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Comparison of the Social Responsibility Effect on Accrual-Based Earnings Management in Companies with or without Financial Crisis: Case Study of Companies Accepted in Tehran Stock Exchange

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Abstract

The purpose of this study was to investigate the relationship between the disclosures of social responsibility in the population of accepted companies (without financial crisis and with financial crisis) in Tehran Stock Exchange on management of earnings accruals. The research hypothesis was analyzed by using the data of 74 companies during the period of 2010 to 2014 through multiple linear regressions using Eviews 7 analysis software. The research findings briefly show that "there is a positive correlation between social responsibility and management of earnings accruals in companies without a financial crisis compared to companies with a financial crisis. As a result, companies that have a high social responsibility orientation tend to accrue earnings management.

Keywords: Iran Stock Exchange, Social Responsibility, Management of Accruals Earnings.

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Introduction

Today earning management is one of the most controversial issues in accounting research. Because to the fact that investors pay particular attention to earnings as a significant factor in decision making (Noravesh et al., 2005). Since the calculation of the profit of an enterprise is influenced by accounting estimates and the preparation of financial statements is the responsibility of the business unit management, it may be possible for a business unit to manage its profits for various reasons. Managers can take this step in two ways: Managing earnings through accruals and managing profits by manipulating real activities. Profit management negatively affects the transparency of financial information and results in a decrease in the quality of the financial reporting process and undermines public confidence in the published information, thereby reducing the general willingness to participate in capital markets, including stock exchanges (Nargesi, 2013).

On the other hand, due to the collapse and financial scandal of some companies, including Enron in the early 21st century, discussions about the corporates' social responsibility status in the global economy, especially international companies, have increased to improve the environmental and social conditions. In the new century, attention is focused on human, social, and environmental rights. This development is clearly visible in the evolution of corporate social responsibility research, and even the relationship between government and corporate social responsibility has been investigated. (Hassas Yeganeh et al., 2013).

Theoretical Foundations of Research

In recent years, in the field of accounting research, the issue of earnings management has attracted the attention of researchers. Watts and Zimmerman consider the management of earnings to be the use of the director's freedom of action on accounting figures with the assumption of the existence or absence of restrictions in this regard. Considering the management objectives, earnings management can be reported as increasing, decreasing or smoothing out the profit. Accrual-based earnings management is the use of authorized accounting and reporting powers to achieve important goals. In recent research, many incentives have been identified for managing profits. Motives such as pressures on capital markets, credibility and personal reputation management, managers' rewards, profit smoothing, minimize and save taxes, reduce the distribution of profit reports, provide a good picture of company performance, add stock prices and reduce political costs are among the factors that drive managers into profit management. Corporates' social responsibility is the commitment of the company to use its resources to benefit society and improve welfare in the community from the company's revenue (Kok, Wiele, McKenna, & Brown, 2001). The current trend of globalization and the ever-increasing demand from companies to take on social responsibility encourages companies to engage in social responsibility (Saleh, Zulkifli, Rusnah Muhamad, 2010). The social responsibility of organizations includes economics, law, morals, and humanitarian expectations of business units, which are generalized to all stakeholders. The dimensions of social responsibility of companies in most researches on ethical issues, in order to determine the level of corporate social responsibility, have different dimensions including employees, customers, environment, health, education, rural development and existing institutions in society. Kim and Qi (2015) investigated the earnings quality and stock returns with macroeconomic variables. They considered the quality of accruals as a criterion for assessing the quality of profit and concluded that the quality of accrual items varied with macroeconomic variables. Indeed, companies with low accrual quality are much more vulnerable to macroeconomic shocks and changes. Chen, X., Cheng, Q., and Wang, X. (2015) investigated whether the legal reforms of the United States in the past decade that most members of the board of directors should be independent have led to a reduction in profit management or not. The results indicated that the management of profits in companies that before the reforms did not have the majority of their board members independent and then had to modify their board structure did not significantly decrease compared to other companies. Kim, Y., Park, M. S., & Wier, B. (2012) investigated the relationship between earnings quality and disclosure of corporate social responsibility. They used discretionary accruals criteria and earnings management using actual activities in order to investigate the quality of earnings. Corporate social responsibility criteria include corporate governance, association, diversity, employee relations, environment, and human rights. The results of their research showed that social responsibility of companies would improve the quality of corporate profits. Jalili and Qaysari (2014) investigated the relationship between earnings quality and social responsibility of companies listed on Tehran Stock Exchange in the period between 2010 and 2014. In this research, a systematic elimination method was used for sampling. The results showed that there was a positive non-significant relationship between corporate accountability and earnings management in the discretionary accruals model and abnormal production costs model, and there is a significant relationship between corporate social responsibility and earnings quality in the abnormal operating cash flow and the unusual discretionary cost model.

Research Hypothesis

The relationship between social responsibility and earnings management based on accrual items in firms without financial crisis and with financial crisis has a significant difference.

Methodology

Collection tools, population, and sample

In this regard, research hypotheses will be tested using appropriate statistical methods using Excel, Spss, and Eveiws7 software. The population of this research includes companies accepted in Tehran Stock Exchange, which have all the following conditions:

1) The financial information of the companies for the period of research is available from 2010 to 2014.

2) Their fiscal year ends by the end of Esfand.

3) Stock transactions have not been interrupted for 6 months.

After applying the limitations, 154 companies during the period from 2010 to 2014 have the above conditions and sampling has been done according to this and 74 companies have been selected for investigation.

Table 1. Number of companies participating in the research

Description	Number of companies subject to restrictions	Number of remaining samples
The number of companies accepted in the stock exchange	-	397
Limitations		
Companies accepted after 2010	10	387
Investment Companies, Banks, Financial Intermediation, Holding and Leasing	52	335
Different financial year	83	252
Companies lacking required information (incomplete information) for at least one year from the research period	88	164
Sampling	90	74

Then, the companies were divided into two categories of without financial crisis and with financial crisis according to table 2 according to the model.

Table 2. Division of companies according to model

Company status	Number
Without a financial crisis	37
With a financial crisis	37
Total number of sample companies	74

Statistical Models of Research Variables Measures

In the present study, for the estimation of discretionary accruals and the measurement of earnings accruals from the residual of model 4, which is modified by the Canic script (1999):

$$\frac{ACC_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{(\Delta REV_{it} - \Delta REC_{it} + \Delta INV_{it})}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \alpha_3 \frac{\Delta \mathrm{CFOit}}{A_{it-1}} + \varepsilon_{it} \tag{1}$$

Where, *ACC*: Total accruals accrued through difference in operating profit and operating cash flow, *ΔREV*: Change in earnings, *ΔREC*: Change in net receivable accounts, ΔINV: Change in inventories of materials and goods, *PPE*: Gross evident fixed assets, ΔCFO: Changes in operating cash flows, *B* and *ai*: regression coefficients and $_i\varepsilon$: the remaining component of the pattern and represents discretionary accruals. (Nargesi et al., 2014). In this research, all corporate actions and activities in the form of 20 items and four dimensions, including the level of disclosure of employee relationship information (EMPD), disclosure of social inclusion information (COMD), disclosure of information on production (PROD), and environmental information dissemination (ENVD). (Alipour et al., 2014). Any company that has each of these items for the related item is 1 and otherwise the code is zero.

CSRD= EMPD+COMD+PROD+ENVD (2)

Also, the following fictitious and controllable variables were used to test the research hypothesis:

► Size = size of the company which is equal to the asset logarithm;

► Leverage = debt to assets ratio;

► ADJ - ROA = difference between company's profitability;

► Growth = this year's selling - base year's selling / base year's selling * 100

► MTB = growth opportunities of the company equal to the ratio of the market value of equity to the book value of the company's equity;

Data Analysis

In the first step, the descriptive statistics of the data under study are calculated for data analysis.

Table 3. Descriptive statistics of research variables in companies without financial crisis

Variable	Mean	Median	Standard Deviation	Max	Min
AEM	-0.043	-0.064	0.143	0.445	-0.442
REM	-0.456	-0.420	0.267	0.110	-1.426
CSR	7.935	8	3.047	15	1
SIZE	5.949	5.904	0.587	8.158	4.756
LEV	0.618	0.620	0.200	1.567	0.227
ADJ_ROA	422776.6	79898.71	1376053	9144611	-135071.6
GROWTH	0.045	0.025	0.284	2.294	-2.019
MTB	2.500	1.970	1.995	11.342	-5.365

Table 4. Descriptive statistics of research variables in companies with financial crisis

Variable	Mean	Median	Standard Deviation	Max	Min
AEM	0.001	0.002	0.099	0.315	-0.393
REM	-0.476	-0.359	0.385	0.180	-2.537
CSR	8.259	8	3.417	15	1
SIZE	6.245	6.222	0.592	8.014	4.356
LEV	0.806	0.762	0.317	2.773	0.245
ADJ_ROA	82285.40	84594.40	904165.7	6022859	-4692199

GROWTH	0.110	0.608	0.319	2.394	-0.964
MTB	1.563	1.576	4.631	21.833	-25.893

Correlation between Variables Teat

The correlation between the research variables in tables 6 and 5 shows that social responsibility (CSR) in firms without financial crisis has the highest correlation with accruals income management variable (AEM) and in companies with crisis has the lowest correlation.

Table 5. Matrix of correlation between variables - in companies without financial crisis

Variable	AEM	CSR	SIZE	LEV	ADJ___ROA	GROWTH	MTB
AEM	1	0.196 0.008	0.237 0.001	-0.188 0.010	0.175 0.017	0.114 0.123	0.305 0.000
CSR		1	0.018 0.804	-.1333 0.071	-0.099 0.179	0.037 0.618	0.035 0.641
SIZE			1	0.025 0.734	0.688 0.000	0.010 0.893	0.008 0.915
LEV				1	-0.166 0.024	-0.102 0.166	-0.195 0.008
ADJ___ROA					1	0.088 0.231	0.083 0.260
GROWTH						1	0.249 0.001
MTB							1

Table 6. Matrix of Correlation between variables- in firms with financial crisis investigating the Reliability of the Variables

Variable	AEM	CSR	SIZE	LEV	ADJ___ROA	GROWTH	MTB
AEM	1	-0.065 0.363	0.060 0.416	-0.025 0.739	0.167 0.023	0.060 0.416	-0.094 0.216
CSR		1	0.711 0.000	-0.145	0.050	-0.044 0.514	-0.098 0.196
SIZE			1	0.004 0.959	0.044 0.549	0.048 0.517	-0.149 0.143
LEV				1	-0.196 0.007	-0.028 0.707	-0.180 0.014
ADJ___ROA					1	0.299 0.000	0.196 0.008
GROWTH						1	0.012 0.874
MTB							1

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Im, Pesaran, and Shin test (1997) was used to make this analysis. Since the value of the significant level obtained in both tables 8 and 7 is less than 0.05 it can be concluded that the research variables were on reliable level during the research period.

Table 7. Im, Pesaran, and Shin test - in companies without financial crisis

Research Variables	Statistic t	Significance level
AEM	-9.139	0.000
CSR	-6.642	0.000
SIZE	-5.205	0.000
LEV	-6.415	0.000
ADJ	-5.984	0.000
GROWH	-15.787	0.000
MTB	-9.695	0.000

The results of our F Limer in Table 9 are as follows:

Table 8. Im, Pesaran, and Shin test - companies with financial crisis Combined Data Model Diagnostic Test

Research Variables	Statistic t	Significance level
AEM	-9.732	0.000
CSR	-5.735	0.000
SIZE	-4.776	0.000
LEV	-5.474	0.000
ADJ	-7.747	0.000
GROWH	-15.356	0.000
MTB	-9.677	0.000

Table 9. Combined Data Diagnostic Test - Hypothesis 1

Test	Companies	Test statistic	F statistics	Degree of freedom	Significance level	Result
F Limer Test	With crisis	F	1.637318	(4,174)	0.1670	Integrated Model
	Without crisis	X2	1.967245	(4,174)	0.1016	Integrated Model
Hausman test	With crisis	F	0.00	6	1	Random effects model
	Without crisis	X2	3.302308	6	0.7701	Random effects model

The results of the processing of the research regression model in table 10 shows that there is a direct and significant relationship between corporate social responsibility and earnings management of accruals in companies without financial crisis, that is, by increasing social responsibility of the company, the amount of earnings management of accruals would increase. Among the control variables, only the coefficients of size and mtb have a direct and meaningful relationship with earnings management of accruals, which shows that companies that have a larger stock market value tend to have more

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earnings management accruals, and also in general the model is significant according to f statistics, and the Watson camera statistics show that the residual is not self-correlated.

Table 10. The results of the first hypothesis in companies without financial crisis

$$\mathrm{AEM} = \alpha_0 + \alpha_1 \mathrm{CSR} + \alpha_2 \mathrm{SIZE} + \alpha_3 \mathrm{LEV} + \alpha_4 \mathrm{ADJ} - \mathrm{ROA} + \alpha_5 \mathrm{GROWTH} + \alpha_6 \mathrm{MTB} + \varepsilon_{it}$$

Variables	Correlation coefficients	Statistic t	Significance level
C	-0.469	-3.484	0.000
Csr	0.076	2.336	0.020
Size	0.062	2.622	0.008
Lev	-0.087	-1.703	0.090
Adj-roa	3.040	-0.296	0.767
Growth	0.014	0.405	0.685
Mtb	0.019	3.809	0.000
The coefficient of determination	0.595	Statistic F	7.201
Adjusted coefficient of determination	0.468	Probability statistics	0.000
Watson camera statistics	1.501		
$AEM = -0.469447 + 0.007633\, CSR + 0.062437\, SIZE - 0.087773\, LEV - 3.0409 ADJ - ROA + 0.014297\, GROWTH + 0.019378\, MTB + \varepsilon_{it}$			

The results of the processing of the research regression model in table 11 shows that there is a significant and inverse relationship between corporate social responsibility and earnings management of accruals in companies with financial crisis, that is, by increasing social responsibility of the company, the amount of management accruals would decrease. Among the control variables, only Adj-roa coefficients have a direct and significant relationship with earnings management of accruals, and in general, according to f statistics it is significant, and the value of the Watson camera statistics indicates that the residual is not self-correlated.

Table 11. Test results of the first hypothesis in companies with financial crisis

$$\mathbf{AEM} = \alpha_0 + \alpha_1\,\mathbf{CSR} + \alpha_2\,\mathbf{SIZE} + \alpha_3\,\mathbf{LEV} + \alpha_4\,\mathbf{ADJ - ROA} + \alpha_5\,\mathbf{GROWTH} + \alpha_6\,\mathbf{MTB} + \varepsilon_{it}$$

Variables	Correlation coefficients	Statistic t	Significance level
C	-0.123	-1.397	0.163
CSR	-0.006	-2.101	0.037
Size	0.032	1.819	0.070
Lev	-0.014	-0.600	0.549
Adj-roa	2.010	2.313	0.021
Growth	-0.004	-0.181	0.856
Mtb	-0.002	-1.729	0.085
The coefficient of determination	0.689	Watson camera statistics	2.228
Adjusted coefficient of determination	0.576	Statistic F	2.198
		Probability statistics	0.045
$\mathbf{AEM} = -0.132250 - 0.006519\,\mathbf{CSR} + 0.032356\,\mathbf{SIZE} - 0.014424\,\mathbf{LEV} + 2.01\,\mathbf{ADJ - ROA} - 0.004341\,\mathbf{GROWTH} - .002823\,\mathbf{MTB} + \varepsilon_{it}$			

Conclusion

The aim of this study was to compare the effect of social responsibility on accrual-based profit management in companies with crisis and without crisis in companies accepted in Tehran Stock Exchange. The summary of the discussion and the results of this research are as follows:

The results show that there is a direct and significant relationship between social responsibility and earnings management of accruals in companies without financial crisis. There is a significant and inverse relation between social responsibility and earnings management of accruals in companies with financial crisis. This suggests that Iranian managers do not use social responsibility as a shield for accruals in companies with a financial crisis or due to the fact that paying attention to such responsibilities reduces the company's performance in the short term managers do not need to hide behind this shield.

References

Alipour, M., & Hejami, M., (2014) *Investigating the Relationship between Disclosure of Social Responsibility and Institutional Ownership in Companies*. Tehran Stock Exchange, Journal of Accounting and Auditing Management, vol. 3, issue 10, p 138-150

Chen, X., & Cheng, Q., & Wang, X., (2015) *Does increased board independence reduce earnings management?* Evidence from recent regulatory reforms. Review of Accounting Studies, 20(2), ، 899-933

Hassas, Y., Barzegar, Y., (2013) *Presentation of Components and Indicators of the Social Dimension of Responsibility of Companies and its Current Status in Iran*, Quarterly Journal of Social-Cultural Development Studies, vol. 2, issue 1, p 210-232

Jalili S., Qaysari, F. (2014) *Investigating the Relationship between Quality of Profit and Social Responsibility of Companies*. Tehran Stock Exchange, Journal of Accounting Knowledge, issue 57, 147-170

Kim, D., & Qi, Y., (2015) *Accruals Quality, Stock Returns, and Macroeconomic Conditions.* The Accounting Review, 85 (3): 937-978.

Kim, Y., & Park, M., & Wier, B., (2012) *Is earnings quality associated with corporate social responsibility?* The Accounting Review, 87(3), 761-796.

Kok, P., & Wiele T., & McKenna R., & Brown, A., (2001) *A corporate social responsibility audit within a quality management framework. Journal of Business Ethics*, 31(4): 287.

Nargesi, M., (2013) *Investigation of Earnings Management Based on Accruals Items and Real Management of Profits in the Periods before and after the Adoption of the Securities Market Law*, Master's thesis at Vali-e-Asr University of Rafsanjan

Noravesh, I., & Majidi, M., (2005) *Investigating the Relationship between Quality of Profit and Capital Cost in Companies*. Tehran Stock Exchange, Electricity Accounting, issue 43

Saleh, M., & Zulkifli, N., & Rusnah, M., (2010) *Corporate social responsibility disclosure and its relation on institutional ownership: Evidence from public listed companies in Malaysia, Managerial Auditing Journal*, Vol. 25 Iss: 6 pp. 591 – 613.