۱۳	۰,۲۰۰۱۱۵	۱,۵۶۷۲۹۱	۰,۲۲۷۱۲۲
ADJ_ROA	۴۶۲۷۷۶,۶	۷۹۸۹۸,۷۱	۱۳۷۶۰۵۳	۹۱۴۴۶۱۱	-۱۳۵۰۷۱,۶
GROWTH	۰,۰۴۵۵۲۸	۰,۰۲۵۹۹۱	۰,۲۸۴۹۲۹	۲,۲۹۴۱۷۰	-۲,۰۱۹۹۲۲۵
MTB	۲,۵۰۰۹۱۹	۱,۹۷۰۱۱۲	۱,۹۹۵۴۷۵	۱۱,۳۴۲۹۸	-۵,۳۶۵۱۶۰

Table 4: The descriptive statistics of research variables in companies with financial crisis

Variable	Mean	Median	Standard Deviation	Max	Min
REM	-۰,۴۷۶۱۷۵	-۰,۳۵۹۹۳۴	۰,۳۸۵۹۷۶	۰,۱۸۰۲۰۰	-۲,۵۳۷۸۶۷
CSR	۸,۲۵۹۴۵۹	۸,	۳,۴۱۷۹۴۰	۱۵	۱
SIZE	۶,۲۴۵۳۶۸	۶,۲۲۲۶۶۷	۰,۵۹۲۹۴۴	۸,۰۱۴۷۱۲	۴,۳۵۶۵۰۴
LEV	۰,۸۰۶۱۳۰	۰,۷۶۲۳۸۵	۰,۳۱۷۹۷۶	۲,۷۷۳۲۸۷	۰,۲۴۵۲۲۲

ADJ_ROA	۸۲۲۸۵,۴۰	۸۴۵۹۴,۴۰	۹۰۴۱۶۵,۷	۶۰۲۲۸۵۹	-۴۶۹۲۱۹۹
GROWTH	۰,۱۱۰۹۸۸	۰,۶۰۸۹۰	۰,۳۱۹۱۲۱	۲,۳۹۴۶۶۳	-۰,۹۶۴۸۸۸
MTB	۱,۵۶۳۹۹۹	۱,۵۷۶۶۴۳	۴,۶۳۱۸۵۵	۲۱,۸۳۳۰۸	-۲۵,۸۹۳۱۸

Correlation test of variables

The correlation between the research variables in Tables 5 and 6 indicated that corporate social responsibility (CSR) in companies without financial crisis has the minimum correlation to real earnings management (REM) and the maximum correlation in companies with financial crisis. (Table 5 and Table 6)

Table 5: Correlation matrix between variables in companies without financial crisis

Variable	REM	CSR	SIZE	LEV	ADJ___ROA	GROWTH	MTB
REM	۱	-۰,۱۴۸	۰,۱۰۴	-۰,۰۴۰	۰,۱۰۹	-۰,۰۶۰	-۰,۰۸۳
CSR		۱	۰,۰۱۸	-۰,۱۳۳	-۰,۰۹۹	۰,۰۳۷	۰,۰۳۵
SIZE			۱	۰,۰۲۵	۰,۶۸۸	۰,۰۱۰	۰,۰۰۸
LEV				۱	-۰,۱۶۶	-۰,۱۰۲	-۰,۱۹۵
ADJ___ROA					۱	۰,۰۸۸	۰,۰۸۳
GROWTH						۱	۰,۲۴۹
MTB							۱

Table 6: Correlation matrix between variables in companies with financial crisis

Variable	REM	CSR	SIZE	LEV	ADJ___ROA	GROWTH	MTB
REM	۱	۰,۳۵۶	۰,۱۵۹	۰,۰۵۶	-۰,۱۸۰	-۰,۲۱۸	-۰,۲۳۷
CSR		۱	۰,۷۱۱ ۰,۰۰۰	-۰,۱۴۵ ۰,۰۵۰	۰,۰۱۲ ۰,۸۷۵	-۰,۰۴۸ ۰,۵۱۴	-۰,۰۹۸ ۰,۱۹۶
SIZE			۱	۰,۰۰۴	۰,۰۴۴	۰,۰۴۸	-۰,۱۴۹
LEV				۱	-۰,۱۹۶	-۰,۰۲۸	-۰,۱۸۰

ADJ___ROA					١	٠,٢٩٩	٠,١٩۶
GROWTH						١	٠,٠١٢ ٠,٨٧۴
MTB							١

The stationary (reliability) of variables

To conduct this analysis, the Im, Pesaran, Shin test (1997) was sued. Since the obtained significance level in both tables was less than 0.05, it can be concluded that the studied variables sin the research time period were at a stationary (reliability) level. (Table 7 and Table 8)

Table 7: Im, Pesaran, Shin test of companies without financial crisis

Research Variables	Statistic t	Significance level
REM	-٧,٩٢٠٨	٠/٠٠٠
CSR	-۶,۶۴٢٠	٠/٠٠٠
SIZE	-۵,٢٠۵۴	٠/٠٠٠
LEV	-۶,۴١۵٨	٠/٠٠٠
ADJ	-۵,٩٨۴٩	٠/٠٠٠
GROWH	-١۵,٧٨٧	٠/٠٠٠
MTB	-٩,۶۶٩۵	٠/٠٠٠

Table 8: Im, Pesaran, Shin test of companies with financial crisis

Research Variables	Statistic t	Significance level
REM	-٨,١١٩٢	٠/٠٠٠
CSR	-۵,٧٣۵٣	٠/٠٠٠
SIZE	-۴,٧٧۶١	٠/٠٠٠
LEV	-۵,۴٧۴١۶	٠/٠٠٠

ADJ	-۷,۷۴۷۴	۰/۰۰۰
GROWH	-۱۵,۳۵۶	۰/۰۰۰
MTB	-۹,۶۷۷۶	۰/۰۰۰

Combined data model diagnostic test

The results of Chow test in Table 9 are as follows (Table 9).

Table 9: Combined data model diagnostic test

Test	Companies	Test Statistic	F Statistic	Degrees Of Freedom	Significance Level	Result
Chow Test	without financial crisis	F	۱,۱۲۸	(۴،۱۷۴)	۰,۳۴۴۶	Panel model
	with financial crisis	X^2	۰,۲۶۱۰۲۵	(۴،۱۷۴)	۰,۹۰۲۶	Panel model
Hausman Test	without financial crisis	F	۳,۶۴۳۴۸۲	۶	۰,۷۲۴۸	Random effects model
	with financial crisis	X^2	۰,۰۰۰	۶	۱,۰۰۰۰	Random effects model

The results obtained from processing the research regression mode in Table 10 indicated that there is a reverse and significant relationship between corporate social responsibility and real earnings management in companies without financial crisis. In other words, the amount of real earnings reduces with the increase of corporate social responsibility. All coefficients of control variables have an insignificant relationship with real earnings management. In general, F statistics was significant and the value of Durbin-Watson statistics showed the lack of autocorrelation in remaining (Table 10).

Table 10: The testing results of the second hypothesis in companies without financial crisis

$$\mathbf{REM} = \square_0 + \square_1\ \mathbf{CSR} + \square_2\ \mathbf{SIZE} + \square_3\ \mathbf{LEV} + \square_4\ \mathbf{ADJ-ROA} + \square_5\ \mathbf{GROWTH} + \square_6\ \mathbf{MTB} + \square_{it}$$

Variables	Correlation coefficients	Statistic t	Significance level
C	-۰,۵۰۰۰۵۴	-۱,۸۳۳۷۹۶	۰,۰۶۸۴
CSR	-۰,۰۱۳۴۲۲	-۲,۰۳۰۱۲۵	۰,۰۴۳۸
SIZE	۰,۰۴۰۷۶۰	۰,۸۵۸۸۶۷	۰,۳۹۱۶
LEV	-۰,۱۰۴۸۸۰	-۱,۰۰۵۷۹۸	۰,۳۱۵۹
ADJ-ROA	۵,۰۸۸۰	۰,۲۸۳۱۵۴	۰,۷۷۷۴
Growth	-۰,۰۴۱۶۲۶	-۰,۵۸۳۹۹۳	۰,۵۶۰۰
MTB	-۰,۰۱۱۴۱۳	-۱,۱۰۸۸۱۴	۰,۲۶۹۰
The coefficient of determination	۰,۴۸۱۴۰	**Statistic F**	۱,۵۰۰۳۸۱
Adjusted coefficient of determination	۰,۳۱۶۰۵۵	**Probability statistics**	۰,۰۱۸۰۴۴
Watson camera statistics	۲,۰۲۸۴۵۱		

$$\mathbf{REM} = -0.500054 - 0.013422\ \mathbf{CSR} + 0.040760\ \mathbf{SIZE} - 0104880\ \mathbf{LEV} + 5.88\ \mathbf{ADJ-ROA} - 0.041626\ \mathbf{GROWTH} - 0.011413\ \mathbf{MTB} + \square_{it}$$

The results obtained from processing the research regression mode in Table 11 indicated that there is a reverse and significant relationship between corporate social responsibility and real earnings management in companies with financial crisis. In other words, the amount of real earnings increases with the increase of corporate social responsibility. All coefficients of control variables have an insignificant relationship with real earnings management. In general, F statistics was significant and the value of Durbin-Watson statistics showed the lack of autocorrelation in remaining. (Table 11)

Table 11: The testing results of the second hypothesis in companies with financial crisis

$\mathbf{REM} = \alpha_0 + \alpha_1\, \mathbf{CSR} + \alpha_2\, \mathbf{SIZE} + \alpha_3\, \mathbf{LEV} + \alpha_4\, \mathbf{ADJ-ROA} + \alpha_5\, \mathbf{GROWTH} + \alpha_6\, \mathbf{MTB} + \varepsilon_{it}$			
Variables	**Correlation coefficients**	**Statistic t**	**Significance level**
C	-۰,۱۱۸۵۷۱	-۰,۳۵۹۰۴۵	۰,۷۲۰۰
CSR	۰,۰۵۵۱۰۹	۵,۰۸۸۸۶۷	۰,۰۰۰
SIZE	-۰,۱۳۳۳۸۵۷	-۲,۱۵۶۰۱۰	۰,۰۳۲۴
LEV	۰,۰۸۹۱۸۷	۱,۰۶۳۲۱۸	۰,۲۸۹۱
ADJ-ROA	-۳,۳۳۰۸	-۱,۰۹۷۰۵۷	۰,۲۷۴۱
Growth	-۰,۱۸۹۸۷۰	-۲,۲۷۲۵۳۴	۰,۰۲۴۳
MTB	-۰,۰۱۵۹۰۲	-۲,۷۹۰۸۲۹	۰,۰۰۵۸
The coefficient of determination	۰,۶۳۸۷۸۸	**Statistic F**	۹,۳۰۶۲۸۷
Adjusted coefficient of determination	۰,۵۱۳۱۳۰	**Probability statistics**	۰,۰۰۰
Watson camera statistics	۲,۰۱۳۰۴۷	۲,۰۱۳۰۴۷	
$\mathbf{REM} = -0.11857 + 0.055109\, \mathbf{CSR} - 0.1333857\, \mathbf{SIZE} + 0.089187\, \mathbf{LEV} - 3.33\, \mathbf{ADJ-ROA} - 0.189870\, \mathbf{GROWTH} - 0.015902\mathbf{MTB} + \varepsilon it$			

Conclusions

The present study aimed at investigating the effect of corporate social responsibility on real earnings management in companies (with and without financial) listed on the Tehran Stock Exchange. Here is a summary of the results obtained from this study:

The results indicated that there is a reverse and significant relationship between corporate social responsibility and real earnings management in companies without financial crisis and there is a direct and significant relationship between corporate social responsibility and real earnings management in companies with financial crisis. This research by answering the question "what is the relationship between social responsibility?" helps the management of corporate profits in achieving better performance and more profitable. It should be noted that real earnings management with reduction of future cash flows can lead to long term operating performance and cause irreversible losses. Although managers can obtain their earnings in the short term by managing real earnings, they cannot increase the value of company in the long term and may not select efficient projects with the aim of maximizing the value of company. The managers who seek for long term earnings are successful. Hence, according to the results of this research, policy makers and developers of the theoretical basis of financial reporting and financial accounting standards strengthen the position of corporate social responsibility. With the introduction of different angles of social responsibility and its benefits for companies, as well as providing the necessary mechanisms for reporting social responsibility, companies can be encouraged to implement the principles of social responsibility more and more, in which case the social responsibility of the company on the features of the company and including the components of financial reporting quality will be tangible.

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